

A Policy Analysis of E-learning at the University of KwaZulu-Natal

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DECLARATION

I, Andrew Emmanuel Okem, declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted for the degree of Master of Social Science in Policy and Development Studies in the Faculty of Humanities, Development and Social Sciences, University of KwaZulu-Natal, Pietermaritzburg, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

Student Signature: Date:.....

Abstract

Policy analysis is a tool used by policy analysts to understand the complexity of policy. Different analysts use diverse models of policy analysis but they seldom agree on the model that is the most ideal for analysing policy. This study is geared towards a policy analysis of e-learning at the University of KwaZulu-Natal (UKZN). Using both quantitative and qualitative data, the study showed that the implementation of e-learning at UKZN has various characteristics that cannot be explained exhaustively within the framework of a single model of policy analysis.

In the absence of an institutional e-learning policy framework, various actors and subsystems are actively implementing e-learning at UKZN. This negates the stagist model of policy analysis, according to which, policy is made up of logical and sequential stages with one stage – e.g. policy formulation – preceding the other – e.g. implementation. This is clearly not the case at UKZN where e-learning is being implemented in the absence of a formal policy framework. Due to the high ambiguity and low conflict that characterize the implementation of e-learning at UKZN, the study found that e-learning at UKZN could be situated within Matland's ambiguity/conflict model.

The need to contextualise e-learning is a key concern expressed by participants in the study. The study also found that the willingness to implement e-learning is significantly high with 84.6% of those surveyed expressing a willingness to implement e-learning. Similarly, more than half of respondents are of the view that UKZN needs to develop an e-learning policy framework. This approach fits into the incremental model according to which policy formulation is gradual and it is informed by the learning that emerges from implementation.

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Dedication

To my elder brother, Sylvester who passed on.

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List of Acronyms

ACF	Advocacy Coalition Framework
DoE	Department of Education
HE	Higher Education
ICT	Information and Communication Technology
OLS	Online Learning System
T&L	Teaching and Learning
UDW	University of Durban Westville
UKZN	University of KwaZulu-Natal
UN	University of Natal
UTLO	University Teaching and Learning Office

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Chapter one

Introduction and Background of Research Topic

1 Background and Significance of the Study

In recent times, e-learning has become an integral part of the education system. In the past, communication media like radio and television were used to relay education materials to learners who did not fit into the physical classroom type of learning. The invention of the World Wide Web by Tim Berners-Lee in 1989 occupies a critical niche in the use of e-facilities for teaching and learning (T&L) (Richardson, 2009:1). E-learning facilities such as live streaming and various web applications – such as email, twitter, podcast, blogs, digital libraries, and wikis – provide exciting opportunities for enhancing e-learning initiatives.

Across the globe, there is a growing acknowledgement of the role of ICTs¹ in T&L. Such a view is echoed by the South African *Draft White Paper on E-education* which states that “ICTs have the potential to improve the quality of education and training” (Draft White Paper on E-education, 2004). The potential that ICT have in improving the quality of T&L is a common thread which runs through existing literature on e-learning. Against this backdrop, the thrust of literature on ICTs in general and e-learning in particular are on how these can be used “to support existing programmes and paradigms” (Czerniewicz, 2007:104). Other studies have highlighted the potential of e-learning in improving both curriculum design and the administration of academic institutions (Dailey-Hebert, et al 2008:3).

Consistent with the avowed value of e-learning, UKZN has committed itself to harnessing the potentials of technology mediated learning. In its *Strategic Plan 2007-2016*, the University affirmed this goal when it holds that UKZN “will optimise the use of Information Technology in improving teaching and learning by integrating IT networks and communication protocols into learning environments” (Strategic Plan, 2007:11). Through the application of ICTs, UKZN seeks to develop pedagogical strategies responsive to the needs of contemporary students; the ‘e-generation’.

¹ Some scholars use the terms e-learning and ICTs interchangeably (See for example, The Draft Paper on E-education 2004; Czerniewicz, 2007; & Richardson, 2009).

The landscape of Higher Education (HE) in South African is punctuated by different approaches and strategies to e-learning. Some traditional academic institutions such as the University of Pretoria, the University of Stellenbosch, and the University of Western Cape have embraced e-learning and have developed formal policy documents, strategic plans and regulatory frameworks for e-learning (Czerniewicz, 2007:105). These institutions are able to deliver full online courses alongside traditional classroom-based courses. Through this approach, they are able to respond to the needs of the growing student population who are unable to devote time to classroom-based education. In contrast to the foregoing, other institutions such as the University of KwaZulu-Natal seem not to have a formal e-learning strategy (Czerniewicz, 2007:104). This however does not mean that e-learning is not being implemented at such institutions.

Although the University has committed itself to optimising technology for T&L, it has no formal e-learning policy framework. The commitment of the University to e-learning can be gleaned from a review of the University's documents and policy statements such as the *Strategic Plan 2007-2016* and the University's *Policy on Teaching, Learning and Assessment* (2008). This study investigates the implications of this apparent absence of an official e-learning policy framework on the implementation of e-learning at UKZN.

A perusal through e-learning literature shows that little attention has been paid to the study of institutional e-learning policies. Reiterating this point, Czerniewicz and Brown (2009:107) acknowledge that very little has been written about policy challenges on the use of ICTs in T&L. Czerniewicz points out that, at the national level, existing policies are either silent or say very little on the use of ICT in T&L. The implication of this is that (HE) institutions have no national framework to refer to when drafting institutional e-learning policies. They simply have to glean information from various policy documents such as the *Draft White Paper on Higher Education* and the *National Plan for Higher Education* (Czerniewicz, 2007:103). At the institutional level, the absence of a policy framework implies that lecturers rely on their discretion when adopting and implementing e-learning. The absence of e-learning policy, among other things, encourages uncoordinated activities which ultimately lead to programme duplication and an inability to tap into the wealth of knowledge of various actors involved in the implementation of e-learning (Rajaram and Peters, 2010:6).

Scholars and policy makers are not unanimous on the question of whether we need a national e-learning policy. There are two contending views on the development of a national e-learning policy. Opponents of a national e-learning policy contend that issues of e-learning in HE can easily be situated within “existing [institutional] principles and frameworks” (Czerniewicz, 2007:103). Consequently, developing a separate policy framework dedicated to e-learning is seen as a redundant exercise incapable of producing any positive result. On the other hand, proponents of a national e-learning policy framework maintain that developing a national policy framework is necessary in order to redress the lack of uniformity in the implementation of e-learning across institutions. Advocates of this position assert that “a national policy framework might establish positive, open-ended principles to be tried for in the long term” (Czerniewicz, 2007:103). Against the backdrop of the dearth of information on e-learning policy both at the national and institutional level, this study seeks to explore how e-learning is being implemented at UKZN. The study will focus on an exploration of the move – whether formal or informal – towards an e-learning policy framework within the University. It is hoped that the study will make a contribution to the emerging field of e-learning policy.

1.1 Research Problems and Objectives: Key Questions to be Asked

The purpose of this study is to identify and examine the factors that enhance and/or inhibit the implementation of e-learning at UKZN. In addition, the study seeks to understand the factors associated with the formulation of an e-learning policy at UKZN. The central questions explored in the study include:

- What are the policy implications of e-learning for the University?
- Does the University need a policy framework for e-learning?
- How are decisions made concerning e-learning strategies at the University?
- What is the attitude of the University administration towards the development of an e-learning policy?
- Are lecturers favourably disposed to the introduction of e-learning at the University?
- Are there moves – whether formal or informal – towards the development of an e-learning policy? If yes, who are those involved and what have they achieved thus far? And if no, what are the factors responsible for this?

1.2 Theoretical Framework

Situated within the context of T&L, e-learning is a relatively new development. Consequently, the field of study associated with e-learning is still being developed. This makes the formulation of institutional e-learning policy and its implementation fraught with many challenges. Understanding the complexity that punctuates the formulation and implementation of e-learning policy can be aided by the application of various models of policy analysis. Over the years, a number of models of policy analysis have been developed. One such model is the policy agenda-setting framework. This model seeks to understand how issues get onto the agenda of important people.

A key agenda-setting theorist, John F. Kingdon, defines agenda as “the list of subjects or problems to which government officials and people outside of government closely associated with those officials, are paying some serious attention at any given time” (Kingdon, 1995:3). Every policy issue, according to Kingdon (1995:91), has three streams: the problem stream, the policy stream and the politics stream. When these three streams are coupled, the chance of an issue getting onto government agenda is greatly enhanced. Other approaches to agenda-setting framework are the Punctuated Equilibrium (Baumgartner, et al 2006), the Advocacy Coalition Framework (ACF) (Sabatier and Jenkins, 1993), and the Policy Networks (Klijn, 1997). While punctuated equilibrium seeks to account for the factors that influence policy shifts after a long period of stability, the thrust of ACF and policy networks is on the role played by various actors and subsystems in influencing policy agenda-setting.

The rational and incremental models are other models of policy analysis explored by policy analysts in a bid to understand the factors at play in the formulation and implementation of policy. The rational model of policy analysis argues that policy makers have all the information, the time to process the information, weigh the consequences of alternatives, and are able to rationally choose the best alternative (Parsons, 1995:270). Policy formulation, according to this model, always starts from scratch. In *Policy Dynamics*, Hogwood and Peters (1983:1) argue that, contrary to common perceptions, most policies are built on existing policies. A number of policies therefore are not entirely new; they are simply a logical extension of existing policies in the absence of a formal policy/agenda status. Hogwood and Peter’s analysis is cognizant of

innovations that present new sets of problems thus necessitating the formulation of new policy frameworks (Hogwood and Peters, 1983:1).

The incremental approach to policy analysis takes a piecemeal approach to policy formulation and implementation. Policy, according to this model, is formed through learning; it is a gradual process. While the rational model is top-down, the incremental model takes the bottom-up approach to policy analysis (Parsons, 1995:272). Over the years, other attempts geared towards resolving the problems inherent in these two extremes have been explored. These include the Bounded Rationality of Simon (1956), Lindblom's (1959) Science of Muddling Through, and the Garbage Can Model of Organizational Choice of Cohen (1972).

Although policy analysts do not concede that one approach to policy formulation takes precedence over the other, some analysts have argued that rather than trying to synthesise the models, efforts should be geared towards understanding the different contexts and the different policy types suitable for each model (Matland, 1995:150). One of the key tasks involved in developing an institutional e-learning policy framework is to grasp the model(s) that is suitable to the unique nature of e-learning. Through a policy analysis of e-learning, this study seeks to understand the variables at play in the formulation and implementation of e-learning policy at UKZN.

1.3 Structure of Dissertation

This study is divided into six chapters which are briefly outlined below:

Chapter One: Background to the Research

This chapter provides an introduction to the study. It explores the background to the study and the reason for choosing this particular topic. In addition, the chapter discusses the objective of the study and the key questions which the study seeks to answer.

Chapter Two: Theoretical Framework

This chapter establishes the principal theory on which the study is anchored. The chapter looks at what constitute a policy, the various models of policy-making and policy implementation. The meaning of successful implementation is also discussed in this chapter.

Chapter Three: Literature Review

Chapter three explores various e-learning initiatives, and the advantages and the disadvantages of e-learning. The chapter also looks at the challenge of the digital divide to e-learning in Africa and the ongoing initiatives aimed at bridging the divide. In addition, the chapter explores the status of e-learning policy in HE institutions in South Africa.

Chapter Four: Case Study

The chapter starts by looking at the research methodology used for the study. The chapter also provides justification for the methodology and selection strategy used for the study. The chapter also provides background information about UKZN and the various ongoing e-learning initiatives.

Chapter Five: Presentation and Analysis of Findings

This chapter presents the findings of the study and the implication of this for e-learning at UKZN.

Chapter Six: Conclusion

Chapter six provides a general conclusion to the study. It gives a synthesis of the study highlighting the current state of implementation and the future thrust of e-learning at UKZN.

Chapter Two

Theoretical Framework

2. Introduction

This chapter will conceptualise public policy and policy analysis by considering the approaches to and models used to analyse policy. In addition, the chapter will attempt to explore what constitutes successful implementation. Through these explorations, the chapter will construct a theoretical framework for a policy analysis of e-learning at the University of KwaZulu-Natal.

2.1 Defining Public Policy and Policy Analysis

2.1.1 Public Policy

The field of policy is an ever growing discipline. The wide application of the term makes it difficult for scholars and practitioners to delimit what the term implies. Like most terms in Social Science, scholars are not unanimous about the definition of policy (Parsons, 1995:xv; Cloete and Wissink, 2006:11). In his exploration of the concept, Colebatch (2002:49) holds that policy could be understood as “the pursuit of goals”. This understanding of policy implies that policy has a definite beginning – the identification of goals – and a definite end – the formulation of policy statement(s) that is geared towards the actualisation of the identified goal(s).

For Denney, policy is “a declaration and implementation of intent” (quoted in Cloete and Wissink, 2006:11). A policy statement – either by government, organisations or institutions – could therefore be seen as a formal articulation of an intention. The articulation of intention specifies how the intention can and should be translated into benefits for the intended recipients of the policy. Matland’s definition is similar to the foregoing. He defines policy “as the programmatic activities formulated in response to an authoritative decision. These activities are the policy designers’ plans for carrying out the wishes expressed by a legitimating organisation” (Matland, 1995:154).

From the perspective of government, Davis (cited in Colebatch, 2002:49) defines policy as “a course of action by the government designed to achieve certain results.” A nexus exists between

this definition and Colebatch's; namely that policy is geared towards the attainment of an identified end. Policy formulation, according to this definition, is not an end in itself; rather it is a means to an end. For government, the ideal end of a policy is the distribution, redistribution and the formulation of regulatory policies aimed at societal well-being. This formulation covers Lowi's (1964 cited in Parsons, 1995:132) division of public policy into three types namely distributive (such as welfare policy), redistributive (such as affirmative action) and regulatory policies (such as environmental policy) respectively. Dye (1982) adds a fourth type to the three categories of policy – self regulatory policy. This type of policy is often formulated by professional bodies to regulate the activities of their members. Symbolic policy is another policy type.

Easton's contribution to the debates on what constitute a policy revolves around the notion of power. He defines policy as "the authoritative allocation through the political process, of values to groups or individuals in the society" (Easton, 1953:129). As an authoritative allocation of values and groups' resources, policy acts as a means through which society is governed.

A common thread which runs through the foregoing is the idea that policy is about action; it is about what is done to address social problems. Dye emphasises that policy is not only about action, it is also about non-action. Consequently, he defines policy as "whatever governments choose to do or not to do" (Dye, 1982:2). Non-decision is seen as policy action so long as it leads to the attainment of a desired end. Through the deliberate refusal to take certain actions, government determines what should and should not happen in society. Dye's framing of public policy resonates with that of Heclo (1972:83) and Smith (1976:13) who contend that policy is not only about action, it also encompasses inaction. This is evident when government deliberately refuses to make decision about a policy issue. The inaction of government, according to this view, represents its policy stance. Against this backdrop, Smith (1976) cautions policy analysts to be wary of erroneously focusing attention only on policies contained in legislative statements since policy actions or policy intents are not always translated into formal legislative statements of governments. The task of policy analysts, according to Smith (1976:13), includes an exploration of how inaction defines the landscape of government's policy formulation and implementation.

Anderson's (1997) definition of policy emphasises the notion of relative policy stability. He argues that policy is "a relatively stable, purposive course of action followed by an actor or sets of actors in dealing with a problem or matter of concern" (Anderson, 1997:9). Policy, according to this definition is not a product of an arbitrary process; rather it requires careful consideration of both short and long-term implications. The idea of policy stability in Anderson's definition is expressed by Hogwood and Peters (1983:1) who contend that, contrary to common perceptions, policies do not change easily; they are modified to suit prevailing conditions which were not envisaged when the policy was being formulated. Consequently, policy change according to this view, is incremental.

2.1.2 Policy Analysis

The literature on public policy makes references to policy analysis and the role it plays in understanding public policy. Policy analysis could be seen as a tool used by policy analysts to gain better insights into policy-making and policy implementation. Quade (1975 cited in Cloete and Wissink, 2006:285), defines policy analysis "as any type of analysis that generates and presents information in such a way as to improve the basis for policy-makers to exercise their judgment." For Parsons (1995:xv), "policy analysis is an approach to public policy that aims to integrate and contextualize models and research from those disciplines which have a problem and policy orientation". In a similar vein, Wildavsky (1979:15) defines policy analysis as "an applied sub-field whose content cannot be determined by disciplinary boundaries but by whatever appears appropriate to the circumstances of the time and the nature of the problem."

Policy analysis for Dunn (1981:35) is "an applied Social Science discipline which uses multiple methods of inquiry and arguments to produce and transform policy-relevant information that may be utilized in political settings to resolve policy problems." This implies that policy analysis does not use a single approach in understanding policy issues. Social Science research methods are usually employed to gather requisite information about the social problem which a policy intends to address. Policy analysts are interested in various aspects of policy. The areas of concern for policy analysts, according to Parsons (1995:29), include:

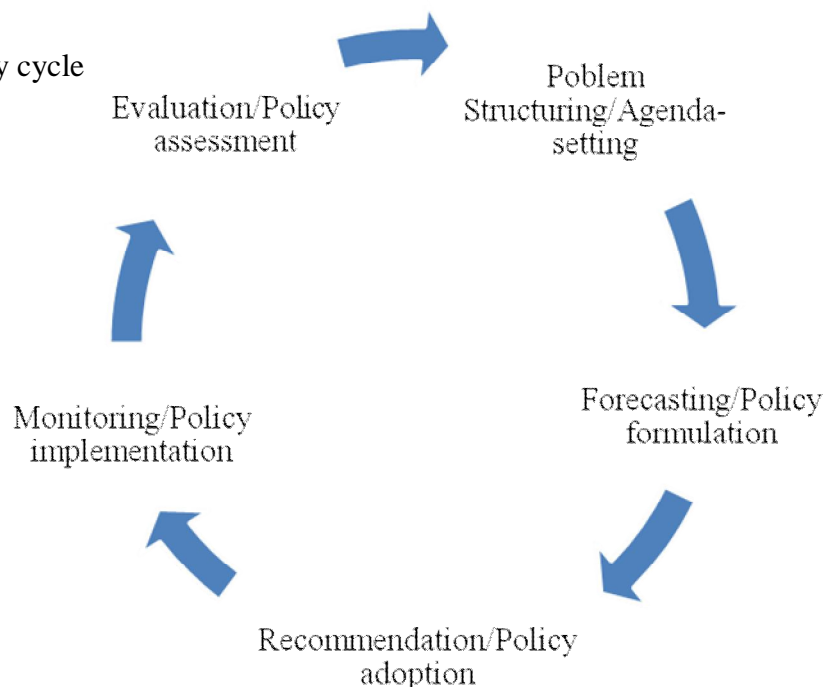
- Problems and the relationship of public policy to these problems.
- The content of public policies.
- What decision-makers and policy-makers do or do not do.
- The inputs and processes of the policy area.
- The consequences of policy in terms of outputs and outcomes.

Policy analysts examine the policy-making and implementation process from a number of perspectives. A dominant model often used in policy analysis is the stagist approach.

2.2 The Stagist Approach

The stagist approach or model of policy analysis seeks to simplify the policy-making process into analysable units/sub-processes (Sabatier and Jenkins, 1993:1). The stages are arranged into functional and related units often depicted in a cycle. Over the years, scholars have explored different stages of the policy cycle. Dunn (1981:17) identifies five stages in the policy cycle: the identification of policy problem, the formulation of alternative solutions to the identified problem, the making of decision about the alternative to choose, the implementation of the

Figure 1: Policy cycle



Source: Adapted from Dunn (1994:17)

decision and the evaluation of implementation.

The strength of the stagist model is that it simplifies the policy process. But this strength of the stagist model is also the source of its weakness. The policy cycle assumes that policy is a simple and straightforward act. In reality, the terrain of policy-making is often messy, less structured, punctuated by conflicting interests, contexts and displays political cleavages. Parsons (1995:70) points out five key criticisms of the stagist model. According to Parsons (1995:70), the policy cycle:

- Does not provide any causal explanation of how policy moves from one stage to another.
- Cannot be tested on an empirical basis.
- Characterizes policy-making as essentially ‘top-down’, and fails to take account of ‘street-level’ and other actors.
- Ignores the real world of policy-making which involves multiple levels of government and interacting cycles.
- Does not provide for an integrated view of the analysis of the policy process and analysis (knowledge, information, research) which is used in the policy process.

While these criticisms point to some inadequacies of the policy cycle, Parsons (1995:81) argues that the model still has some heuristic and hermeneutic values for policy analysts. The policy cycle might not be able to give valid account of complex policies and contextual issues but it remains a valuable tool for analysing policy by enabling in-depth analysis of the various characteristics of a policy.

Three specific policy analysis models which relate to the current study will now be explored. These are the policy agenda-setting framework, models of decision-making and the models of policy implementation.

2.3 The Policy Agenda-Setting Framework

The works of agenda-setting theorists such as Downs (1972), Cobb and Elder (1983), Kingdon (1995), Parsons (1995), Sabatier and Jenkins (1993), and all point to a consistent theme in

policy-making: that different issues gain prominence and others drop out of prominence in the government and public domain. The question these authors pose is: what is and/or who responsible for the rise and fall of issues on the government agenda? The literature on agenda-setting reveals two dominant models of agenda-setting. These are the Advocacy Coalition Framework, and Kingdon's Stream Approach to agenda-setting. These are summarised below.

2.3.1 The Advocacy Coalition Framework

The Advocacy Coalition Framework (ACF) has been rigorously explored by Sabatier and Jenkins. Their book, *Policy Change and Learning: An Advocacy Coalition Approach* (1993), is anchored on a "theory of the policy process, which includes the manner in which problems [...] get defined as "political" problems, the remedies government devises for dealing with them, the implementation of those solutions, the impact of those supposed remedies on the problems, and the revision of the remedies in light of various group's perceptions of their desirability." The ACF is a result of dissatisfaction with the "text book approach" to policy analysis (Sabatier and Jenkins, 1993:1).

The strength of the ACF lies in its analysis of the role that beliefs, information and learning play in influencing policy change. The ACF of Sabatier and Jenkins (1993:16) is anchored on four premises:

- That understanding the process of policy change and the role of policy-oriented learning requires a time perspective of a decade or more.
- That the most useful way to think about policy change over such a timespan is through a focus on "policy subsystems", that is, the integration of actors from different institutions who follow and seek to influence governmental decisions in a policy area.
- That those subsystems must include an intergovernmental dimension, that is, they must involve all levels of government (at least for domestic policy).
- That public policies (or programs) can be conceptualised in the same manner as belief systems, that is, as sets of value priorities and causal assumptions about how to realize them.

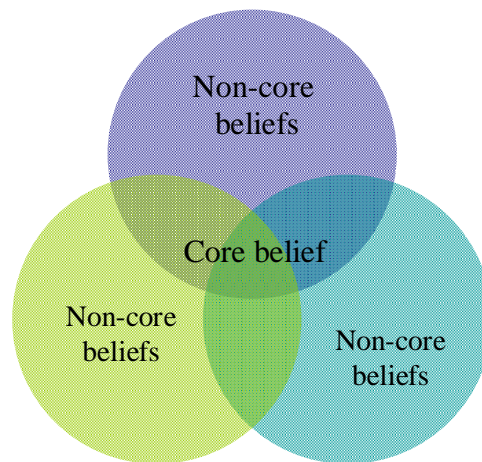
Each of the above premises is crucial to understanding ACF. The value of timespan, according to Sabatier and Jenkins (1993), stems from their experience of policy implementation which has shown that policies take time to change. This is because policy change is brought about through knowledge accumulation that takes years of research to materialise. In addition, they argue that policy change takes time because evaluating the success or failure of implementation requires that implementation has occurred over a considerable period (Sabatier and Jenkins, 1993:16).

The second basis of the ACF is based on the conviction that policy change in contemporary society transcends the realm of government. Policy change, Sabatier and Jenkins argue, is influenced by various policy subsystems.

The third basis of the ACF stems from the understanding that policy formulation is not the sole domain of national government or authoritative structures. It can also be the outcome of interaction between actors at different levels of government (Sabatier and Jenkins, 1993:17). The interaction between the different levels of government is identified as one of the key factors that influence how policy issues are shaped and formulated. Consequently adequate understanding of policy-making is premised on an analysis of the roles played by different actors at different levels of government over a relatively long period of time.

The last premise links the objectives of public policies to belief systems. Sabatier and Jenkins argue that public programs have built-in systems aimed at achieving a set goal; a goal which can be equated to a belief system. This is why they contend that “public policies involve values, priorities, perceptions of important causal relationship, perceptions of world states (including the magnitude of the problem), perceptions of the efficacy of policy instruments and so on” (Sabatier and Jenkins, 1993:17). An advocacy coalition group is formed when different groups, actors or individuals “who share a set of normative and causal beliefs come to act together” (Sabatier and Jenkins, 1993:17). Every advocacy coalition group is united around a core belief which acts as the bond that holds the group together. A coalition is bound to break up if the core belief changes. The non-core beliefs of the group are subject to change as the coalition engages in the process of learning. Those beliefs that contribute towards the attainment of the coalition’s objectives are consolidated while those that hinder the attainment of the group’s objective are either jettisoned or modified in the light of emerging knowledge (Sabatier and Jenkins, 1993:19).

Figure 2: Types of Beliefs within a Coalition



Source: Adapted from Sabatier and Jenkins (1993).

The formation of coalition stems from the realisation that, in certain cases, it is beneficial for individuals and groups to pool their resources together in pursuit of a common goal. By pooling resources together, members of the coalition are able to better influence the setting of the policy agenda.

2.3.2 Kingdon's Stream Approach to Agenda-Setting

In his book *Agendas, Alternatives and Public Policies* (1995), Kingdon made significant contributions to the policy agenda-setting theory. According to Kingdon (1995:3), an agenda is “the list of subjects or problems to which government officials and people outside of government closely associated with those officials are paying some serious attention at any given time.” The thrust of his study is on “how issues come to be issues; how they come to the attention of public officials and policy-makers; how agendas are set and why ideas have their time” (Parsons, 1995:192). Kingdon (1995:2) argues that the policy-making process comprises of four phases: (i) the setting of the agenda, (ii) the specification of alternatives, (iii) an authoritative choice from specified alternatives, and (iv) the implementation of the decision.²

² This division of policy into stages has been rigorously criticized (Parsons, 1995; Lindblom, 1959). Kingdon acknowledged that his definition is not an all embracing one. It is simply a working definition. For instance,

Kingdon's distinction of the four phases of policy process is informed by the understanding that it is not sufficient for an issue to get onto government agenda to effect change. An issue could be on government agenda without the government making any policy specification on how it should be addressed. The lack of decision could be as a result of the absence of a feasible policy alternative attached to the problem. In addition to the above, Kingdon (1995:3) points out that legislation does not necessarily translate into policy implementation. This resonates with Dye's (1982) and Anderson's (1997) reference to non-action or non-decision as highlighted earlier.

Kingdon makes a distinction between the government agenda and the government decision agenda. A government agenda is the list of subjects that are getting attention while a government decision agenda is "the list of subjects within the government agenda that are up for an active decision" (Kingdon, 1995:4). The difference between the government agenda and the government decision agenda lies in the fact that an issue might be on the government agenda but fails to make it onto the decision agenda due to the lack of suitable alternatives/solutions. Issues on the decision agenda are those that have clearly specified alternatives and about which government is to make decisions on implementation (Kingdon, 1995:17).

Kingdon lists three possible ways that an issue can gain the attention of both those in and outside of government. The first of these is the emergence of a sudden event or crisis which calls for immediate response. The second way is through the process of knowledge accumulation. For Kingdon (1995:17), "the gradual accumulation of knowledge and perspectives among the specialists in a given policy area, and the generation of policy proposals by such specialists influences how issues rise on the government agenda." Knowledge accumulation – particularly through academic research or emanating from advocacy coalitions and/or policy networks – leads to the emergence of new perspectives on issues. The third means through which an agenda can be influenced is through political changes such as changes in public opinion, administration, and elections (Kingdon 1995:17). Kingdon (1995:18) points out that "each of the three processes – problem recognition, generation of policy proposals, and political events – can serve as an impetus or as a constraint" to policy agenda-setting. A key idea which is present in the agenda-

monitoring and evaluation are also considered to be part of the policy process but they do not feature in his definition of policy.

setting framework of Kingdon is the notion of streams. According to Kingdon (1995:91, 117 and 146), every policy issue is characterised by three streams. These are briefly discussed below.

2.3.2.1 The Problem Stream

The problem stream of Kingdon's agenda-setting framework considers how issues become policy issues and how they capture the attention of government. Within what Kingdon refers to as the policy primeval soup, issues float around seeking the attention of government officials. Some issues in the policy primeval soup catch the attention of government officials while others are ignored. Problem definition is a highly political process (Cobb, Ross and Ross, 1976). This is because the way a particular problem is defined can be beneficial to some groups but disadvantageous to others. For instance, if a decline in fish stock is defined as a problem of over-fishing, a policy alternative might be to regulate the number of fishing vessels allowed in the affected area. While this specification might be welcomed by conservationists, fishermen who earn a living from the fishing industry will be vehemently opposed to a policy that threatens their livelihood. Value is another key factor that plays an important role in problem definition (Kingdon, 1995:110). This is why it has been pointed out that social problems are social constructs; they are not objective facts with a positive existence. Focusing events make indicators more visible by drawing attention to the issue (Kingdon, 1995:95). Programme monitoring which provides feedback to government officials is another way that a problem can be brought to the attention of government officials.

2.3.2.2 The Policy Stream

Policy proposals are generated within the policy stream. Kingdon likens the selection of ideas from the policy primeval soup to the process of natural selection. According to Parsons (1995:193) "Kingdon finds this model an attractive framework to approach an agenda-setting process in which solutions search for problems and the outcomes are a function of the mix of problems, participants and resources." Ideas in the policy community pass through different phases, becoming prominent at times and fading away at other times. The role of policy specialists and policy entrepreneurs is to ensure that ideas relevant to future challenges continue to be generated. In order to survive, any idea generated has to be accepted by the policy community as technically feasible. Once an idea catches on, it percolates through the policy

community becoming the dominant idea. A policy community can either be closely knitted or fragmented. Fragmented policy community leads to policy disintegration as different policy entrepreneurs will provide different policy alternatives to a problem. This challenge is not experienced in a closely knitted policy community. High level of coherence within a policy community – or low ambiguity – leads to members speaking with a single voice hence higher policy coherence.

2.3.2.3 The Political Stream

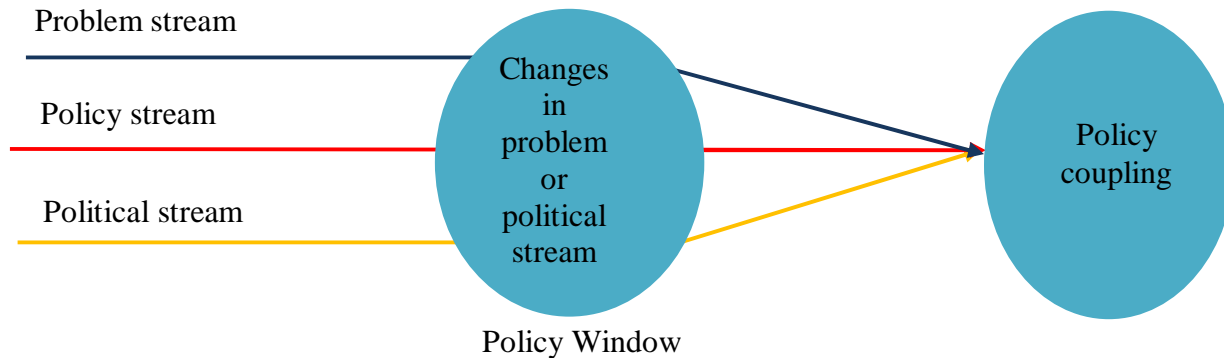
The third stream of Kingdon's agenda-setting framework is the political stream. This stream is made up of public mood, pressure groups, election results, and partisan or ideological distribution (Kingdon, 1995:144). Changes in the political stream can play a significant role in bringing an issue onto the government agenda. For instance, election results which bring in a new majority party into government may lead to certain issues being considered as significant while others are conveniently ignored. A key aspect of the political stream is consensus building. Kingdon (1995:159) points out that unlike in the policy stream where consensus is achieved through the diffusion of ideas and persuasion, consensus in the politics stream is achieved through bargaining. In the political stream, coalitions are built with the aim of bargaining for support. Individuals join coalitions which they feel have the potential to serve their interests. Apart from the trade-offs of mutual interests, others join a coalition because they do not want to be left out of the benefits of a new idea. This is why Kingdon (1995:162) holds that "once an issue seems to be moving, everybody with an interest in the subject leaps in, out of fear that they will be left out."

2.3.2.4 The Policy Window: Joining of the Streams

Once in a while, opportunities favourable to the rise of an issue or issues onto the agenda are created. This is what Kingdon refers to as the 'policy window'. The policy window "is an opportunity for advocates of proposals to push their pet solutions, or to push attention to their special problems" (Kingdon, 1995:165). Some policy windows open fairly regularly thus making them predictable while others are not so regular. A policy window, Kingdon argues, opens due to changes in either the political or the problem stream. In the problem stream, certain imperatives make an issue to be viewed as a pressing problem by an administration thus, creating

opportunities for policy entrepreneurs to attach their policy proposals (Kingdon, 1995:169). It is only the decision agenda that is affected when the policy window opens. This is because the government decision agenda enables active decisions since proposals have been formulated by policy entrepreneurs.

Figure 3: The Coupling of the Policy Streams



Source: Adapted from Kingdon (1995).

Policy coupling happens when the three streams of the agenda-setting framework fuse. For a policy to move upward from the specialist community onto government decision agenda, it must either be coupled with a pressing problem or significant events within the policy stream (Kingdon, 1995:178). The absence of one of the streams reduces the chances of an issue getting onto government decision agenda. Policy windows do not stay open for long. It is therefore incumbent on policy entrepreneurs to ensure that they utilize the opportunity presented to them once a policy window opens. Failure to take advantage of a policy window implies waiting for a long time for the window to re-open (Kingdon, 1995:165). Policy window closes for a number of reasons. For instance, participants might fail to take action or feels that they have addressed the problem. In addition, a change – e.g. personnel change – which brought about the opening of the policy window, might experience a reversal. The lack of solution also leads to the closing of policy window (Kingdon, 1995:169-170).

2.4 Models of Decision-Making

Given the absence of a formal e-learning policy at UKZN, understanding how decisions with regard to e-learning are made contributes to understanding the factors that influence the

implementation of e-learning. Exploring the different models of decision-making offers some insights into the various approaches to decision-making. Three of the most prominent models of decision-making discussed in the literature on policy analysis are the rational model, the bounded rationality model and the incremental model.

2.4.1 The Rational Model of Decision-Making

According to Lindblom (1959:84), decision-making is seen as choosing from available alternatives, the option which will lead to a desired end. The rational approach to decision-making has, over the years, been at the forefront of decision science. The rational model of decision-making seeks to establish the “clarity of objective, explicitness of evaluation, a high degree of comprehensiveness of overview, and, wherever possible, quantification of values for mathematical analysis” (Lindblom, 1959:80). It is a model built on the premise that decision makers have all the information they need, the time to process the information, weigh the consequences of alternatives, and rationally choose the best alternative (Parsons, 1995:270; Lindblom, 1959:79; Dye, 1972:35; Forester, 1984:24). According to Howlett and Ramesh (1960), the rational model of decision making is “a model of business decision-making applied to the public arena.” This definition of the rational model of decision-making looks at rationality from the perspective of economics. Another source of rationality in decision-making could be seen from the perspective of bureaucracy “as formulated by sociological theories of organisation and industrial society” (Parsons, 1995:271). Here the notion of rationality is based on the assumption that human beings always act to advance self interest (Parsons, 1995:272).

The sociological approach to decision-making is built on the work of Weber. According to Weber, decision-making is heavily influenced by authority. This is why he argues that “the dominant trend of industrialized societies was towards authority legitimizing itself in terms of legal-rational model” (cited in Parsons, 1995:272). The rational model of decision-making has been criticised for its inability to deal with complex issues. This is why Lindblom (1959) argues that human beings lack rational capacity required by the rational model of decision-making. In addition, the time and resources required to make rational decisions are often limited.

2.4.2 The Bounded Rationality Model of Decision-Making

Moving away from a purely rational analysis of public policy, Simon (1956) presents the notion of bounded rationality. His argument is based on the realisation that when faced with decisions, the behaviour of people do not always conform to the rational model of decision-making. This however, does not negate the fact that decision-makers are rational beings. According to the concept of bounded rationality, “decision makers are intendedly rational; that is, they are goal oriented and adaptive, but because of human cognitive and emotional architecture, they sometimes fail, occasionally in important decisions” (Jones, 1999:297). Among other things, Simon (1995:46) argues that human rationality is constrained by a number of factors such as the inability of the human person to completely foresee the consequences of his/her choice; the limitation of human attention span; the limitation of organisational environment, the limit of human capacity to store information; and the fragmented nature of human knowledge.

The behaviour of the “administrative man”, according to Simon (1956), does not correspond with that of the “economic man” explicated in the rational model of decision-making. This is why Simon argues that:

While the economic man maximizes – selects the best alternative from among all those available to him; his cousin, whom we shall call administrative man, satisfices³ – looks for a cause of action that is satisfactory or ‘good enough’...administrative man recognizes that the world he perceives is a drastically simplified model of the buzzing, blooming confusion that constitute the real world. He is content with this gross simplification because he believes that the real world is mostly empty – that most of the facts of the real world have no great relevance to any particular situation he is facing, and that most significant chains of causes and consequences are short and simple (Simon, 1957: xxv).

According to Lindblom (1959:81), the rational model or the root model always starts from scratch when attempting to provide solution to a problem. The notion of rationality as presented by the rational model suggests that there are rational criteria which a manager or a decision-maker must always appeal to in order to make any decision. Forester has questioned this notion of objective criteria of decision-making. He points out that:

³ Coined by Herbert Simon in 1956, the term implies decisions geared towards the attainment of a result that is near the optimal goal. This is due to the cognitive inadequacy of human beings to maximise goals through rational decisions.

What is rational for an administrator to do depends on the situations in which they work. Pressed for quick recommendations, they cannot begin long studies. Faced with organizational rivalries, competition, and turf struggle, they may justifiably be less than wholly candid about their own plans. What is sensible to do depends on the context one is in, in ordinary life no less than in public administrations (Forester, 1984:23).

2.4.3 The Incremental Model of Decision-Making

In contrast to the rational model of decision-making, the incremental model of decision-making “views public policy as a continuation of past government activities with only incremental modifications” (Dye, 1974:30). This model stems from the critique of the rational model of decision-making that features particularly in the work of Pressman and Wildavsky (1973). Lindblom’s (1959) *The Science of “Muddling Through”* makes a significant contribution to the literature of incremental decision-making. He sees the incremental model “as the branch method...building out from the current situation, step-by-step and by small degrees” (Lindblom, 1959:81). Lindblom categorises the incremental decision-making approach into simple incremental analysis, strategic analysis and disjointed incrementalism. The difference between each of the incremental approaches to decision-making lies in the depth of analysis involved (Lindblom, 1959:81).

The stance of the incremental model is the conviction that decision-making is not entirely rational. Constraints that impinge on decision-makers force them to settle for that which can be attained. Policy, according to the incremental decision-making model, is formed through learning. The incremental model, according to Dye, is based on a realist examination of the context of decision-making where:

Decision makers do not actually review the whole range of existing and proposed policies, identify societal goals, research the benefits and costs of alternative policies in achieving these goals, rank-order preference for each policy alternative in terms of the maximum net benefits, and then make a selection on the basis of all relevant information. On the contrary, constraints of time, intelligence, and costs prevent policy makers from identifying the full range of policy alternatives and their consequences (Dye, 1974:35).

In the public sector – and to a large extent, the private sector – the realisation that a particular policy is not producing its objectives is rarely addressed by formulating an entirely new policy. What rather happens is that legislators formulate secondary policies aimed at filling-in the

perceived gap created by implementation problems. For the incremental model, the task is not about formulating new policies or programmes, it is about how to either modify – to increase deliveries – or terminate non-performing programmes. Various challenges force policy-makers to accept existing policies as legitimate even in the face of serious implementation challenges. Dye (1974:35) points out five of these:

- The fact that policy makers do not have the time, intellectual resources, or money to investigate all the alternatives to existing policy.
- It makes more sense to policy makers to accept the legitimacy of existing programmes whose consequences are known than starting an entirely new programme whose consequences are not known.
- Investment in existing programme might be significantly high, thus, foreclosing the possibility of termination.
- It is more amenable to politicians; a change is only an amendment to existing programme rather than a total change.
- It is a good model in the context where there is no consensus on what government ought to do.

For Lindblom (1959:83), the rational model is anchored on a means-end analysis of decision-making. It fails to be cognizant of the fact that decision-making is a political activity; it is not just a rational process. It is value-laden and is shaped by worldviews and ideological positions. In the context of decision-making, decision-makers do not agree about what needs to be done and how it should be done. The means-end analysis of decision-making can only be successful when key actors have common values and worldviews.

2.5 Models of Policy Implementation

In implementation analysis, the top-down and the bottom-up models are the two models often cited. The top-down model takes a hierarchical approach to policy-making. According to proponents of the top-down model, the task of policy-makers is to make “policy goals clear and consistent (Van Meter and Van Horn 1975; Mazmanian and Sabatier 1983); to minimise the number of actors (Pressman and Wildavsky 1973); to limit the extent of change necessary (van

Meter and Van Horn 1975; Mazmanian and Sabatier 1983); and to place implementation responsibility in an agency sympathetic with the policy's goals'' (Van Meter and Van Horn 1975; Sabatier 1986) (cited in Matland, 1995:147). Implementers of policy, according to this model, do not play any significant role in policy-making. They only carry out directives contained in the policy statement formulated by specialists.

The bottom-up model to policy-making is a response to the perceived weakness in the top-down approach. While the top-down model assumes a hierarchical and authoritarian approach to policy-making, the bottom-up approach takes a democratic/participatory approach. Proponents of the bottom-up model argue that policy-making is not the domain of policy specialists but that various actors and policy subsystems are involved in the formulation of public policy. According to Kingdon (1995:117), "policy communities [policy subsystems] are composed of specialists in a given policy area-health housing, environmental protection, criminal justice, to name a few." Central to the bottom-up model is the notion that one can gain in-depth understanding of policy implementation if one looks at implementation from the perspective of beneficiaries of the policy and those involved in delivering the intended benefits of the policy (Matland, 1995:148). Implementation, according to this model of policy-making, occurs at macro and micro levels (Matland, 1995:148). Macro level implementation is concerned with the central level that formulates the general implementation strategy of a policy. Micro level implementation deals with implementers at local level who have to develop plans and strategies to translate the national plan into actions relevant to local contexts.

While the central level can influence implementation at a local level, there are limits to the influence it can exert. Tightly regulated macro level implementation which fails to give discretion to micro level implementers has the potential to derail implementation. This is why "bottom-uppers argue that the goals, strategies, activities and contacts of the actors involved in the micro implementation process must be understood in order to understand implementation'' (Matland, 1995:149).

In the history of policy analyses, various scholars have made attempts at reconciling the top-down and bottom-up approaches to policy-making and policy implementation. These attempts

include the backward mapping of Elmore (1982), and the Advocacy Coalition Framework (ACF) of Sabatier (1986). Some scholars (such as Dunsire, 1978 and Saetren, 1986) have argued that synthesising the two approaches might not be what is most important. They contend that rather than trying to merge the two approaches, policy analysts should focus on understanding the context in which each of the models is relevant (Matland, 1995:152). This approach to contextualizing the top-down and bottom-up approach is central to Matland's *Synthesizing the Implementation Literature: The Ambiguity/Conflict Model of Policy Implementation* (1995).

2.6 The Ambiguity/Conflict Model

Matland's ambiguity/conflict model seeks to emphasise the role that context, conflict and ambiguity play in the formulation and implementation of policy. The premise of Matland's analysis is that the implementation of certain policies is riddled with high levels of conflict and ambiguity. Matland argues that when confronted with conflicting goals, policy actors tend to:

Resort to bargaining mechanisms such as side payments, log rolling, and oversight to reach agreements and hold coalition together. Coercive methods of insuring compliance are used. Actions tend to be the results of a long bargaining process. The bargaining process does not lead to an agreement on goals; rather it focuses entirely on reaching an agreement on actions (means). Often the process culminates in no action, because actors are unable to reach agreement (Matland 1995:156).

Apart from conflicts that play a critical role in shaping implementation, policy ambiguity is another critical factor that policy analysts need to pay attention to. The ambiguity of policy can be traced to two sources: (i) ambiguity of goals – the measurable impact/change – and (ii) ambiguity of means – the means of achieving the goal (Matland, 1995:157). Ambiguity of means, according to Matland (1995:158), is more explicit “in cases where the technology needed to reach a policy's goals does not exist”. He further adds that policy ambiguity could also arise from a failure to clearly specify the roles of the different actors involved in policy implementation, “when a complex environment makes it difficult to know which tools to use, how to use them, and what the effects of their use will be” (Matland, 1995:158). Policy ambiguity can weaken the ability of superiors to monitor the implementation of policy. This directly impacts on the nature of implementation which in turn leads to varying types and levels of implementation across different implementation sites (Matland, 1995:15). Matland's

ambiguity/conflict matrix illustrates the relationship between policy ambiguity and policy conflict and the kind of implementation they relationship elicits.

Table 1: Ambiguity/conflict Matrix of the Policy Implementation Process

		CONFLICT	
		Low	High
AMBIGUITY	High	Administrative Implementation	Political Implementation
	Low	Experimental Implementation	Symbolic Implementation

Source: Matland (1995:160)

The first quadrant of the matrix of Matland’s ambiguity/conflict model as indicated in Table 1 refers to the case of low policy ambiguity and low policy conflict. For this policy type, implementation is carried out by administration since this kind of policy is readily open to rational decision-making (Matland, 1995:160). Matland refers to this as administrative implementation. In administrative implementation, goals are clearly specified and successful implementation is determined by the availability of requisite resources. Low conflict ensures that the authority is able to delegate who is responsible for specific tasks.

The second policy type explored by the matrix is the case of low policy ambiguity and high policy conflict. This frame, according to Matland (1995:163), “is common to political models of decision-making.” For this policy type, there is little consensus around policy goal since each political actor is focused on getting his/her objective attached to the policy goal. In addition to conflicting goals, actors are also in conflict about the means of attaining the set objective (Matland, 1995:163). Due to the high level of conflict, the outcome of implementation is decided by the actor with the most power. This is why Matland refers to this as political implementation. The level of compliance by implementers of this policy type is usually low as they tend to be

coerced into implementing the policy. “Successful implementation [of this policy type] depends on either having sufficient power to force one’s will on the other participants or having sufficient resources to be able to bargain an agreement on means” (Matland, 1995:164). For policy implementation to succeed, agreement on goals is not necessary, what is important is that actors are able to agree on actions.

High policy ambiguity and low policy conflict is the third policy type explored by Matland (1995) in the ambiguity/conflict matrix. He regards this type of implementation as experimental implementation. The key factor here is the notion that implementation is driven by contextual factors, the disposition of actors and the availability of resources. This type of implementation is akin to the “garbage can” in which the different streams, actors, problems, solutions, and choices combine to produce an outcome that is difficult to predict (Matland, 1995:166).

In the case of experimental implementation, actors are not certain about the preference to choose and the technology to apply. Experimental implementation is defined by actors who are active and the degree of their involvement in implementation. The involvement of participants is dependent on a range of factors: their proximity to context of implementation, their interests, and their availability (Matland, 1995:166). The absence of conflict in this policy type could ensure unrestrained availability of resources and the freedom of implementers to shape the policy. This type of implementation is “excellent for bureaucratic entrepreneurs to create policies to deal with local situations” (Matland, 1995:166). In addition, experimental implementation lends itself to learning both from the context of implementation and from similar implementation taking place in other contexts. Experimental implementation occurs when the required knowledge to implement a programme is lacking.

One of the dangers of experimental implementation which Matland (1995:167) warns against is the danger of uniformity. In experimental implementation, the demand for uniformity can lead to superficial compliance. Similarly, the demand for uniformity in the absence of a clear understanding of the policy has the potential to take away the ability of implementers to use their discretion in adapting the policy to their context.

The last policy type of Matland's ambiguity/conflict matrix is high policy ambiguity and high policy conflict. This kind of implementation is referred to as symbolic implementation. It is about policies that deal with symbolic issues but lack clear policy goals. According to Matland (1995:168), "symbolic policies play an important role in confirming new goals, in reaffirming a commitment to old goals, or in emphasizing important values and principles." Due to the high level of ambiguity, implementation will vary across contexts since outcome of implementation is determined by the strength of local coalition. Example of this kind of policy are policies aimed at "redistributing power or goods" (Matland, 1995:169).

The central issue raised by Matland in his ambiguity/conflict model is that the presence of ambiguity should not be seen as a weakness since it can facilitate successful implementation. Ambiguity can ease agreement both at the stage of policy formulation and legitimation. In addition, ambiguity provides the opportunity to learn new methods, technologies, and goals. Variation provides an abundance of knowledge which should be encouraged. Ambiguity is value-neutral; it is the actions/inactions of actors that determine whether ambiguity will have positive or negative impact on policy implementation (Matland, 1995:171).

2.7 Defining Successful Implementation

A question arising from the foregoing is the question of what constitutes successful policy implementation. According to Matland (1995:154), central to understanding successful implementation is the question of "whether attention should be focused on fidelity to the designer's plan or on the general consequences of the implementation actions." What constitutes successful implementation could be seen from the perspective of the two models of policy-making already explored. While proponents of the top-down model will measure success in terms of faithfulness to the goals of programme, bottom-uppers will see successful implementation in terms of the positive outcome brought about by implementation (Matland, 1995:154). Successful implementation, according to the bottom-up model, is not measured by the level of faithfulness to formal policy goals but the positive changes brought about by implementation. This is because some policies do not have clearly defined goals.

2.8 Conclusion

The common thread which runs through issues explored in this chapter is the notion that the process of policy formulation and implementation is complex. The chapter uncovered the notion that policy formulation and implementation is a messy business with various competing paradigms, interests, politics and powers and each of these influence the formulation and implementation of policy. In addition, the chapter explored how the setting of the policy agenda is influenced by the interaction of various actors in a policy subsystem. Within a policy subsystem, it was argued, the action and interaction of various policy actors, networks, media and the public affects problem definition and the kind of policies formulated by government. The different models of policy analysis presented in this chapter will inform the analysis of data collected for this study.

Chapter Three

Literature Review

3 Introduction

This chapter is divided into three sections. The first section is an overview of the opportunities which the ICT revolution presents for T&L. Factors influencing the adoption of e-learning strategies in HE institutions will be explored in this section. The second section of the chapter examines the notion of the digital divide and the challenges it presents to e-learning in Africa. Section three of the chapter is a review of the trends of e-learning policies across HE institutions in South Africa. These explorations will contextualise the thrust of the study.

3.1 Information and Communication Technology in Education

The ICT revolution has impacted in various ways on the organisation and management of society. Latchem and Walker (2001: v) hold that “Information communication technologies (ICTs) are fast becoming essential tools in the delivery of information, knowledge and education all over the world.” Access to ICT infrastructures continues to increase with implications for the structuring and management of institutions and organisations.⁴ The potentials of ICTs are being harnessed by governments to improve the quality of governance and the deepening of democracy (Norris, 2004:1). The ICT revolution has, in addition, given people further opportunity to express their opinions on issues such as governance, democracy, human rights, etc. This phenomenon is unprecedented in human history. Web applications such as blogs, wikis, twitters, etc. present exciting platforms where people may easily express their opinions. The ICT revolution has also played and continues to play instrumental roles in the business sector where it has transformed business practices such as organisational management, trade negotiations, and payments for transactions (Czerniewicz, 2007:102).

Academic institutions are not immune from the changes brought about by the ICT revolution. In harnessing the potentials of the ICT revolution, “educational institutions as well as industry[ies] at all levels have moved quickly to exploit this new technology for instructional purposes” (Meyen, *et al* 2002). The influence of ICTs on HE institutions according to Czerniewicz (2007:102) can be seen from two perspectives:

⁴ According to *The Internet World Stats*, an internet user worldwide was over one billion as at 30 June 2010.

- As a catalyst to new knowledge conception and production processes, resulting in demands for particular forms of high knowledge and skills.
- To offer fundamentally new ways of organizing and delivering knowledge (e-learning).

In HE, ICTs are being employed to perform various functions as indicated in Table 2.

Table 2: Information Technology in Higher Education – Areas of Concern

IT in HE	Areas affected by the developments of IT
Teaching and Learning	The teaching and learning process The educational ‘products’ and services: Programs Courses Computer literacy
Research	The research process Research fields: Computer science Interdisciplinary research
Libraries and information Servicers	The ease of access to information The kind of information to be administered by libraries: Books and other media
Administration and management	Efficiencies and effectiveness of administrative and Institutional management

Source: Bull *et al.* 1994.

As indicated in Table 2, ICTs are being put to different uses in HE institutions. As an ever evolving field, the application of ICT in HE continues to broaden. The production of innovative ICT facilities implies that ICTs will continue to be used in ways not previously conceived. In the past, communication media like radio and television (Reiser, 2001:56) were used to relay education materials to learners whose educational needs were not catered for by the traditional learning environment. The traditional learning environment is seen as “static, stable and location specific. Thus lectures take place in lecture halls, seminars in smaller rooms on campus and homework or independent work in the library or off campus” (Czerniewicz and Brown, 2010a:149). The ICT revolution is bringing about a paradigm shift in our understanding of the learning environment. Through the ICT revolution, the learning environment is no longer limited to a geographic location. This gives learners the opportunity to be flexible about the time that

they devote to learning. Apart from the flexibility which ICTs provides for learners, it has been argued that there are a host of other advantages which ICT mediated learning provides in the information age (Howie, Muller and Paterson, 2005:30). These advantages, it is argued, are conspicuously absent in the traditional medium of education. Table 3 compares education in the industrial society and in the information age.

Table 3: The Difference Between Education in the Industry and Information Society

Actor	Education in the Industrial Society (The traditionally important paradigm)	Education in the Information Society (The emerging paradigm)
School	Isolated from society Most information on school functioning confidential	Integrated in society Information openly available
Teacher	Initiator of instruction Whole-class teaching Evaluates students Places low emphasis on communication skills	Helps students find appropriate instructional path Guides students' independent learning Helps students to evaluate own progress Places high emphasis on communication skills
Student	Mostly passive Learns mostly at school Hardly any teamwork Takes question from books or teachers Learns to answer questions Low interest in learning	More active Learns at school and outside school Much teamwork Asks questions Finds answers to questions High interest in learning
Parent	Hardly actively involved in learning process No steering of instruction No lifelong learning model	Very active in learning process Co-steering of instruction Parents provide learning model

Source: Brummelhuis, P. et al (1997 in Howie, Muller and Paterson 2005:30).

3.1.1 E-learning: Conceptual Issues

As stated earlier, ICTs are being put into various uses in HE institutions. An example of how ICTs are being used in HE institutions is the facilitation of e-learning. In recent times, e-learning has become an integral part of many education institutions across the globe. The invention of the World Wide Web by Tim Berners-Lee in 1989 occupies a critical niche in the use of e-facilities for T&L (Richardson, 2009:1). E-learning media such as live video streaming, and various web applications such as email, twitter, podcast, blogs, digital libraries, wikis, etc. provide exciting opportunities for enhancing T&L initiatives (Marshall, 2005). The opportunities which ICTs provide for T&L was re-echoed by Naledi Pandor, the former Minister of Education, in the forward to the *Draft White Paper on E-education* (2004). According to Pandor “Information and Communication Technologies (ICTs) are central to the changes taking place throughout the world. Digital media has revolutionized the information society and advances in ICTs have dramatically changed the learning and teaching process” (Department of Education, 2004).

Although ICTs play crucial roles in contemporary academic institutions, a review of literature on ICTs shows that related concepts are plagued by conceptual ambiguity. Many concepts employed in this field are used interchangeably (Meyen, et al 2002; Brown, Anderson and Murray, 2007:78; Richardson, 2009; Urdan and Weggen, 2000:4). For instance, concepts such as open distance learning, online learning and technology assisted learning are sometimes used as synonyms for e-learning. For those unfamiliar with this field, the lack of conceptual clarity often leaves them lost in the minefield of conceptual ambiguity.

The word e-learning has been used by different authors to mean different things – its meaning ranges from being a mode of education that focuses on web-based self study to learning that is supported by electronic media. Garrison and Anderson’s (2003:xi) conceptualisation of e-learning falls within the ambit of the first understanding. They hold that e-learning is a “learning facilitated online through network technologies” (Garrison and Anderson, 2003:xi). A similar view is echoed by Nagi (2006:7) who holds that e-learning is the “online delivery of information, communication, education and training.” Physical or classroom encounters between educators and learners is excluded from this understanding of e-learning.

Online learning is sometimes termed flexible learning. The aim of flexible learning “is to augment or replace conventional classroom activities with a range of technologies such as interactive multimedia, computer-mediate conferencing, and e-mail” (Daniel, 1999:59). A characteristic often associated with this conceptualisation of e-learning is a shift from a teacher-focused to a learner-focused pedagogy. Learners within this paradigm are not seen as passive participants who must assimilate what is passed across by the educator. Rather, they are seen as active participants in the learning process. Learning is believed to take place in the context of interaction between members of the online community. In this context, the role of the educator shifts from being the provider of knowledge to being a facilitator of the process of knowledge generation. This form of learning is often referred to as collaborative or active learning (Czerniewicz, 2007:90).

Czerniewicz’s (2007) delimitation of e-learning is similar to the foregoing except that it includes non-online electronic learning media such as CD-ROM. E-learning, according to this view, does not necessarily take place via the internet – the internet is one of the means through which e-learning can be conducted. Czerniewicz (2007:90) defines e-learning as “flexible learning using ICT resources, tools and applications (which may involve the use of the internet, CD-ROM, software, other media and telecommunications), focusing on:

- Accessing information.
- Interaction among teachers, learners and the online environment
- Collaborative learning and
- Production of materials, resources and learning experiences

The second understanding of e-learning is highlighted by scholars such as Waterhouse and Rogers (2004:4), and Yan *et al* (2003) who see e-learning in terms of the use of technology to assist T&L. Although the two understandings revolve around the use of ICTs to support T&L, the conceptualisation of the term by Yan *et al* differs slightly from that of Waterhouse and Rogers. The difference stems from Yan’s *et al* focus on the historical development of learning. Yan *et al* see e-learning as the third system of learning – the first system being the s/speech system, the second is the p/paper phase and the third system is the e/electronic phase of learning

(Yan *et al* 2003:286). The focal point of the two conceptualisations of e-learning is the idea that rather than courses being delivered solely via online medium, e-learning strategy is used to support and improve the quality of classroom-based T&L.

E-learning can either be synchronous or asynchronous. Asynchronous learning is real-time learning conducted via electronic means. Latchman *et al* (2001) define synchronous learning as a “process whereby a student can join a traditional on-campus lecture synchronously using live video and audio streams, and can also benefit from the class at a later time by accessing archived video and audio, synchronized with PowerPoint class materials.” According to Hrastinski (2008), synchronous e-learning that is “supported by media such as videoconferencing and chat, has the potential to support e-learners in the development of learning communities. Learners and teachers experience synchronous e-learning as more social and avoid frustration by asking and answering questions in real time.” Prior to the ICT revolution, synchronous learning was limited to a particular geographic location; it could only happen in classrooms. The advancement of ICT has led to deterritorialisation, it has removed the space constraint which previously confined synchronous learning to a given geographic location.

An asynchronous e-learning is learning that is “facilitated by media such as e-mail and discussion boards, supports work relations among learners and with teachers, even when participants cannot be online at the same time” (Hrastinski, 2008). In non-online based distance education, asynchronous learning is mediated via the post. With the introduction of the web and other application like emails, blogs and learning management systems (LMS) such as Moodle, asynchronous learning now also happens via online means. More and more, learners and instructors are able to engage in synchronous T&L activities through the help of web applications. Teaching and learning within the framework of asynchronous learning does not happen in real time. Information such as assignments or comments could be left for the educators or learners to address at a convenient time. Asynchronous T&L appears suited to the needs of working class adult learners who need flexible learning plans.

As already indicated, open distance learning or online learning are sometimes used as synonyms for e-learning. According to Moore and Tait (2002:7), “the terms *open and distance learning*

*reflects both the fact that all or most of the teaching is conducted by someone removed in time and space from the learning, and that the mission aims to include greater dimensions of openness and flexibility, whether in terms of access, curriculum or other elements of structure.”*⁵ This definition of distance education seems not to be cognizant of synchronous learning via online medium. Although e-learning is a form of distance education, not all distance education could be said to be e-learning. This is particularly true of distance education institutions whose course materials are not delivered via online medium. For instance, a distance oriented education institution such as the University of South Africa (UNISA) delivers the bulk of its course materials via the post.

For this study, e-learning is defined as learning which is realized through an online medium. E-learning courses are delivered entirely online with the aid of specialized learning environment created to meet the needs of the online learning community. E-learning can either be a fully online course or a pedagogical strategy aimed at supplementing classroom-based courses.

3.1.2 The Growth of E-learning

Across the globe, academic institutions are adopting e-learning strategies. Technology has paved the way and has augmented the globalization of education and educational institutions. With the aid of e-infrastructures, academic institutions are able to provide education services to learners across national boundaries. The pedagogical strategies being adopted by academic institutions imply a paradigm shift in how these institutions are structured and governed. Against the backdrop of the ongoing transformation, some scholars have argued persuasively that in the next three decades, academic institutions as we know them today will become irrelevant (O’Neil, et al 2004:314). Following this line of argument, Dye points out that:

Thirty years from now, the big university campuses will be relics. Universities won’t survive...Higher education is in deep crisis. The college won’t survive as a residential institution. Today’s buildings are hopelessly unsuited and totally unneeded (Dye, cited in 1997:761 cited in Byrd, 2001:5).

Consistent with this line of argument, it could be said that institutions that are actively attracting students through e-learning strategy are ideally placed to be of relevance to the e-generation.

⁵ Italics in the original text.

Those institutions of learning that fail to adapt to the new learning paradigm will – according to the above view – become obsolete. They will go into extinction as demands for their services decline.

It has also been argued that the adoption of e-learning strategy by HE institutions is due to the growing competition in the sector. The drive by academic institutions to attract more students has led to a high level of competition among HE institutions. Traditional academic institutions face competition not only from those that provide similar services, they also must compete with virtual universities that have emerged in the information age. This view is reiterated by Meyen (2002), who holds that with the advent of e-learning, “virtual universities, with no prior education histories have come into being, attracting large enrollments.”

An account different from the foregoing has been advanced to explain the factors behind the ongoing changes being witnessed in academic institutions. According to the *Draft White Paper on E-education* (2004) the changes in the landscape of education is premised on four different but related factors: (1) the changing nature of the work environment, (2) the realities of the information age, (3) the new global partnerships and (4) an awareness of the need for equal distribution of educational opportunities.” Similarly, the United Nations Education, Scientific and Cultural Organization’s report on the growth of e-learning attributes the changes in HE institutions to two factors: (1) “the growing need for a continual skills upgrading and retrain, and (2) the technological advances that have made it possible to teach more and more subjects at a distance” (Moore and Tait 2002:4). The changing nature of the work environment implies that learners be equipped with practical problem solving skills that will enable them to adapt to the dynamics of the work environment. Pressure from students who want flexible learning opportunity is another driver behind the changes being witnessed in HE institutions. This is the view held by Goddard (1998 cited in O’Neil, et al 2004:315) who argues that “the demand for higher education is expanding exponentially throughout the world and by 2025 as many as 150 million people will be seeking Higher Education.” To meet the demands for flexible learning, academic institutions must adopt flexible pedagogical strategies which allow learners to undertake educational activities at their own time, space, and pace. This often implies adopting e-learning strategies.

In line with international patterns, e-learning has been used to address the challenge of large student numbers. Jansen (2004:303 cited in Ravjee, 2007:27) cites the universities of Stellenbosch and Pretoria as two institutions in South Africa “where the number of ‘distance’ students enrolled in traditionally ‘contact’ institutions increased by almost 500% between 1993 and 1999.” In response to this challenge, the University of Pretoria introduced “a central, shared LMS⁶, infrastructure and support services” to reach large students base. This strategy increased access to learning materials and interaction between lecturers and students (Czerniewicz, 2007:91).

3.1.3 E-learning Strategy: Some Criticisms

Although e-learning is said to have advantages which the traditional form of education lacks, it has been argued that e-learning also has some weaknesses. One of the criticisms of e-learning is linked to the lack of physical interaction among online learners (O’Neill, Singh, and O’Donoghue, 2004). Cooper (cited in O’Neill, Singh, and O’Donoghue, 2004) contends that “electronic contact cannot currently sustain the qualities and multi-dimensionality of the kind of tutor-student relationship that real⁷ learning seems to require.” Other scholars have challenged the merit of this criticism pointing out that physical contact is not a prerequisite for learning (O’Neill, Singh, and O’Donoghue, 2004). They assert that students, over the years, have been able to learn by reading from books in the privacy of their rooms and in the library. Consequently, to assert that students need physical interaction before authentic learning can take place is not a legitimate claim (O’Neill, Singh, and O’Donoghue, 2004:18).

Another criticism of e-learning claims that e-learning has led to the commercialisation of education. This could be seen from the perspective that the growth of e-learning has occurred more in for profit institutions (Jung, 2009:1). Consistent with the foregoing, Noble (1998) argues persuasively about the increasing trend in the commercialization of academia. According to Noble (1998) “Universities are not simply undergoing a technological transformation. Beneath

⁶ The Learning Management System is often abbreviated as LMS. It is software used for documenting, tracking and management of trainings and e-learning programmes.

⁷ The use of this word already implies a bias towards e-learning; it suggests that e-learning is not ‘real’ learning. It is an aberration of learning. This is the view held in some academic circles.

that change, and camouflaged by it, lies another: the commercialization of higher education. For here as elsewhere technology is but a vehicle and a disarming disguise.”

In South Africa, policy documents of the Department of Education (DoE) show that government is cognizant of the implications of e-learning for the standard of education. In its 2007 *White Paper on Higher Education*, the DoE states that the danger which the Department seeks “to avoid is a laissez-faire proliferation of higher education programmes by an increasing range of providers, without the benefit of a planning framework and without adequate safeguards to ensure the quality of provision” (DoE 1997:22). There is therefore a need to put in place a framework which will regulate the provision of e-learning.

The foregoing suggests that there is an awareness of a move towards the commodification or the “McDonaldization” of education (Gerhard and Mayr, 2002:3). A profit oriented university has repercussion for the quality of graduates that it is capable of producing. A report by the University of Houston corroborates the idea that graduates of online institutions are less equipped for the workplace when compared with those educated in a conventional environment. A survey of human resource professionals by the University in 2000 showed that 61% of those surveyed believed that online degrees were not as credible as traditional qualifications (University of Houston, 2001 cited in O’Neill, Singh, and O’Donoghue, 2004:318).

3.2 The Digital Divide: A Challenge to E-learning

One of the often cited potentials of e-learning lies in its ability to increase access to education. This is especially true for developing countries struggling to provide basic education for all. With limited number of HE institutions, many cash-strapped developing countries are unable to accommodate and provide quality education to citizens within the ambit of classroom-based education. Scores of developing countries have not been able to tap into the enormous potentials of e-learning due to the near absence of requisite resources – both human and capital (Iahad, 2004). The inability to use ICTs for education and development by developing countries implies that the chasm between developed and developing countries continues to widen. This is why Castells (2000:4-5) argues that with the increase in connectivity and the use of technology, “countries lacking these resources become locked in their backward conditions.” It is against this

backdrop that the United Nation's Human Development Report (HDR) introduced the ICT Development Index (IDI) in 2001. The index shows that there is a correlation between the level of development and access to ICT infrastructures. The 2009 UNDP report holds that most of the countries with favourable IDI are in the global north while most developing countries have and continue to perform poorly in terms of their IDI.

Compared with the more developed countries of Europe, North America and the developed nations of Asia, the level of ICT penetration in developing countries is significantly low. This disparity between developed and developing countries in terms of access to ICT infrastructures is what is often dubbed the digital divide. The issue of access forms the axis around which discussion on digital divide revolves. Moore and Tait (2002:5) define digital divide as “the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities.”

Table 4: World Internet Usage and Population

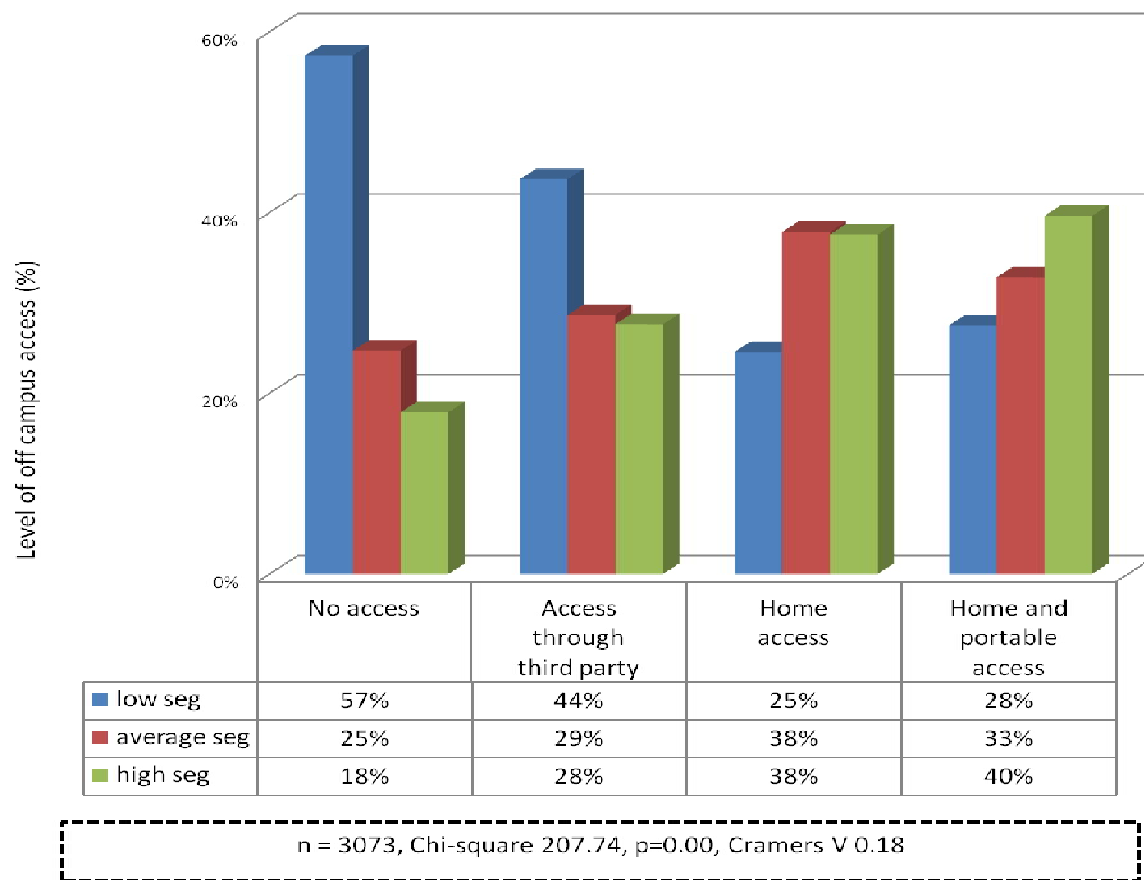
World Regions	Population (2010 Est.)	Internet Users Dec. 31, 2000	Internet Users Latest Data	Penetration (% Population)	Growth 2000-2010	Users % of Table
Africa	1,013,779,050	4,514,400	110,931,700	10.9 %	2,357.3 %	5.6 %
Asia	3,834,792,852	114,304,000	825,094,396	21.5 %	621.8 %	42.0 %
Europe	813,319,511	105,096,093	475,069,448	58.4 %	352.0 %	24.2 %
Middle East	212,336,924	3,284,800	63,240,946	29.8 %	1,825.3 %	3.2 %
North America	344,124,450	344,124,450	266,224,500	77.4 %	146.3 %	13.5 %
Latin America/Caribbean	592,556,972	18,068,919	204,689,836	34.5 %	1,032.8 %	10.4 %
Australia/Oceania	34,700,201	7,620,480	21,263,990	61.3 %	179.0 %	1.1 %
World Total	6,845,609,960	360,985,492	1,966,514,816	28.7 %	444.8 %	100.0 %

Source: Internet World Stats 2010.

The greatest tragedy of the digital divide is that it is producing a situation whereby “those who have the greatest need of them – disadvantaged groups, rural communities, illiterate populations or even entire countries – do not have access to the tools which would enable them to become full-fledged members of the knowledge society” (Moore and Tait, 2002:7). The tragedy is more nuanced in Africa where many schools are struggling to buy text books, keep school children clothed, fed and housed in conducive learning environment. The cost of purchasing ICT facilities is prohibitively high for many African countries. In addition, the cost of internet access is beyond the means of many in Africa. A key challenge constraining African countries from harnessing the potentials of ICTs is the near absence of the necessary infrastructural facilities (Castells 1999:2). Although the works of Brown *et al* (2007:70) show that this divide is being bridged in South Africa as more and more people have access to cellular phones, cellular phone charges are very high in many African countries (Buys, 2008:1495; Brown Anderson and Murray, 2007:72). Since cost places restriction on access, the high cost of phone charges in Africa has implication for how e-learning can be realized on the continent.

From a socio-economic perspective, Czerniewicz and Brown (2010a:364) hold that inequality in terms of access to ICT correlate with socio-economic status and is more widespread among people whose first language is not English. They further point out that rather than the digital divide being bridged; it is being strengthened in South Africa. One of the dimensions that the digital divide is being strengthened is the broadening gap between students who have access to broadband connection at home and those who do not. They argue that “on campus/off campus divides and social class distinctions are deepened by class-based personal access in private homes. Issues of access are pertinent to student experiences because they shape what is possible” (Czerniewicz and Brown, 2010:145b).

Figure 4: Types off Campus Access to ICTs by Socio-economic Grouping



Source: Brown and Czerniewicz (2010b:364).

Figure 4 indicates that there is a correlation between social economic group (SEG) and off-campus access to the internet. From the chart, 57% of students with no access to ICTs off campus are from low SEGs. Similarly 44% of those who access ICTs through secondary sources are from that same group. This does show a statistically significant relationship (Chi-square of 207 $p = 0.005$) although the association is weak (Cramer's V 0.18) (Kotrlik and Williams, 2003, cited in Brown and Czerniewicz, 2010b).

3.2.1 Bridging the Digital Divide: Connecting Africa to the Internet

Having realized the potential of e-learning for Africa's development, different strategies are being explored to help Africa reap the benefits of the ICT revolution. Significant among these is the increasing trend in the number of online learning institutions across Africa. The African

Virtual University is playing a leading role in this regard. The University is a fully digital University aimed at providing quality education for Africans. Headquartered in Nairobi, Kenya, the African Virtual University is geared towards the provision of quality education and training for students and professionals in Africa (African Virtual University, 2010:2). The University also works towards supporting economic development across the continent. Other universities across Africa, while providing classroom based education, are also providing full online learning opportunities in a bid to address the educational needs of the continent. These universities provide ICT resources either on or off campus at their learning centres.

Although academic institutions can and do play strategic roles in bridging the digital divide, it has been pointed out that they are limited in terms of what they can do. Meaningful success in increasing access to ICTs in developing countries is premised on the political will of leaders in addressing the challenges facing the development of ICTs. Oestmann and Dymond (2001:3), point out that leaders must have the political will to address challenges such as:

- Access to technology.
- Affordability and financing.
- Inappropriate regulatory frameworks; and
- Shortage of knowledge and skills to develop and implement ICT-based systems.

The Kigali *Connect Africa Summit* held in October 2007 was a bold political step towards addressing the challenges of the digital divide in Africa. Among other things, the summit was aimed at mobilising “the human, financial and technical resources required to bridge major gaps in Information and Communication Technology (ICT) infrastructure across the continent, with the aim of supporting affordable connectivity and applications and services to stimulate economic growth, employment and development throughout Africa” (Connect Africa Report, 2007).

Attended by 1036 participants from 54 countries, the summit resolved to connect all capitals and major cities in Africa by 2012. The summit also resolved to connect African villages to broadband by 2015, support the development of ICT related skills, and establish centres of

excellences that will support education across the continent. The summit took a bold step by encouraging countries to develop national e-strategies that will facilitate the use of ICTs for development purposes by 2012 (Connect Africa Report, 2007). The President of the African Development Bank, Donald Kaberuka holds that although much is yet to be seen in the translation of these resolutions into positive actions, progress is being made on various fronts. He based his optimism on the fact that “the rate of [ICT] penetration has doubled from about 20 per cent to over 40 per cent with the unprecedented growth in mobile telecommunication over the last decade and a half” (Kaberuka, 2010).

There are indeed positive signs that Africa is preparing and working towards harnessing the potentials of the ICT revolution. A significant stride in this regard is the laying of a submarine optical cable connecting African countries to Europe, North America and Asia by *Main One Cable*. In addition, “new submarine cable systems: SEACOM and TEAMS have landed on the East coast of Africa, with three more expected to be completed within the coming two years in different parts of Africa” (Kaberuka, 2010). The submarine optical cables provide increased internet speed. In addition, they can lead to a reduction in the prices of internet connection (Kaberuka, 2010). Another innovative initiative aimed at bridging the digital divide is the location of publicly accessible ICT facilities. Such centers are often referred to as telecentres.⁸ Oestmann and Dymond (2001:2) define telecentres “as strategically located facilities providing public access to ICT-based services and applications.” According to the definition, telecentres are geared towards bringing ICT facilities closer to people who would otherwise not have access to them. It is against this backdrop that telecentres are usually located in rural areas. According to Oestmann and Dymond (2001:2), telecentres usually have a combination of the following:

- Telecommunication services such as telephony, fax, e-mail and Internet (via dial-up or ISDN, high-speed telecommunications network).
- Office equipment such as computers, CD-ROM, printers and photocopiers.
- Multimedia hardware and software, including radio, TV and video; and
- Meeting spaces for local business or community use, training and so on.

⁸ Telecentres are known by other names: telecottages, télécentres, infocentros, telecentros, espacios numérisés, telestugen, community technology centres, phone shops, open learning centres, digital clubhouses, cabinas públicas, people’s economic posts and wartels’ (Latchem and Walker 2001:vii)

The goal of telecentres is to provide access to these facilities for people who would otherwise not have access to them. Such centres have the potential to provide the much needed services in developing countries in the area of education, healthcare, economic development and various services that can help improve the socio-economic conditions of people (Oestmann and Dymond, 2001:2). Various telecentres have been established across Africa. One of these is the Gaseleka telecentre located in the Northern Province, South Africa's poorest region. Established by the Universal Service Agency (USA),⁹ the centre provides ICT related services to 34 surrounding villages (Benjamin, 2001:75).

3.3 Charting the Course for E-learning Policy

In an international study aimed at charting the trends in the formulation of e-learning policies, Brown, Anderson and Murray (2007) uncovered three consistent stages

The first stage occurs as governments act to make e-learning possible, the second as they work to integrate e-learning into the education system, effectively, to mainstream e-learning. In the third stage, a transformative role for e-learning is seen, with changes to views of learning and to the nature and operation of the tertiary institutions and the tertiary system (Brown, Murray and Anderson, 2007:76).

According to the pattern uncovered in the study, government plays a critical role in charting the course of e-learning policies. This is evident in the fact that the first two stages are basically the domains of government. National government, through its policy framework, sets the tone for institutions and organisations interested in developing e-learning strategies. Although this is the pattern witnessed in the international study, the South African scenario presents a slightly different case. Some education institutions independently developed e-learning strategies in the absence of a national policy. Czerniewicz (2007:104) cites two examples of such institutions: the University of Stellenbosch, which developed “an integrated strategy incorporating e-learning, e-information, e-student administration, e-research and e-services” and the University of Pretoria which developed “a telemetric learning and education innovation strategy plan.” In addition, the Universities of Free State, Limpopo, Cape Town and Western Cape have developed similar strategies (Czerniewicz, 2007:104).

⁹ This agency was established based on the Telecommunications Act of 1996 to provide the access to ICT. The Act was a response to redressing the inequality in access to telecommunication facilities in South Africa.

3.3.1 Why have an E-learning Policy Framework?

A study of the terrain of ICTs in HE in South Africa shows that this is an emerging field. According to Czerniewicz *et al* (2006:33 cited in Czerniewicz, 2007:104), this field of study is still “in the process of defining itself and clarifying its boundaries.” So far, not much study has been done in this field. A review of articles in the South African Journal of Higher Education by Czerniewicz points to the following:

In 2001 there was one article...However; there were three in 2002 and six in 2003. In 2004 there were three. The articles that have been published in SJHE come from several different institutions. Two were from University of Cape Town two from Rand Afrikaans University, two from University of Pretoria, and one each from the University of Witwatersrand, Cape Technikon, University of South Africa, University of Natal and University of Stellenbosch’ (Czerniewicz, 2006:31 cited in Czerniewicz 2007:106).

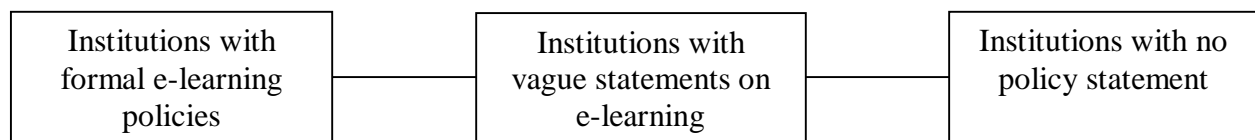
Of all the articles on e-learning reviewed, none was devoted to exploring e-learning policy. In the literature on e-learning, little attention has also been paid to studying the processes involved in the formulation of e-learning policy. Attention seems to be focused on how ICTs are being used for T&L. The use of ICTs for T&L in South African context exists within a loose policy framework. The loose policy framework of e-learning policy has an advantage; it creates a situation whereby academic institutions are able to experiment with innovative e-learning initiatives (Czerniewicz, 2007:112). This type of implementation mirrors Matland’s (1995) high policy ambiguity.

Although it has been pointed out that e-learning can improve the quality of education, its adoption has not been automatic. Pertaining to the use of ICTs for T&L, it has been shown that a link exists between e-learning policy and change in practice (Czerniewicz and Brown, 2009). In the same vein, a 2004 study by Czerniewicz and Brown (2006) “showed that in institutions with established e-learning policies, staff reported that the use of e-learning across the institution was good and were very positive about institutional support and vision for e-learning.” The emerging idea is that it is not enough to invest in ICT infrastructures; a policy framework that defines how e-learning should become a learning strategy for the institution needs to be established by HE institutions. The vision enshrined in the policy framework acts as a blueprint that guides and stimulates the growth of e-learning initiatives across the institution.

An institutional policy approach to e-learning is informed by the dominant ideas within the institution. For instance, in institutions “where there is a belief that ICTs are merely a neutral medium for conveying any kind of pedagogical principles, the tendency is not to write ICT policies related to teaching and learning” (Czerniewicz, 2007:204). E-learning activities within such institutions are simply carried out by individuals and departments that are interested in using it as a learning strategy. In other institutions where “there is a fundamental recognition that the manner in which ICTs are deployed carries with it implications for pedagogy, the policies tend to integrate the two concerns” (Czerniewicz, 2007:204). The implication of this is a harmonized approach to e-learning. E-learning in such institutions is not just about the passion and interests of individual lecturers and departments, it is also a duty that needs to be performed.

A survey of South African HE institutions shows that although all universities in the country have formal ICT departments, they do differ in terms of their policy strategy towards e-learning (Czerniewicz, 2007:101). Not all HE institutions in South Africa have a formal e-learning policy framework. From the perspective of institutional e-learning policy, academic institutions could be placed in three categories. At one extreme are those HE institutions that have developed formal e-learning policy framework that delimits how e-learning should be used for teaching and learning. Midway on the scale are institutions that do not have clear policy statements. Reference to e-learning could be gleaned from different policy documents or strategic plans of such institutions. In such academic institutions, implementation of e-learning is often based on the interests and passions of individuals, lecturers and departments (Czerniewicz, 2007:204). At the other extreme are those institutions that have no policy framework delimiting how e-learning could/should be used as a strategy for T&L (Czerniewicz, 2007:204). Their approach to e-learning is highly ambiguous; there is no institutional stance on the issue.

Figure 5: Classification of Academic Institutions based the Status of E-learning Policy



Source: Adapted from Czerniewicz (2007).

Table 5: Survey of Policies at South African Universities, June 2006¹⁰

Policy Status	University
Institutions with formal policies, complete with strategic plans and regulatory frameworks, as well as statements of policy principle	University of Pretoria University of Stellenbosch University of Western Cape
Institutions with formal policies or strategic documents with clear principles and intentions but no implementation documents as yet	University of Cape Town Tshwane University of Technology
Institutions with draft policies	University of Fort Hare University of Free State
Institutions where ICT policy is incorporated into existing policy	Durban University of Technology
Merged institutions where it is not clear if policy from one institutions applies across the new institution	University of Johannesburg University of KwaZulu-Natal
Institutions with no frameworks, although they may have relevant institutional structures	Cape Peninsula University of Technology Nelson Mandela Metropolitan University Rhodes University North-West University University of Venda University of Witwatersrand Vaal University of Technology Walter Sisulu University.

Source: Saide 2006 (in Czerniewicz, 2007:105).

The fact that e-learning is already being implemented in some of the institutions lacking a clear policy framework brings up debates about the relevance of developing a specific e-learning policy framework. This dilemma is witnessed even at the national level where scholars are not unanimous on the question of developing a national framework for e-learning. Arguments on the

¹⁰ This is not a comprehensive list as it did not include, for instance, the University of Zululand. A further National survey of universities is needed to give comprehensive information about the status of e-learning policies across HE institutions in South Africa.

development of a national policy are divided into two polar opposites. Opponents of a national e-learning policy contend that issues of e-learning in HE can easily be situated within “existing [institutional] principles and frameworks” (Czerniewicz, 2007:103). Consequently, developing a separate policy framework dedicated to e-learning is seen as a redundant exercise. This seems to be the tacitly accepted strategy at institutions that do not have e-learning policy. Although these institutions are implementing e-learning strategies, it appears that they do not see the need for developing a policy framework for e-learning that is separate from that which guides teaching and learning.

Contrary to the foregoing, proponents of a national e-learning policy framework contend that developing a national policy framework is necessary in order to redress the lack of uniformity in the implementation of e-learning across institutions. Advocates of this position assert that “a national policy framework might establish positive, open-ended principles to be tried for in the long term” (Czerniewicz, 2007:103). The emphasis on the development of an open-ended e-learning policy framework is informed by the ever evolving terrain of e-learning. With new technologies being developed, a rigid e-learning policy framework can easily become irrelevant within a short timeframe. This is the point highlighted by Brown, Anderson and Murray (2007:9) who hold that “in comparison to the compulsory schooling sector, the provision of e-learning policy for tertiary education is relatively immature. A notable feature of initiatives in this area is the short shelf life of policy.” E-learning policy therefore needs to be seen as an ongoing process, a process that needs to be continually renewed and reformulated so as to adapt to the emerging e-learning field.

3.3.2 E-learning Policy: The Need for Inclusivity

Technical skills both on the part of staff and students are often viewed as a challenge facing the introduction and the use of e-learning. Based on the assumption that those seeking e-learning are already adept with the requisite technical knowledge, attention is hardly paid to addressing the needs of students and lecturers who lack ICT skills. Studies that emphasized the pervasiveness of technology in society could have informed the little attention being paid to the technical competence of learners and lecturers in the formulation of e-learning policies. In a study that explores the ICT knowledge base of society, Prensky (2001) divides society into two: the “digital

natives” and the “digital immigrants”. Digital natives are those “first generations to grow up with this new technology. Digital natives have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age...[they are] “native speakers” of the digital language of computers, video games and the Internet” (Prensky, 2001:1). Prensky (2001:2) refers to those who did not grow up in the digital age as the digital immigrants. The digital immigrants are those who were born prior to the digital revolution. Through interactions, they develop interest and learn the basics of the new technology. Although digital immigrants do not have much ICT skills when compared with digital natives, Prensky (2001:6) argues that they are able to acquire ICT related skills through informal means due to the pervasiveness of ICT in society.

The weakness of this bifurcation of society into digital natives and digital immigrants is its inability to tell the whole story of access to ICT infrastructure. Prensky’s analysis seems to be more applicable in societies with high level of access to ICT infrastructure. This is the theme uncovered in the work of Brown and Czerniewicz (2010b) who contend that the South African scenario does not fit seamlessly into Prensky’s categorisation. They reckon that there is a third category; those “who lack both experience and opportunities, as they have been using a computer for fewer than four years; and have no direct access to ICTs off campus” (Brown and Czerniewicz, 2010b). The authors maintain that this group of students fit neither into Prensky’s digital natives nor digital immigrants. They are ‘digital strangers’, they are outside the digital world (Brown and Czerniewicz, 2010b). It is this section of the population that is often neglected in the formulation of e-learning policies. Another weakness of Prensky’s classification is the application of the notion of digital natives. This is of importance to South Africa where “being a “digital native” was not about age but about experience and it did not apply to a generation but elite” (Brown and Czerniewicz, 2010b). Rather than rely on informal knowledge base which Prensky alluded to, digital strangers in South Africa depend on formal systems and structures in order to acquire basic ICT skills. In the context of Africa whereby access to ICTs is still a challenging issue; it will be a big disservice to the academic field to superimpose a Western paradigm.

An issue not often addressed in existing e-learning policy documents is the concern of disadvantaged groups. The key issue being raised here is “about some of the deeper structural barriers to promoting wider access to tertiary education have largely been ignored by e-learning policy” (Brown Anderson and Murray, 2007:78). With no specific reference to this section of the population in e-learning policies, they are often unable to harness the potentials of e-learning (Brown, Anderson and Murray, 2007:78). In the context of South Africa, more studies need to be done to explore the extent to which disadvantaged members of the society are considered in the formulation of e-learning policies.

3.4 Conclusion

This chapter has reviewed the various opportunities that the ICT revolution presents for T&L. In addition, the concept of e-learning and the surrounding ambiguity were explored leading to a review of the challenges facing e-learning in Africa. One of the key issues which emerged from this review is that e-learning is an emerging field that is in a gradual process of defining itself. The chapter also reviewed current trends of e-learning across HE institutions in South Africa highlighting the fact that different HE institutions have different approaches to the formulation and implementation of e-learning. While some institutions have formulated clear policy frameworks for e-learning, the implementation of e-learning in other institutions occur within loose frameworks. Understanding the different approaches to the formulation and implementation of e-learning policy plays a significant role in the policy analysis of e-learning. The next chapter will give a background to e-learning at UKZN.

Chapter four

Case Study

4 Introduction

This chapter is divided into two parts. The first part presents the research methodology employed for the study. In this part, attempt will be made to identify and justify the research method and the sampling technique employed. The second part will give an overview of the merger which brought into existence, the University of KwaZulu-Natal. This will pave way for the presentation of the central part of the chapter – a discussion of e-learning at UKZN. Structures put in place to support e-learning will also be highlighted to provide background information on the status of e-learning at UKZN.

4.1 Research Methodology and Methods

In the Social Sciences, research methodology employed is commonly categorised as being either quantitative or qualitative (Jayaratne and Stewart, 1991:85). While qualitative research seeks to gain in-depth knowledge about the contextual reality of research participants (Babbie and Mouton, 2001:270), quantitative research emphasises “gathering quantitative data by means of quantitative variables” with the aim of determining “the magnitude of variation” (Kumar, 1996:10). Qualitative methodology is particularly relevant to exploratory research which attempts to understand the impact of a new development e.g. technology and social processes (Robinson, 2002:271). This study will employ a mixed method for data collection i.e. it will collect and use both quantitative and qualitative data.

4.1.1 Sampling

Purposive non-probability sampling was used for selecting the study sample. In purposive sampling, the researcher has a purpose in mind which guides the selection of the study sample. In this sampling method, “a sample is built up which enables the researcher to satisfy her [his] specific needs in the project” (Robinson, 2002:265). This sampling technique enabled the researcher to select only those participants that have the requisite knowledge and were in position to answer the research questions.

4.1.2 Research Methods

The first method used to collect data for the study was a critical review of documents that pertain to e-learning. Relevant policies and documents of government and UKZN were reviewed to gain knowledge of the position of government and UKZN on the place of e-learning in education. This analysis was informed by relevant texts such as books and journal articles on e-learning. An advantage of this review is hinged on the fact that “it is unobtrusive and the data are permanent [...] and can be subject to re-analysis” (Robinson, 2002:358).

The semi-structured interview was the second method employed in the study. In semi-structured interviews, the interviewer “has predetermined questions, but the order can be modified based upon the interviewer’s perception of what seems most appropriate” (Robinson, 2002:270). This method was chosen for the study because of its flexibility. It allowed the researcher to follow-up new ideas that emerged in the course of the interview. Two sets of interview schedules were constructed: one for the interview with a staff member of the University Teaching and Learning Office (henceforth UTLO), and the other for interview with two staff of the Information and Communication Technology Division (henceforth ICT Division).¹¹ The staff were purposively selected because they are well placed to provide relevant information for the study. Data collected for the study will be analysed by means of thematic analysis (qualitative data) and descriptive statistical analysis using SPSS (Quantitative data). Thematic analysis is the “search for themes that emerge as being important to the description of the phenomenon” (Fereday and Muir-Cochrane, 2006:3).

The third method employed for the study was by means of questionnaires administered to 42 lecturers of the Faculty of Humanities, Development and Social Sciences who were purposively selected from the Pietermaritzburg campus of UKZN.¹² The Faculty has 13 schools out of which a total of 13 were selected for the study. The study focused on the faculty for two reasons. Firstly, the pedagogical strategies of e-learning vary across faculties hence, the need to situate the study within a particular faculty. Secondly, the programme of the researcher is hosted in this faculty and this increased the ease of access to research participants. Questionnaires administered

¹¹ See appendices A and B for interview schedules.

¹² See appendix C for questionnaire.

to lecturers contained both open-ended and closed questions. Open-ended questions allowed participants to provide additional information which the researcher did not anticipate when constructing the questionnaire. To increase validity, the questionnaire was first administered to a pilot group of lecturers before it was expanded to the whole study sample. This pilot group was not part of the participants who took part in the final study.

For confidentiality, those interviewed will not be identified by their names. The interviewee from UTLO will be identified as TL while those interviewed from the ICT Division will be identified as ICT1 and ICT2 respectively. Participants in the survey will be identified as respondents. Shorter excerpts from interviews and responses of respondents in the questionnaires will be italicised while longer ones will be indented.

4.1.3. Case Study Research

When carrying out research, researchers can choose either one of two options: they can choose to observe many different cases or carry out in-depth analysis of a case relevant to understanding certain phenomenon (Gerring, 2007:1). The latter option is what is often dubbed the case study approach. A case study is conceptualised by Gerring (2007:20) “as the intrusive study of a single case where the purpose of that study is – at least in part – to shed light on a larger class of cases (a population).” The strength of case study research is based on its focus on the experiences of actors grounded on the “dynamics of implementation and interpretation of events in their socio-political contexts” (Simons, 2009:14). Case study research is not removed from the lived experiences or the context that is studied. In case study research, the researcher seeks to understand cases or participants in their ‘natural context’.¹³

Case study research has been typically associated with qualitative research (Scapens, 2004). Accordingly, case studies are often linked with “a broad rubric covering a host of non-quantitative approaches – ethnographic, clinical, anecdotal, participant-observation, process-tracing, historical, textual, field research, and so forth” (Gerring, 2007:10). Contrary to this position, it has been argued that case study research does not use only qualitative data.

¹³ The extent to which the presence of the researcher affects the rhythm of the case being studied has been heavily debated. It has been argued that the presence of the researcher affects the natural flow of things and this affects the type of information that the researcher is able to generate.

Supporting this line of argument, Gerring (2007:11) contends that there seems to be no justification why mathematical representations cannot be used in case study research if this “helps to elucidate the relevant parameters operative within the given case.” It is therefore permissible to gather quantitative data if such data provide useful insight into the case being studied. In addition, a mixed method can be employed in case study research (Simons, 2009:5). The data collection strategy employed in case study is informed by the potential value of such data to the study.

The focus of a case study could be an individual, a classroom, an institution, a programme, a policy, or a system (Simons 2009:2; Gerring 2007:1; Noor, 2008). In the literature on case study research, there is no consensus on whether policies and process should be seen as objects of case study. However, while supporting the need to maintain the “commitment to the singularity and uniqueness of the policy process”, Simons (2009:2) is of the opinion that a wider focus on policy process can be an authentic object of case study. It is against this backdrop that this study aims to understand the processes involved in the formulation and implementation of e-learning policy at UKZN. The next section will give an overview of UKZN. It will also highlight institutional structures that support e-learning and the roles these structures play in the implementation of e-learning.

4.2 The University of KwaZulu-Natal: An Overview

The University of KwaZulu-Natal is a relatively new academic institution. Prior to 2004, what is today known as the University of KwaZulu-Natal were two independent Universities – the University of Natal (UN) and the University of Durban Westville (UDW). On 1 January 2004, UN and UDW merged to form a single academic institution – UKZN (Strategic Plan 2007-2016). The merger between the two institutions was in response to a 2002 proposal by the Minister of Education. Among other things, the minister called for the “transformation and restructuring of the institutional landscape of the higher education system in South Africa” (Pandor 2007, cited in Chetty and Collins, 2007). This was aimed at improving the management of HE institutions in South Africa. In addition, the call for the merging of HE institutions was aimed at redressing the skewed nature of HE institutions; a vestige of the apartheid era. In a bid

to restructure and transform HE in South Africa, 35 HE institutions merged into 23 institutions of higher learning.

Prior to 2004, UN and UDW catered for different racial groups. UN, previously known as the Natal University College, was established in 1910. The University underwent rapid expansion shortly after the end of the First World War. Further expansion saw the establishment of a Faculty of Agriculture in Pietermaritzburg in 1946. This was followed by the establishment of a medical school in Durban in 1947 which was exclusively for the black population – Indians, Africans and coloureds¹⁴. In 1949, the Natal College was granted the status of an independent University (http://sarua.org/?q=uni_University%20of%20KwaZulu%20Natal). Chetty and Collins (2007) hold that “in terms of organizational culture and ethos, the University of Natal was perceived as a white, elitist and colonial institution.”

UDW was established to cater for the academic needs of Indians. The University was established on the Salisbury Island in Durban Bay in 1960 (<http://alumniaffairs.ukzn.ac.za/events/SalisburyIsland.aspx>). The exclusive character of the University did not last long. During the turbulent years of the 1980s, UDW opened its doors to people of all races and became a focal point of anti-apartheid protests (<http://alumniaffairs.ukzn.ac.za/events/SalisburyIsland.aspx>).

The newly merged University of KwaZulu-Natal places great emphasis on teaching, learning and research. According to its mission statement, UKZN seeks to become “a truly South African university that is academically excellent, innovative in research, and critically engaged with society” (Strategic Plan, 2007-2016). In addition, the University has a vision of becoming the Premier University of African Scholarship (Strategic Plan, 2007-2016). By international standards, UKZN is a relatively large academic institution with five campuses – Pietermaritzburg, Westville, Howard College, Edgewood and the Medical School – spread across the southern coast of the KwaZulu-Natal Province. Structurally, the University is organised into four colleges; each of which has a constellation of 8 Faculties and a total of 54 Schools (¹http://www.ukzn.ac.za/About-UKZN/ukzn_organizational_structure.aspx).

¹⁴ The term coloureds refer to people of mixed races in South Africa.

Table 6: Colleges and Faculties of the University of KwaZulu-Natal

College of Agriculture, Engineering and Science	College of Health Sciences	College of Humanities	College of Law and Management Studies
<ul style="list-style-type: none"> • Faculty of Engineering • Faculty of Science and Agriculture 	<ul style="list-style-type: none"> • Faculty of Health Sciences • The Nelson R Mandela School of Medicine 	<ul style="list-style-type: none"> • Faculty of Education • Faculty of Humanities, Development and Social Sciences 	<ul style="list-style-type: none"> • Faculty of Law • Faculty of Management Studies

4.2.1 E-learning at UKZN

The University is cognizant of the invaluable roles of ICTs in HE. This esteemed value of ICT in education appears in various policy documents of UKZN. According to the University's *Strategic Plan* (2007-2016), "efficient electronic transactions, supported by an integrated ICT structure, will provide real-time access to information for students, staff and management decision-making purposes alike." In addition, the *Strategic Plan* (2006-2016) states that the University seeks to "promote excellence in teaching and learning through creative and innovative curriculum design and development, pedagogical strategies, and assessment practices in accordance with the highest quality management principles." The *Strategic Plan* further points that the University will "optimise the use of Information Technology in improving teaching and learning by integrating IT networks and communication protocols into learning environments."

In order to meet the vision of providing cutting edge T&L solutions tailored towards meeting the needs of students, the University committed itself to providing funding that is aimed at improving e-learning facilities (University of KwaZulu-Natal, 2008:5). The University recently undertook massive infrastructural development geared towards improving the quality of T&L. This includes the investment of R33 million to upgrade teaching facilities at the Edgewood campus. Facilities earmarked for upgrade include lecture theatres, construction of new students

LAN and a host of other support structures to improve T&L at UKZN (Mamela, 2010a). Apart from its financial commitments, UKZN has set up functional units committed to improving teaching, learning and research. These include the ICT Division and UTLO.

In terms of ICT infrastructure, the University has about 5000 computers to service the academic needs of students. Each of the campus is equipped with computer labs where students can access the internet. The University has also invested heavily in a massive roll-out of wireless technology. At the moment, there are about 450 to 500 wireless connections across the five campuses of UKZN (ICT1, 2010). Almost all classrooms, teaching venues and student residences have wireless connectivity. In addition, most meeting venues are being equipped with wireless facilities. These are tailored towards increasing internet connectivity. It is also a response to the awareness that increasingly, more and more students own personal computers. There is therefore a need to provide these students with the opportunity to access internet at various locations at such times that are convenient to them.

4.2.2 The ICT Information and Communication Technology Division¹⁵

The ICT Division of the University is responsible for all ICT related issues at the University. The ICT Division is concerned with issues related to the planning, development and maintenance of all ICTs. *The division is structured to employ a total of 120 people. At the moment, a number of these positions are vacant.* There are two key sections that play important roles in relation to e-learning. One of these is the Networking Division. The Networking Division has the responsibility of providing network facilities such as computers and internet connections. Another section of the ICT Division is the Academic Computing. The Academic Computing section is directly responsible for providing “support programmes to promote best practice in the adoption and effective use of technology in teaching and learning” (<http://ict.ukzn.ac.za:8080/ICT/>). In addition, Academic Computing seeks “to alert users on the challenges of recent student massification, and the means of interacting with large student numbers across distributed campus structures in the effective employment of educational technologies” (<http://ict.ukzn.ac.za:8080/ICT/>).

¹⁵Some of the information in this section is based on an interview with a staff of the ICT Division. Short excerpts from the interview are italicized while longer ones are indent.

The Academic Computing section of the ICT Division focuses on three strategic areas: e-learning, e-infrastructure and e-research. The e-learning arm of Academic Computing is geared towards providing the necessary support both in terms of infrastructure and capacity building. This is aimed at increasing the quality of e-learning across the University. The e-infrastructure wing of Academic Computing seeks to provide the infrastructural needs of UKZN. It is hoped that these infrastructures will aid the “production, storage, and shared access to information, via cloud and grid computing, by providing services and tools for data management and digital curation” (<http://ict.ukzn.ac.za:8080/ICT/>).

The Academic Computing section has five staff. There is an instructional designer who is primarily responsible for e-learning. The instructional designer helps academics to move their course materials onto the e-learning platform. In addition, the instructional designer helps academics to design their course in such a way that it allows academics to interact easily with students. A system consultant is responsible for implementing the Moodle open source software at UKZN.

The e-research section of academic computing seeks to address a number of issues related to research. It seeks to, among other things, carry out applied research aimed at tracking “emerging trends in online scholarship” (<http://ict.ukzn.ac.za:8080/ICT/>). In addition, e-research is tailored towards “developing platforms for online collaboration of virtual research communities; and of wireless handheld devices in visualization techniques to enable scientific data analysis” (<http://ict.ukzn.ac.za:8080/ICT/>). Through this, it is hoped that the University will have leverage in adopting emerging trends in the use of ICTs for T&L. The approach ensures that the practice of teaching, learning and research mediated through networked technologies will be informed and backed up by strong and sound empirical research.

A dedicated website – *learning@ukzn*¹⁶ - has been developed to support e-learning initiatives. The site is devoted solely to e-learning at the University. Among other things, *learning@ukzn* “enables students to follow lectures online, interact with lecturers, submit assignments and check on their marks. Lecturers are also able to upload course materials, post assignments and generate discussions online using blogs and other social networking tools” (Rajaram and Peters, 2010).

¹⁶ The website is <http://learning.ukzn.ac.za>

4.2.3 The University Teaching and Learning Office¹⁷

Another important structure directly involved in issues of T&L at UKZN is UTLO. Approved by Senate in 2008, the University Teaching and Learning Office (henceforth, UTLO) seeks to advance T&L practice of the university. One of the factors that informed the establishment of UTLO is the acknowledgement that not all lecturers come from the background of education. Consequently UTLO *seeks to provide firstly, the motivation for academics to embark on a journey of re-learning themselves in the pedagogy, methodology and philosophy of teaching and learning. In addition, it seeks to provide the resources and support in order to ignite interest in teaching and to sustain this interest.*

Established under the leadership of Professor Renuka Vithal, UTLO aims to “collaborate with academics, researchers and students to create supportive, adaptable and innovative learning environments in which outstanding teaching at all levels is nurtured, recognized and rewarded” (<http://ict.ukzn.ac.za:8080/ICT/>). In addition, the office is responsible for addressing all the “teaching and learning needs of the University community, providing leadership in developing and implementing pedagogically sound research driven solutions” (<http://ict.ukzn.ac.za:8080/ICT/>). The University is constantly exploring new strategies to improve on e-learning. For instance, through the support of the Deputy Vice Chancellor of UTLO, the ICT Division facilitated the “upgrade of the learning management system from OLS (Online Learning System) to Moodle v1.9” (Rajaram and Peters, 2010:2). With the integration of ITS¹⁸ course codes, Moodle is able to automatically generate courses for every registered student. The system went live in January 2010 and has been active since then. At the moment there are “41,019 students automatically enrolled in 7,090 courses offered at UKZN, of which 310¹⁹ courses are currently active” (Rajaram and Peters, 2010).

OLS is a home grown learning management system developed at UKZN. As an in-house learning management system, OLS has its advantages. However other disadvantages acted against the continued use of OLS. Prominent among the disadvantages is the lack of external

¹⁷ Some of the information in this section is based on an interview with a staff of UTLO. Excerpts from the interview are italicized.

¹⁸ Integrated Tertiary Software

¹⁹ As at September 2010: There were 1061 Courses on Moodle out which 387 were active during 2nd semester (Rajaram and Peters 2010).

support mechanism. This is particularly true *in the event of losing the persons who developed the system. As open-source software with a huge online community support, Moodle does not have this problem. At the moment, Moodle is the most widely used e-learning platform in terms of open source option.* These factors informed the migration from OLS to Moodle.

Among other things, UTLO aims to “collaborate with academics, researchers and students to create supportive, adaptable and innovative learning environments in which outstanding teaching at all levels is nurtured, recognized and rewarded” (<http://ict.ukzn.ac.za:8080/ICT/>). In addition, the office is responsible for addressing all the “teaching and learning needs of the University community, providing leadership in developing and implementing pedagogically sound research driven solutions” (<http://ict.ukzn.ac.za:8080/ICT/>). A significant stride in this regard is the Annual University Teaching and Learning Conference organised by UTLO. The conference seeks to bring together academics on an annual basis to explore experiences in innovative T&L techniques. In 2010, UTLO organised the 4th Annual University Teaching and Learning Conference. A total of 130 papers were presented at the conference. The conference was attended by over 300 delegates from across the country. Also in attendance were participants from other African countries and delegates from outside the continent.

4.3 Conclusion

This chapter has explored the methodology and method for the research. Key methodological issues such as study sample, sampling technique and method of data collection and analysis were explored. In addition to this, an attempt was made to provide pertinent background information about UKZN and about e-learning at UKZN. This chapter has illustrated that despite the absence of a formal e-learning policy at UKZN, the University has reiterated its intent through significant actions thereby illustrating that for all intents and purposes, UKZN has an e-learning policy. This reiterates Smith’s (1976) argument that rather than only focusing on formal policy documents, policy analysts should also be cognizant of the actions and inactions of governments and institutions since these amounts to policy (Anderson, 1997; Dye, 1982). Important in this regard are the various initiatives and structures put in place to support e-learning. Based on this information, it could be argued that e-learning is being implemented at the University. What is left to be understood is the driving force behind e-learning initiative and the various challenges

facing the implementation of e-learning at UKZN. These pointes will be explored in the next chapter.

Chapter 5

Findings and Analysis of Data

5 Introduction

This chapter will provide a presentation and analysis of the data. This analysis will synthesise the qualitative and quantitative data and will be informed by the theoretical framework explored in chapter two.

5.1 Structure of Questionnaire and Response Rate

Of the 42 Questionnaires that were distributed to lecturers in the Faculty of Humanities, Development and Social Sciences on the Pietermaritzburg campus, 26 were returned with a satisfactory response rate (Babbie and Mouton, 2001: 261). The information generated from respondents through the questionnaire is aggregated into three clusters. The first cluster presents information about demographic and pedagogical background of the respondents in order to describe the sample and control for any influences this may have on their use of e-learning. The second cluster explores the nature and form of ICT used for teaching purposes. It also establishes the willingness of respondents to engage with e-learning. This willingness has implications for the implementation of e-learning. The third cluster is an exploration, from the perspectives of respondents, the nature of, and need for a coherent e-learning policy at UKZN.

5.2 Demographic and Pedagogical Description of the Sample

Of the 26 respondents who returned their questionnaires, one respondent did not indicate his/her school. The highest response rate of the study comes from the School of Sociology and Social Sciences which constitutes 30.8% of the sample. This is followed by the School of Philosophy and Ethics (26.9%). Combined, the School of Philosophy and Ethics and the School of Sociology and Social Sciences constitute more than half of the respondents who took part in the study. Although there are disparate response rates by schools, there is still a relatively good coverage of the sub areas.

Table 7: Response Rate by School

School	Frequency	Percent
School of Sociology and Social Studies	8	30.8
School Philosophy and Ethics	7	26.9
School Anthropology, Gender and Historical Studies	3	11.5
School Psychology	3	11.5
School of Politics	3	11.5
School of language, Literature and Linguistics	1	3.8
Total	25	96.2
Missing	1	3.8
Total	26	100.0

5.2.1 Years of Lecturing

Table 8 examines the lecturing experience of respondents. It presents information about the number of years that respondents have taught at a HE institution. It is clear that the sample represents a gamut of experience across the categories with only the category 8-11 years being underrepresented.

Table 8: Years of Lecturing at a HE Institution

	Frequency	Pent
0-3	8	30.8
4-7	8	30.8
8-11	2	7.2
>12	8	30.8
Total	26	100.0

Table 9 presents information about the number of years that respondents have lectured at UKZN. A total of 11 respondents reported that they have lectured at UKZN for the period of 0-3 years. Six respondents reported having lectured at UKZN for between 4-7 years and four respondents reported having a teaching experience of 8-11 years at UKZN. Again, there is a relatively good spread across the categories indicating that the sample draws from lecturers with different experiential backgrounds. The oversubscription of 0-3 years for UKZN teaching experience may have implications in terms of the institutional familiarity of the sample.

Table 9: Years of lecturing at UKZN

0-3	11	42.3
4-7	6	23.1
8-11	4	15.4
>12	5	19.2
Total	26	100.0

5.2.2 Relationship between Age of Participants and ICT Usage

The age of the participants in the study is shown in Table 10. The sample had respondents from all categories but drew particularly from the category 31-41.

Table 10: Respondents by Age

Age	Frequency	Percent
20-30	5	19.2
31-41	13	50.0
42-53	4	15.4
>54	4	15.4
Total	26	100.0

The variable of age is important because of the perceived notion that the older generation tend to be reluctant in embracing technology (Pagliarello, 2007:71). To test this, a comparison was made between age of respondents and their level of comfort with ICTs. The level of comfort – as indicated in Table 10 – with regards to the use of ICTs range from those who are very comfortable with ICTs to those who are just comfortable. Interestingly, none of the respondents indicated being uncomfortable with the use of ICTs.

Table 11: Level of Comfort with ICTs

Age	Very comfortable	Comfortable	Total
20-30	4	1	5
31-41	7	6	13
42-53	2	2	4
>54	1	3	4
Total	14	12	26

A Chi Square to test the significance of the relationship between age and the level of comfort with the use of ICTs shows the likelihood ratio between the two variables is >0.05 ($p=0.408$). This demonstrates that there is no significant relationship between age and the level of comfort with ICTs. This indicates that age is not a barrier to the introduction of e-learning. A view consistent with the foregoing was expressed by ICT2

What we found is that academics want to make their work easier. They are more reliant on technology rather than just standing and delivering the lecture. Lecturers are becoming more and more reliant on these technologies. We get queries all the time even from older people to go and query the effectiveness of either a hard or software that they have come across. People have come to realize that using the right technology can cut down a lot of time in terms of mundane tasks.

The desire to reduce workload and experiment with new teaching styles, according to ICT2, are the driving force behind the move by the older generation in embracing the new technologies used for T&L.

5.3 The use of ICTs in Teaching and Learning

At the University of KwaZulu-Natal, various ICT infrastructures have been put in place to enhance the quality of T&L. An item in the questionnaire sought to determine the usage of various ICTs and software to support teaching. The response to this item on the questionnaire is displayed in Table 12. While some of these ICTs are officially adopted by the University and lecturers are expected to use them, the use of other ICTs is dependent on the interests and passions of individual lecturers. Among the official UKZN ICTs, Novell GroupWise is the one

with the highest level of usage. All respondents who took part in the study reported using the Novell GroupWise in relation to teaching. The Novell GroupWise is an email package and serves as the primary mode of communication at the institution.

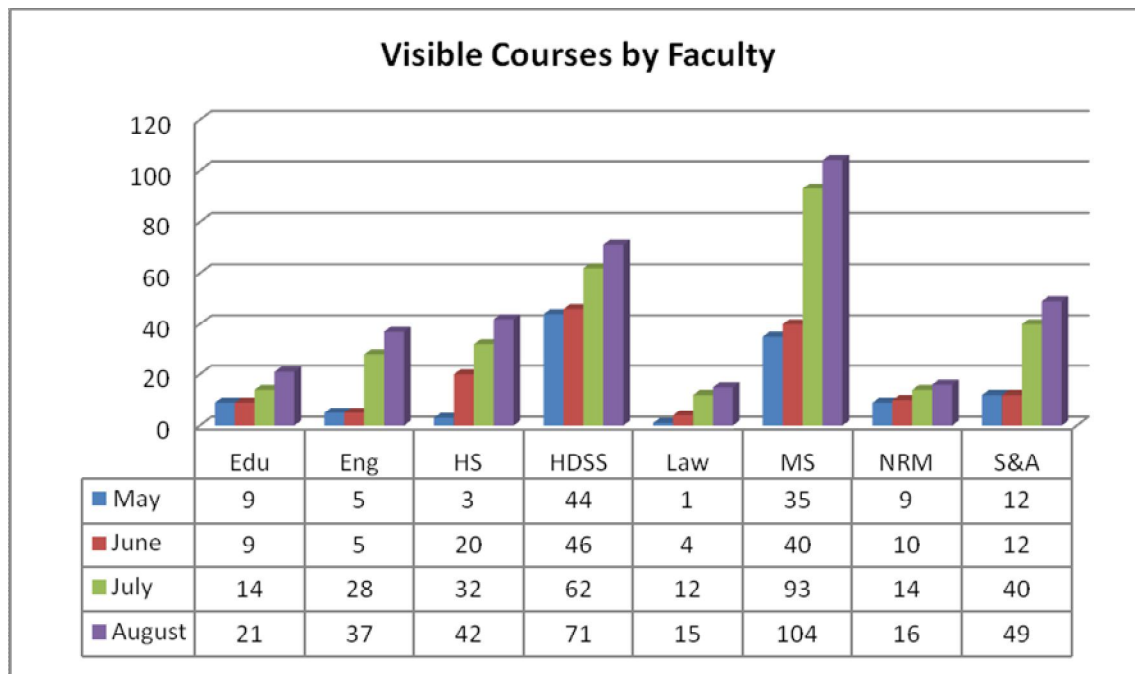
Table 12: ICTs used by Respondents

ICTs	Responses	
	N	Percent
GroupWise	24	23.3
PowerPoint	19	18.4
Turn-it-in	13	12.6
Moodle	12	11.7
Student Management Information Systems	11	10.7
Innerweb	6	5.8
Online Course Evaluation	4	3.9
E-journals and data bases	4	3.9
Blogs	3	2.9
Facebook	2	1.9
Twitter	1	1.0
Wikis	1	1.0
Online Data Base	1	1.0
You-tube	1	1.0
Video	1	1.0
Total	103	100.0

Another official software that has high usage among respondents is Moodle. Out of the 26 respondents that completed the survey, 12 reported using the Moodle learning platform to deliver course materials. Although the total of 12 respondents who reported using Moodle for their modules is higher than most of the other ICTs listed, it should be pointed out that this number is low and constitutes less than half of the study sample. This shows that the level of adoption of the Moodle learning platform is not very high even though it is the official e-learning platform adopted by the University. This finding is consistent with the report by Rajaram and Peters (2010). According to Rajaram and Peters (2010), the uptake of the Moodle learning platform “has been considerably” slow among staff when compared with students’ uptake. There is

however a positive trend in the adoption of Moodle. As more academics and students use the new learning platform, knowledge about its potentials for T&L is disseminated among lecturers. This makes it possible for more lecturers to adopt the new learning platform. The growing trend in the adoption of the Moodle learning platform by faculty is shown in Figure 6.

Figure 6: Visible Courses by Faculty that are using Moodle²⁰



Source: Rajaram and Peters (2010).

From Figure 6, it could be seen that there is a positive growth in the number of courses becoming visible on Moodle. Although the growth varies across schools and faculties, there is a positive growth across the board. Within the time frame indicated in Figure 6, the Faculty of Humanities, Development and Social Sciences has the second highest visible course. This shows that lecturers in the faculty are actively embracing the Moodle learning platform.

²⁰ Edu= Faculty of Education; Eng= Faculty of Engineering; HS= Faculty of Health Sciences; HDSS= Faculty of Humanities, Development and Social Sciences; Law= Faculty of Law; MS= Faculty of Management Studies; NRM=Nelson R Mandela School of Medicine; S&A=Faculty of Science and Agriculture.

5.4 E-learning at UKZN: A Model of Incremental Implementation

The type of implementation explicated above mirrors the incremental model of implementation. Previously, the e-learning platform used by the University was OLS. The move from OLS to Moodle illustrates the model of incremental implementation as explicated by scholars such as Lindblom (1959) and Hogwood and Peters (1983). The formulation and implementation of policy, according to this view, is not usually a rational process; it is based on experiential learning. Through learning, policy-makers and implementers modify existing policies and models of implementation in the light of new discoveries and challenges. The move from OLS to Moodle was because of the learning emerging from the context of implementation and the challenges which OLS poses to e-learning at UKZN. ICT1 captures this view in the following excerpt:

The move from OLS to Moodle was because OLS was a system designed in house which has its advantages. But when you lose the support of the persons who designed the system then it is very difficult to maintain because there is no outside support. Whereas with the open source system, you have an online community that supports you. And in terms of Moodle, it has the biggest market slice in terms of open source option at the moment. This means that it has a very active user community who respond immediately when we say we would like to install turn-it-in add-on but it is not doing this and that you get immediate response within an hour or two which is very useful because it is difficult to develop the expertise within such a short period.

From the foregoing, it could be deduced that the move from OLS to Moodle was informed by the experiences of different actors involved in implementing OLS at UKZN. The change of the learning platform was not a total departure from what was obtained previously; it is a continuation of e-learning on a new e-learning platform. This goes contrary to the rational model whereby policy formulation and implementation always start from scratch (Lindblom, 1959:81). The change in the context of UKZN was based on practical considerations of the challenges confronting OLS as the University's e-learning platform. The process of change is also different from the hierarchical approach to policy formulation espoused by scholars such as Pressman and Wildavsky (1973). According to proponents of the top-down or hierarchical model, the task of policy makers is to make "policy goals clear and consistent (Van Meter and Van Horn, 1975; Mazmanian and Sabatier, 1983); to minimise the number of actors (Pressman and Wildavsky 1973); to limit the extent of change necessary (van Meter and Van Horn, 1975; Mazmanian and

Sabatier, 1983); and to place implementation responsibility in an agency sympathetic with the policy's goals'' (Van meter and Van Horn, 1975; Sabatier, 1986) (cited in Matland, 1995:147). According to the top-down model participants, particularly those involved in the implementation of policy, have little role to play in policy formulation. Their duty is to see that the policy formulated by the administration is effectively implemented.

The change of e-learning platform at UKZN does not follow the top-down model. It had high participation from lecturers and those in the ICT Division who are directly involved in the implementation of e-learning. The wide participation in choosing Moodle as the e-learning platform for the University is captured in the report by Rajaram and Peters (2010). They hold that prior to adoption of the Moodle learning platform:

A workshop attended by 42 faculty representatives, academic staff, and members of the executive, ICT staff, and other support sector staff was held on 27 August 2008, to decide with the academic community on a Learning System to serve our online learning needs. The chosen system should help the University in achieving its strategic goal to promote excellence in teaching and learning (Rajaram and Peters, 2010).

This approach to decision-making fits more with the bottom-up model. The bottom-up approach holds that policy-making is not done exclusively by policy specialists. The model insists that various actors and policy subsystems are involved in the formulation and implementation of policy. This is akin to the ACF, according to which, interactions between various actors and policy subsystems lead to the formulation of policy and implementation of decisions (Sabatier and Jenkins, 1993:1).

The University is aware of the importance of incremental implementation of e-learning and has consistently adopted strategies to ensure that knowledge about the use of the new learning platform is incremental and diffuses among academics. This is why TL points out that:

We are adopting an incremental approach whereby a group of academics are being trained and that has a spinoff effects. When these groups are trained, they use it, they see the benefits of it, and it will diffuse to their colleagues and schools and to faculties. Somewhere down the line, this process will bear fruit.

The implementation of e-learning at UKZN does not lend itself to the rational model. This is because of the limitations placed by the very nature of ICTs in general and e-learning in particular. The terrain of e-learning is constantly evolving. New technologies are being developed making earlier ones obsolete within a relatively short period of time (Peters, 2010). In reference to the transient nature of technology, TL points out that there is need to be cognizant of the fact that Moodle might be replaced within a relative short timeframe. Reflecting on Moodle, TL points out that:

it [Moodle] is here today and replaced tomorrow by other technologies. Just as OLS was regarded as a significant innovation only a few years ago, today OLS is seen as archaic. Moodle will follow a similar path.

In addition, the challenges and potentials of existing learning platforms tend to emerge with time as more actors become involved in implementation. It is due to the inability of the human mind to make accurate predictions about future occurrences and about the implication of human decisions that Simon (1956) criticised the rational model of decision-making. In place of the rational model, he advocates a bounded rationality. Within the framework of bounded rationality, the aim of decision-making is not the attainment of maximum benefits, it is about; it is about getting the result which is “good enough” (Simon, 1956). The “good enough” with regards to e-learning is the adoption of e-learning platform that will address the contextual needs of the University. For this model of implementation, the success of implementation is based on the positive effects generated by the implementation (Matland, 1995:154).

5.5 Social Networking Media and E-learning at UKZN

Another important piece of information emerging from Table 12 is the near absence of the usage of social networking media. Out of the total of six social networking media included in the survey, web blog has the highest number (3) of respondents who indicated using it for teaching. Other social media like Facebook, twitter, and wikis, have limited usage among respondents. For instance, Facebook is used by only two of the respondents while the other social networking media listed in the questionnaire have only 1 reported case of usage respectively. Based on the limited number of respondents who reported using social networking media for their modules, it can be deduced that most students are currently using social media for non-academic purposes.

The limited usage of social media among lecturers could be attributed to the incremental approach to the adoption and implementation of e-learning. Respondents seem hesitant about the roles of social networking in academic realm as knowledge about the value of these media is yet to diffuse to lecturers. This view is captured vividly by TL who noted:

Social networking is a great way to keep in touch with friends but I still don't use social networking and I don't think I am any worse off. For the time that my son and daughter spend on Facebook, I read and my life is enriched through my reading. I am not sure that they are enriched by the fickle talk that goes on in these chat rooms.

The foregoing points to the fact that there is a level of apprehension about the contribution of social networking to the academic upliftment of students. The use of social networking sites tend to be seen as a waste of time; as academically unedifying. This is one of the reasons why access to websites such as Facebook and YouTube were restricted during the day. Interestingly the request to block these websites was from students. This view was expressed ICT1 who pointed out that *we received a request from SRC to block access to sites such as Facebook and YouTube because students were queuing to do their assignments while others were using Facebook and YouTube*. The pattern of decision-making captured in the extract mirrors the bottom-up approach. Information about implementation challenges is generated from the context of implementation. Based on the challenges, those at the level of implementation make recommendations which are forwarded to the higher level for ratification.

Previously, the rationale for restricting access to social networking sites was due to the limited bandwidth of the University. According to ICT1, the University now has virtually unlimited bandwidth hence people have greater freedom with regards to what they can do on the internet. ICT1 further pointed out that it is not the responsibility of the ICT Division *to limit what people can or cannot do* on the internet. From the foregoing, it can be inferred that the use of internet is within a loosed framework. It does not have a clear specification and tight regulation as explicated by proponents of the rational model of implementation.

As earlier highlighted, social networking sites are not viewed positively hence, the perception that other academic work should take precedence over social networking media. This is why,

when discussing the restriction of access to social networking sites, ICT1 stated that *we must understand that some work has priority over other works*. A notice placed by ICT Consultants in a computer lab on the Pietermaritzburg campus further captures this view lucidly. The notice states: *please be advised that you may be asked to log off if you are on Facebook since academic work takes preference to social networking*. Although the foregoing portrays negative sentiments towards social networking, there appears to be a willingness to accept social networking sites if attempts are made towards using these sites for academic purpose. This resonates with TL who pointed out that *if we use social networking for instance to elevate the quality of intellectual discussions at universities, then I say yes*. The preceding idea points to a desire for the development of pedagogical strategies aimed at using social networking media for academic purposes. It seems to suggest that rather than focus on the view that social media is a waste of time that could be used for other meaningful academic activities, efforts should be geared towards harnessing the potentials of social networking for T&L.

5.6 Advantages and Disadvantages of E-learning

The implementation of e-learning has both advantages and disadvantages. To explore the views of respondents with regards to the advantages and disadvantages of e-learning, an item on the questionnaire asked respondents to choose from a list, the advantages and disadvantages of e-learning which they agree with. This was aimed at getting the perspectives of respondents since the way they view e-learning will influence adoption of e-learning. Table 13 presents some of the key advantages which e-learning brings to academics institutions. From the Table, it is apparent that most of the respondents agree with the view that e-learning increases the speed of access to information. This view was affirmed by 21 respondents. The idea that e-learning leads to flexible and creative teaching was also rated highly by respondents. Each of these views was affirmed by a total of 16 respondents respectively.

Table 13: Advantages of E-learning

Advantages	Responses	
	N	Percent
Faster access to information	21	23.9
Creative teaching	16	18.2
Flexible teaching	16	18.2
Prepares and equips students for work environment	14	15.9
Makes Higher Education more accessible	13	14.8
Improves quality of graduates	8	9.1
Total	88	100.0

When asked whether e-learning increases access to HE, half of the respondents gave a positive response. Although this is a reasonable response, some of the respondents are of the opinion that e-learning cannot increase access to HE because of the high cost of e-learning. Along this line of thinking, one of the respondents pointed out that:

I do not think it [e-learning] makes higher education any more accessible than the traditional medium. If anything, with the digital divide which is still uneven and unequal, it could lead to marginalisation. Not many students have computers at home, let alone internet access.

Only 5 respondents affirmed the view that the implementation of e-learning increases the quality of graduates and prepares them for the work environment. The low number of respondents in support of this view could be explained in light of the stance that e-learning has the potential to reduce the quality of graduates (Noble 1998; DoE 1997:22; O'Neill, Singh, and O'Donoghue 2004:318). Commenting on this point, TL noted that:

We have seen for instance how modern day students have a particular view of what to learn and how to learn. In the past, you were required to digest an entire text book in order to write an assignment. But now you go onto Wikipedia and it generates a 20 page summary. Is that learning? It might be, but that is certainly not deep learning, it is surface learning. The hazards of surface learning show up quickly when you go into the work place. That is where we see many youngsters failing dismally since they don't have real depth of knowledge in order to navigate the real challenge of the world of work and life in general.

From the response, it could be deduced that e-learning is being approached at UKZN cautiously. This however does not imply that e-learning is not being implemented; what it suggests is that there is an emphasis on the need to establish the values and usefulness of e-learning. This is why TL noted that:

UTLO supports a disciplined and empirically grounded scholarship of teaching and learning. This implies that we do not support ad hoc arrangements inherited from some other generation. When academics make particular curriculum and methodological choices, it must be based on sound empirical evidence that is responsive to a particular generation of students' needs, which is contextually responsive and is ultimately designed to ensure optimal use of resources ensuring optimal student success.

The need to establish a sound pedagogical foundation for e-learning strategy is an important area of interest for the e-research section of Academic Computing. This informs the focus of e-research in carrying out sound and empirically verifiable research about the values of evolving e-learning strategy thus ensuring that practice is informed by sound empirical research (<http://ict.ukzn.ac.za:8080/ICT/#>). Against this backdrop, it seems important that e-research carries out a study geared to establishing the relevance of social networking for T&L.

Despite the stated possible disadvantages of e-learning, the level of response to some itemized disadvantages of e-learning is significantly low. As indicated in Table 14 the view that e-learning is open to abuse is the item with the highest response rate. This is closely followed by the notion that e-learning is time consuming. The item which holds that students cannot be relied on to be online is the disadvantage of e-learning with least support from respondents.

Table 14: Disadvantages of E-learning (multiple response variable)

Disadvantages	Responses	
	N	Percent
Open to abuse	7	23.3
Time consuming	6	20.0
Leads to commercialization of education	5	16.7
Decreases quality of scholarship	4	13.3
Leads to loss of personal space	3	10.0
Too expensive	2	6.7
Increases the digital divide	2	6.7
Students can't be relied on to be online	1	3.3
Total	30	100.0

One of the often cited disadvantages of e-learning is its potential to increase plagiarism among students. This is because of the ease of access to learning materials on the web. Table 14 shows that more than half (57.7%) of respondents do not agree that e-learning increases plagiarism. Only 34.6% agree that e-learning increases the chance of plagiarism among students. The lower number of respondents holding that e-learning could increase plagiarism is due to the awareness that the Turn-it-in software reduces plagiarism among students. This is the view expressed by one of the respondents who pointed out that *I worry about plagiarism but I think there are ways to combat this*. Table 12 shows that half of the respondents reported using Turn-it-in as a measure to reduce the spate of plagiarism among students.

Table 15: E-learning Increases Plagiarism

	Frequency	Percent
No	15	57.7
Yes	9	34.6
Total	24	92.3
Missing	2	7.7
Total	26	100.0

5.7 Challenges Facing E-learning at UKZN

One of the items in the questionnaire seeks to establish what respondents see as the challenge(s) to e-learning at UKZN. Respondents were asked to rank items – the lack of ICT infrastructures, the lack of staff training, the lack of staff motivation, the lack of student motivation and the absence of e-learning policy – in terms of the challenge that each of these poses to e-learning at UKZN. The ranking is ordered from “not at all challenging” to “very challenging”. Of interest to this study are the lack of staff training and the absence of e-learning policy which are items with the highest response. Each of these was affirmed by 5 respondents. The lack of staff and student motivation were affirmed by 3 respondents respectively as being very challenging to e-learning at UKZN. Although the lack of staff training was seen to be very challenging, the lack of motivation seems to work against the possibility of staff seeking training to increase their e-learning skills. This view was affirmed by ICT2 who pointed out that:

We have in place programmes and structures to train staff. If staff of a department have identified a particular skill shortage that they want addressed, all they need do is approach us for us to organise a training session for them. Most of the time, we take the initiative to approach staff in the academic community, we discuss with them new trends and issues that we want to be conversant with.

Table 16, it can be deduced that infrastructure is not seen as a major challenge to e-learning at UKZN. Only 4 of the respondents indicated that the lack of infrastructure is very challenging to e-learning. This seems to reflect a high level of satisfaction with existing e-learning infrastructures. Highlighting the achievement of UKZN in terms of wireless technology, ICT1 pointed out that *in my discussion with other universities in this area, they are surprised that we have succeeded in rolling out wireless connectivity within this short period of time*. In addition to this, there are various ongoing initiatives to upgrade ICT infrastructures of the University. This view was corroborated by ICT2 who noted that:

We [the ICT Division] are always exploring new options. We have introduced PDA blackberries to executive staff so that they can respond to emails even while they are travelling. We also have a new technology where you can have calls redirected to your cell phones when you are not in the office. This allows academics to be up to date and in touch with their students. There is an option being explored which will enable students to get access to essential services like RMS by pressing a button on their cell phones. A lot of initiatives are currently ongoing.

Table 16: Challenges Facing E-learning at UKZN

Challenges		Count
Lack of staff training	Not at all challenging	2
	Somewhat challenging	3
	Neutral	8
	Challenging	8
	Very challenging	5
Lack of staff motivation	Not at all challenging	1
	Somewhat challenging	4
	Neutral	9
	Challenging	9
	Very challenging	3
Lack of student motivation	Not at all challenging	1
	Somewhat challenging	9
	Neutral	8
	Challenging	4
	Very challenging	3
Absence of e-learning policy framework	Not at all challenging	2
	Somewhat challenging	8
	Neutral	6
	Challenging	5
	Very challenging	5

A similar initiative that emerged from the interviews is the exploration to introduce eBooks at UKZN by UTLO. Through eBooks initiative, UTLO hopes that all students will be provided with digital equipments pre-loaded with textbooks, assignment questions, notes etc. This will help to alleviate the challenge of the high of cost of textbooks which has placed access to textbooks beyond the reach of many students. As TL pointed out:

Some students go through school without access to text books. The challenge now is for us to find alternative modes of providing students with access to textbooks. We are now embarking on eBook project with IADP. The project involves negotiating with IADP to

provide access to eBooks at the fraction of the cost. Ultimately, the students will have all the textbooks of University loaded on their system.

Across the University, a number of individuals are involved in various e-learning initiatives. For instance, Mr. Craig Blewett and Mrs. Rosemary Quilling, both lecturers at the School of Information Systems and Technology co-founded *NextEd* and have formed strategic partnerships with other Universities to explore the usefulness of this e-learning medium. *NextEd* is “an eLearning project seeking to establish a global, virtual educational network, built on an *ubuntu* philosophy of collaboration and a scaffold model of supportive engagement”²¹ (Mamela 2010b:6). Another initiative developed at the University is *Reason!Able*. This is a software developed to assist students in the development of “the skill of critical thinking” (Mamela 2010b:7).

The availability of e-learning infrastructure is consistent with Matland's experimental models of implementation. According to Matland (1995), one of the defining characteristics of experimental implementation is the absence of conflict which ensures unrestrained access to resources. This model of implementation could be seen at UKZN in light of the huge investment by the University in e-infrastructures. The University is also poised to benefit from the recent fund made available by the National Research Foundation (NRF) for the upgrade of broadband connectivity on its Pietermaritzburg campus (National Research Foundation 2010). This will further increase the resources available for the implementation of e-learning at the University.

Despite the financial commitment to e-learning infrastructure by UKZN, a number of respondents are neutral when asked whether UKZN administration is taking e-learning seriously. Table 17 shows that 15 respondents indicated that they have a neutral view with regards to whether UKZN administration is taking e-learning seriously. 5 of the respondents indicated that the University administration is taking e-learning seriously while 5 support the view that the administration is not taking e-learning seriously.

²¹ The website of NextEd is <http://nexted.info/>.

Table 17: UKZN Administration takes E-learning Seriously

	Frequency	Percent
Neutral	16	61.6
Yes	5	19.2
No	5	19.2
Total	26	100.0

5.8 E-learning Policy at UKZN

At the moment, UKZN does not have a formal e-learning policy framework. What the University has, according to TL, is the *makings of a policy framework*. In formulating an e-learning policy framework, UKZN can take either one of two options. The first option is the formulation of a policy framework that is rigid and is not adaptable to changing external imperatives. The second option is the formulation of a flexible policy that is adaptable to changing external factors. From the interviews, there was a strong sense that e-learning policy at UKZN needs to be flexible. TL captures this vividly when he pointed out that:

Policy must not be held captive to technology. Technologies are fluid and transient. What we need to do is to be very clear about what we want technology to do for us as a University. The policy must define for us the potentials and limits of technology. We cannot simply be investing the bulk of our funds in buying computers for every student without addressing other dire learning imperatives. For instance, we might have these fancy technologies but does the student have the basic capacity to comprehend effectively? Does he possess the necessary academic discourses of higher education? Does he possess the necessary disciplinary knowledge? The policy must be very clear about not elevating technology beyond human capability.

The need to make e-learning policy for UKZN flexible was also expressed at the Symposium entitled *Exploring the Frontiers of E-learning @ UKZN*. According to the report of the symposium, policy formulation is “a dynamic process that changes over time. It should be pursued as an enabling mechanism to encourage technology assisted learning, enabling the development of staff capacity in a non-technical manner, and reviewed periodically by the user community itself” (Peters, 2010). The inclusion of the user community points to the view which holds that implementers play a crucial role in determining the success of policy implementation. This affirms the value of the bottom-up approach to decision-making.

One of the items on the questionnaire asked respondents whether UKZN should develop an e-learning policy framework. As indicated in Table 18, more than half of the respondents (17) are in favour of an institutional e-learning policy framework. 5 respondents are neutral while only 3 hold the view that the University does not need an e-learning policy framework.

Table 18: UKZN needs an E-learning Policy Framework

	Frequency	Percent
Yes	17	65.4
Neutral	5	19.2
No	3	11.5
Total	25	96.2
Missing System	1	3.8
Total	26	100.0

From the data collected through interviews and surveys, it could be deduced that in principle, the formulation of e-learning policy at the University will not face a significant opposition. The content of the policy and what it should do for the University is what is ambiguous. Consequently, it could be said that e-learning at UKZN fits into the third quadrant of Matland's (1995) Ambiguity/Conflict Model of implementation. This is the quadrant in which there is low conflict and high policy ambiguity. Matland (1995:166) refers to this model of implementation as experimental implementation. Experimental implementation is heavily influenced by issues such as the context of implementation, the disposition of actors and the resources available for implementation.

Contextualising e-learning is a key issue that emerged from the interviews. Referring to the formulation of e-learning policy, TL emphasises the need to contextualise e-learning policy for UKZN. He noted that *e-learning policies have been formulated in other universities and we need to bring it onboard and see what lesson we can take for UKZN and what works for us*. The formulation and implementation of e-learning is therefore not about a wholesale transplanting of policies from other institutional contexts. There is a strong feeling that the formulation of institutional e-learning policy must speak to the context of UKZN in order to make it meaningful

and useful to the University community. This is why TL further pointed out that UTLO does not support ad hoc arrangements which do not speak to the contextual needs of students. The policy will lead to the coordination of various e-learning initiatives and helps to avoid challenges such as the multiple installation of Moodle by different lecturers and faculties (ICT1, 2010).

Similar to the preceding is the view that experimental implementation is always cognizant of the implementation of similar policies in other contexts. Taking note of similar implementation in other contexts facilitates an understanding of the challenges and successes of implementation. This enables implementers to maximize the benefits of implementation based on the learning generated through observation (Matland, 1995:166). It is against this backdrop that TL holds that UKZN must be cognizant of what is happening in other contexts in order not to be left behind.

The implementation of e-learning at UKZN negates the stagist model of policy formulation. The stagist model holds that policy is a sequence with one stage preceding the other (Dunn, 1998:17). According to the stagist model, implementation can only occur after a formal policy has been formulated. This, however, is not the case with the implementation of e-learning at UKZN where e-learning is being implemented without a formal e-learning policy. It is after a number of years of experimenting with the implementation of e-learning that there are now calls for the University to develop an e-learning policy framework. Various fora have been organised to examine the development of e-learning policy for the University. A symposium, *Exploring the Frontiers of E-learning @ UKZN* is one such forum. Among other things, the symposium showcased the benefits of e-learning and hoped “to map out policy guidelines in the advancement of e-learning at UKZN” (UKZNonline, 2010).

Having implemented e-learning for a number of years, the University is poised to launch a formal policy framework in 2011. Among other things, the e-learning policy framework, according to ICT1, will mandate all lecturers to move their courses onto the Moodle platform. The challenges that such a move will face are yet to be seen. But as pointed out by Matland (1995), the requirement of uniformity is usually a challenge of experimental implementation. The demand for uniformity has the potential to encourage partial implementation (Matland, 1995:167). It could also result in a situation whereby lecturers might just be interested in moving

their courses and uploading course materials onto Moodle to satisfy the requirement of the policy. This stifles any meaningful online interaction between lecturers and students – a key aspect of e-learning.

5.9 Willingness to Implement E-learning

The success of e-learning policy at UKZN is dependent on the willingness of lecturers to implement e-learning. This is because the success of experimental implementation is based on the disposition of those directly involved with implementation (Matland, 1995). Consequently, one of the questions on the questionnaire asked respondents to indicate their willingness to implement e-learning if UKZN develops a policy framework that mandates all lecturers to incorporate e-learning into their teaching. The response of actors in terms of their willingness to implement e-learning is indicated in Table 19.

Table 19: Willingness to Implement E-learning

	Frequency	Percent
Yes	22	84.6
No	3	11.5
Total	25	96.2
Missing	1	3.8
Total	26	100.0

From Table 19, it is apparent that the willingness to implement e-learning is significantly high with 22 respondents stating a willingness to implement e-learning should a policy framework requires them to do so. Only three respondents are not willing to accept the requirement of a policy framework that mandates them to implement e-learning. The high level of willingness affirms the point that the implementation of e-learning at UKZN is not conflictual.

Although there is willingness to implement e-learning, a good number of respondents do not have a clear stance with respect to whether UKZN should develop full online courses. As indicated in Table 20 a total of 12 respondents are neutral with regards to whether UKZN should develop full online course. 10 respondents are in support of the development of full online

courses while only four respondents are against the development of full online course. The unwillingness to support the development of full online courses was reaffirmed by TL when he pointed out that:

The fact of the matter is that UKZN is a contact University and for the foreseeable future, we will be offering the traditional mode of contact but through blended learning approaches which will involve a great emphasis on e-learning because that is where most of today's teaching and learning resources reside. So, while focusing most of our attention and resources on the traditional classroom mode of operation, we need to increasingly devote resources, attention, research and development to alternative approaches offered by e-learning.

A view similar to the foregoing was expressed by one of the respondents who asked: *can UKZN do this* [developing full online courses] *or is that the preserve of UNISA?* Although other contact Universities have developed full online courses alongside the traditional contact models of T&L, the dominant view emerging from the data is that UKZN may not following the same route. Table 20 shows that although a significant number of respondents are not directly opposed to the development of full online learning, there is still a high level of indifference towards it. TL makes this ambiguity explicit when he points out that *e-learning must complement and supplement existing tried and tested pedagogy*.

Table 20: UKZN should Develop full Online Courses

	Frequency	Percent
Yes	10	38.5
Neutral	12	46.2
No	4	15.4
Total	26	100.0

6 Factors influence the Implementation of E-learning At UKZN

The implementation of e-learning at the University could be attributed to a number of factors. From the interviews, factors influencing the implementation of e-learning could be placed in three key themes. One of these themes is the idea that UKZN needs to adapt e-learning as a way of addressing the needs of the e-generation. TL expresses this view when he noted that *we must*

always be mindful of the younger generation of students described by Wim Veen as the Homo Zappiens. A view similar to this was expressed by one of the respondents who noted that it [e-learning] makes some of the learning more relevant to students.

Another factor which emerged from the data is the view that UKZN does not exist in isolation. Consequently, UKZN must be aware of the *fact that the broader society is progressing along a particular trajectory and there is need develop strategies which will allow the University to move along the same trajectory in order to avoid existing as an island in that sea of change* (TL). The two factors just highlighted could be seen as problems which e-learning was adopted to address.

The third factor influencing the adoption of e-learning at UKZN is the influence of various actors interested in the development of e-learning. Prominent among these actors are UTLO and the ICT Division. These two units of the University have played vital roles in bringing the issue of e-learning and e-learning policy to the agenda of the University administration. As an advocate of e-learning, UTLO provides various support training to lecturers. Through trainings, lecturers are able to appreciate the values of e-learning and adopt it as a pedagogical strategy. UTLO has also created various fora where the University community come together to discuss and debate on issues of e-learning. Through this, knowledge is generated and this knowledge plays a critical role in influencing how e-learning issues rise on the agenda of the administration (Kingdon, 1995:18).

On its part, the ICT Division has been involved in bringing the values of e-learning to the attention of the administration through the various fora it has organised to highlight the gains of e-learning initiatives. Through its reports on e-learning initiatives, it has also been able to play strategic roles in bringing key e-learning agenda to the attention of the administration. This was pointed out by ICT1 who said:

We had a meeting with the Executive Committee and the Executive Dean. We made the presentation with the intention of getting their support to the implementation of the software. This was particularly important with the development of a policy framework.

Through the activities highlighted, it could be inferred that UTLO and the ICT Division are agenda setters with regards to e-learning at UKZN. In addition, the ICT Division and UTLO act in ways that mirrors policy networks. In its role as agenda setter, UTLO created a network of interested persons and organisations to work towards the realisation and implementation of e-learning. In this regard, TL pointed out that:

We play a facilitatory role; we help people network with each other in particular areas and disciplines. We create a network of people in the ICT Division, through a variety of meetings and consultations such as seminars, symposia and workshops. We are constantly in a process of dialoguing with different individuals, seeking opportunities for them and also procuring resources wherever we can.

The foregoing points to key elements of the policy agenda-setting framework pointed out by various key agenda setting theorists. Having identified the problem – addressing the needs of the e-generation and moving along the general trajectory of the society – policy agenda setters developed policy proposals to the problem and bring these to the attention of significant people.

Chapter 6

Conclusion

Despite the absence of consensus on the best model of policy analysis, there is a tacit acknowledgment among some policy analysts that the suitability of the model of policy analysis is determined by the type of policy being analysed and the context of implementation (Matland, 1995:152). This approach to understanding policy analysis provided an invaluable framework which facilitated an analysis of e-learning at UKZN. The study found that rather than follow a rational model, decisions around the implementation of e-learning at the University could be better explained within the framework of incremental decision-making. Central to this model is the notion that decision is not always rational. This is particularly significant because of the limitations of human rationality (Lindblom, 1959; Simon, 1956). The incremental model contends that rather than subject decisions to a range of rational criteria, decisions are made in response to contextual factors that impact on policy implementation and such decisions may not always be rational (Dye, 1974:35).

Another key feature of the incremental model is hinged on the fact that rather than start from scratch, policy changes are often incremental; they are gradual modifications of existing lines of actions (Hogwood and Peters, 1983:1). Policy change occurs in response to the learning that emerges from the context of implementation. As more implementers become involved with implementation, knowledge about the values and challenges of e-learning percolates through the community. The study showed that the accumulation of knowledge influences decisions with regards to the future of e-learning at UKZN.

Over the years, implementation analysts have come to understand that “implementation failures” often results from the inability of policy makers to envisage exhaustively, the various factors at play in the context of implementation (Smith, 1973). The tailoring of implementation to contextual needs has been central to decisions with regards to the implementation of e-learning at UKZN. A key aspect highlighted by the study was the move from OLS to the Moodle e-learning platform.

The need for the formulation of an institutional e-learning policy is an issue that has emerged from the knowledge accumulated from the implementation of e-learning. The formulation of e-learning policy is being influenced by different actors. Three key sets of actors influencing the setting of e-learning agenda are the ICT Division, UTLO and lecturers. Consistent with the hypothesis of agenda-setting theorists (Kingdon, 1995; Parsons, 1995; Sabatier and Jenkins, 1993), various actors within the policy subsystems play varying roles in bringing pertinent e-learning issues onto the agenda of key decision-makers by formulating an issue into a problem that requires the urgent attention of decision-makers. The facilitation of different discussion fora and the creation of policy networks among interested participants to discuss the benefits and challenges facing the implementation of e-learning are some of the ways that agenda setters are influencing e-learning at UKZN. The adoption of e-learning at the University is informed by factors such as addressing the needs of the e-generation and keeping UKZN abreast with changes happening in society in general and across HE institutions in particular.

One area that knowledge is yet to accumulate to the point of influencing lower end implementers is the use of social networking for teaching. This could be seen from the low reported cases of the usage of social networking media for T&L. Another emerging knowledge is the view that e-learning for the University does not entail the development of full online courses. E-learning for UKZN is a pedagogical strategy used to aid classroom-based T&L.

AT UKZN, e-learning is being implemented in the absence of a formal policy document. This lends credence to the notion that policy should not always be seen in terms of formal policy documents but can also be discerned through the actions/inactions of governments and institutions (Anderson, 1997; Smith, 1976, Dye, 1982). Despite the absence of a policy framework, e-learning is being implemented with a relatively low level of conflict. The role of e-learning at the University and how lecturers should engage in it appears ambiguous. The high ambiguity and low conflict in the implementation of e-learning at UKZN fits into the experimental model of implementation (Matland, 1995). The defining features of experimental implementation, according to Matland (1995), include the fact that implementation is driven by contextual factors, the perspective of actors and the availability of relevant implementation resources. Consistent with experimental implementation, the study showed that respondents were

highly emphatic about contextualising e-learning for UKZN. The study also showed that the implementation of e-learning is being driven by the passion of individual lecturers and departments. In addition, the study has shown that requisite resources for the implementation of e-learning are readily available. These resources include investment in ICT infrastructures such as computer labs and broadband connectivity, the availability of training opportunities for lecturers and the various fora created to explore e-learning initiatives.

Respondents in the study showed a high level of willingness to implement e-learning. This is in harmony with Matland's experimental implementation. In line with experimental implementation, the study showed that different actors are experimenting with different e-learning softwares. Significant e-learning initiatives include the *Reason!Able* software being used in the School of Philosophy and Ethics and *NextED*. Streamlining these initiatives is one of the challenges facing the implementation of e-learning at UKZN.

Given that e-learning is being implemented in the absence of an e-learning policy framework, measuring what constitutes successful implementation could be a challenge. Successful implementation from the perspective of the rational model is the measure of the extent to which implementers are faithful to the directives contained in the formal policy statement (Matland, 1995:154). For the incremental model, successful implementation is measured in terms of the net changes brought about by implementation. In this regard, the strides made so far by the implementation of e-learning at UKZN could be seen as a measure of successful implementation. The study did not find any significant relationship between age of participants in the survey and the level of comfort with ICT usage. Data collected for the study showed that older generations are embracing e-learning technology. It was inferred that over the years, older lecturers have engaged in the process of developing key ICT skills. In addition, they have, through interactions with the younger generation and other actors passionate about e-learning, learnt about the potentials of ICTs for innovative T&L. These account for the lack of correlation between age and ICT usage.

Participants in the qualitative aspect of the study expressed a strong view about making e-learning policy flexible and adaptable to the changing terrain of e-learning. The study found that

rather than make e-learning policy subject to technology, the policy should be the guiding principle of what technology should do for the University. This implies ensuring that the e-learning policy of the University is explicit about what e-learning is and how it should be applied for T&L. Although policy and problem streams were identified in the analyses, a political stream could not be identified from the available data showing that e-learning at UKZN does not fit exactly into Kingdon's agenda-setting model. The study has demonstrated that policy implementation does not always require the existence of a formal policy framework.

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Appendix A
Informed Consent

Dear,

My name is Okem Andrew Emmanuel. I am a student studying towards a Master's Degree in Policy and Development Studies at the University of KwaZulu-Natal, Pietermaritzburg campus. As part of the requirement for the master's degree, I am carrying out a research on a project titled: *A Policy Analysis of E-learning at the University of KwaZulu-Natal*. The paper seeks to explore among other things, factors that influence the formulation and implementation e-learning policy at the University of KwaZulu-Natal. Due to the strategic relevance of the University Teaching and Learning Office to e-learning, the researcher feels that interviewing someone from this office will give useful insight into the topic under research and you have been identified as someone who will make invaluable contribution to this study.

All the information you provide for this study will be used strictly for the study. In addition, any information that you provide will be treated with the utmost level of confidentiality. You are free to withdraw from the study at any stage you wish to opt out. You are not under any obligation to answer any question that you are not comfortable with. I hope to use audio recording equipment for the interview session. However, the use of such equipment is dependent on your permission. In the dissemination of the findings of this research, your identity will be protected. On completion of the study, all records of the interview will be securely locked in a safe for a period of five years. After this period, all audio records will be deleted and any paper document provided will be shredded.

Thanks a lot for your time.

Yours sincerely,

Okem Andrew Emmanuel
(Researcher)
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Dr. Anne Stanton (Supervisor)
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Mark Rieker (Co-Supervisor)
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Section I

Background

- How did UTLO come into existence?
- How does UTLO view e-learning?
- What role(s) does UTLO play in facilitating e-learning at UKZN?
- Apart from UTLO, who do you think is/are interested in e-learning at the University?
- How has this/these interest(s) been manifested?
- What do you think are the main issues occupying the attention of the University administration?

Section II

Implementation challenges

- Does UTLO support staff training in the use of e-learning facilities for teaching?
- Are lecturers doing enough to integrate e-learning into teaching?
- What are the perceptions of students on e-learning?
- What do you think are the key challenges facing e-learning at UKZN?
- Is the University committing enough financial and human resources to the development of e-learning facility?

Section III

Analysis

- At the moment, there is no formal policy framework that guides e-learning. What are the strengths/weaknesses of the absence of a policy framework?
- Do you think the University needs a formal e-learning policy framework?
- What form should this take? Flexible or rigid?
- What recommendations do you have in terms of how e-learning can be improved at the University?

Appendix B

Informed Consent

Dear,

My name is Okem Andrew Emmanuel. I am a student studying towards a Master's Degree in Policy and Development Studies at the University of KwaZulu-Natal, Pietermaritzburg campus. As part of the requirement for the master's degree, I am carrying out a research on a project titled: *A Policy Analysis of E-learning at the University of KwaZulu-Natal*. The paper seeks to explore among other things, factors that influence the formulation of institutional e-learning policies at the University of KwaZulu-Natal. Due to the strategic relevance of the ICT Division to e-learning, the researcher feels that interviewing someone from this office will give useful insight into the topic under research. You have been identified as someone who will make invaluable contribution to this study.

All the information you provide for this study will be used strictly for the study. In addition, any information that you provide will be treated with the utmost level of confidentiality. You are free to withdraw from the study at any stage you wish to opt out. You are not under any obligation to answer any question that you are not comfortable with. I hope to use audio recording equipment for the interview session. However, the use of such equipment is dependent on your permission. In the dissemination of the findings of this research, your identity will be protected. On completion of the study, all records of the interview will be securely locked in a safe for a period of five years. After this period, all audio records will be deleted and any paper document provided will be shredded.

Thanks a lot for your time.

Yours sincerely,

Okem Andrew Emmanuel
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Dr. Anne Stanton (Supervisor)
xxxxxxx@ukzn.ac.za
Mark Rieker (Co-Supervisor)
xxxxxxxx@ukzn.ac.za

Section I

Background

- How many staff do you have at the ICT Division?
- How long have you worked in the Division?
- What has changed during this time?
- What role(s) does the Division play in enhancing e-learning at UKZN?
- Which other section of the University do you partner with on issues related to e-learning?
- Do you get enough support from the University administration and lecturers on issues of e-learning?
- Is the University paying sufficient attention to e-learning?
- At the moment, the University is using the Moodle learning platform. How did this come about?
- How many courses are currently using the Moodle system?
- Any feedback from the lecturers and students about the use of Moodle?
- What do you think are the main issues occupying the attention of the University administration at the moment?
- What are the common ICTs being used for T&L at the University?

Section II

Implementation challenges

- What are the challenges faced by the ICT Division in its drive to support e-learning at the University?
- In terms of capacity building, is the ICT Division involved in the training of lecturers to develop e-learning skills?
- Is there a collaborative effort between the ICT Division and lecturers?

Section III

Analysis

- At the moment, there is no formal policy framework that guides e-learning at the University. What are the strengths/weaknesses of this?
- Do you think the University needs a formal e-learning policy framework?

- Do you think the absence of an e-learning policy framework is a problem for UKZN?
- What recommendations do you have to improve e-learning at UKZN?

Appendix C

Informed Consent

Dear lecturer,

My name is Okem Andrew Emmanuel. I am studying towards a Master's Degree in Policy and Development Studies at the University of KwaZulu-Natal, Pietermaritzburg campus. My research project is entitled: *The Policy Agenda Setting Framework: A Case Study of E-learning at the University of KwaZulu-Natal*. The study seeks to explore among other things, factors that influence the formulation of institutional e-learning policies and staff responses to e-learning initiatives.

Your response to the questions contained in the questionnaire will be used strictly for the study. In addition, any information that you provide is confidential. You are under no obligation to answer any question that you are not comfortable with.

Thanks a lot for your time.

Yours sincerely,

Okem Andrew Emmanuel.

(Researcher)

xxxxxxx@ukzn.ac.za

I..... understand the content of this questionnaire. My participation in the study is of my own freewill.

Date.....

Signature.....

Questionnaire for Lecturers

Conceptualisation: For this study, e-learning is defined as learning facilitated online through network technologies. E-learning can either be a fully online course or a pedagogical strategy aimed at supplementing classroom-based courses.

Instruction: Please mark the appropriate box(es) with an **X**.

1) School.....

2) Discipline.....

3) From the following, choose the box that best describes you

☐ Professor ☐ Dr. ☐ Mr. ☐ Mrs. ☐ Others.....

4) Please choose from the following the one that best describe your age.

☐ 20-30yrs ☐ 31-41yrs ☐ 42-53yrs ☐ 54yrs and above

5) How many years have you lectured at tertiary institution?

☐ 0-3yrs ☐ 4-7yrs ☐ 8-11yrs ☐ 12yrs and above

6) How many years have you lectured at UKZN?

☐ 0-3yrs ☐ 4-7yrs ☐ 8-11yrs ☐ 12yrs and above

7) Which of the following official UKZN Information and Communication Technologies (ICTs) do you use in relation to teaching? (Please mark all that apply).

☐ Moodle ☐ Turn-it-in ☐ Innerweb ☐ Student Management Information Systems

☐ Video conferencing ☐ Online course evaluation ☐ GroupWise

Others, please specify

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8) Which of the following general ICTs do you use in relation to teaching? (Please mark all that apply)

☐ Power point presentation ☐ Facebook ☐ Blogs²² ☐ Twitter²³ ☐ Wikis²⁴

Others, please specify

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9) How comfortable are you with ICTs?

☐ Very Comfortable ☐ Comfortable ☐ Uncomfortable

10) Do you think the University administration takes e-learning seriously?

☐ Yes ☐ Neutral ☐ No

11) On a scale of 1 – 5 with 5 being the most serious and 1 being the least serious, rank the following in terms of the challenges they pose to e-learning at UKZN.

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|---------------------------------|---|---|---|---|---|
| a) Lack of ICT infrastructures | 1 | 2 | 3 | 4 | 5 |
| b) Lack of staff training | 1 | 2 | 3 | 4 | 5 |
| c) Lack of staff motivation | 1 | 2 | 3 | 4 | 5 |
| d) Lack of student motivation | 1 | 2 | 3 | 4 | 5 |
| e) Absence of e-learning policy | 1 | 2 | 3 | 4 | 5 |

²² A web blog also known as blogs is a website or part of a website that is regularly updated and maintained by an individual. Most web blogs are interactive allowing visitors to the site to leave comments and interact with other users

²³ Twitter is a social networking site which allows people to post and read messages (known as tweets) of other users. Unlike a web blog, the number of characters used in a twitter is quite limited (about 140 characters).

²⁴ Wiki is an online service which allows users to edit interlinked web pages. It is the technology that is used by collaborative wiki sites such as Wikipedia.

12) At the moment, the University of KwaZulu-Natal has no e-learning policy framework. Do you think the University needs to develop a formal e-learning policy framework?

☐ Yes ☐ Neutral ☐ No

13a) If UKZN were to establish an e-learning policy framework which mandates all lecturers to develop e-learning platforms, would you, as an academic, implement e-learning willingly?

☐ Yes ☐ No

13b) If yes, indicate which of the following reason(s) informed your response to question 13a (Please mark all that apply).

It leads to faster access to information ☐

It leads to more creative teaching ☐

It leads to more flexible teaching ☐

It prepares and equips students for work environment ☐

It makes Higher education more accessible ☐

It improves the quality of graduates ☐

Additional reason(s) (please write in the space provided)

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13c) If no, indicate which of the following reason(s) informed your response to question 13a (Please mark all that apply).

It increases plagiarism ☐

It decreases the quality of scholarship ☐

It leads to constant interaction (loss of personal space) ☐

It is open to abuse ☐

It is too expensive ☐

I am too old to follow to follow all the changes ☐

It increases the digital divide²⁵ ☐

It leads to the commercialization of education ☐

E-learning is very time consuming ☐

Lack of ICT expertise ☐

The change to e-learning portals and platforms is too radical ☐

Staff should have the autonomy to decide which teaching ICTs to use ☐

It is hard to develop online materials for some modules ☐

Staff should have the autonomy to choose their teaching style (whether traditional or online) ☐

Other reason(s) (please write in the space provided)

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14) The following are some of the advantages of e-learning. Please mark the item(s) that you agree with (if your answer to question 13a is “yes”, please ignore this question).

It leads to faster access to information ☐

It leads to more creative teaching ☐

It leads to more flexible teaching ☐

It prepares and equips students for work environment ☐

It makes Higher education more accessible ☐

It improves the quality of graduates ☐

Other reason(s) (please write in the space provided)

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²⁵ Digital divide is a term used to describe the difference between people who have effective access to digital technologies and those with limited access.

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15) The following are some of the disadvantages of e-learning. Please mark the item(s) that you agree with (if your answer to question 13a is “no”, please ignore this question).

It increases plagiarism ☐

It decreases the quality of scholarship ☐

It leads to constant interaction (loss of personal space) ☐

It is open to abuse ☐

It is too expensive ☐

It increases the digital divide ☐

It leads to commercialization of education ☐

E-learning is very time consuming ☐

Other reason(s) (please write in the space provided)

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16) Do you think the University should pay more attention to the development of full online courses?

☐ Yes

☐ Neutral

☐ No

17) From the following, choose the item that you agree with. If the University were to assist me with developing online course for my module, I would readily embrace the opportunity.

☐ Strongly Agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly

Disagree

18) Do you see e-learning as a move towards distance learning?

☐ Yes

☐ Neutral

☐ No

19) Do you allow students to submit their assignments online?

☐ Yes

☐ No

20a) Do you assess assignments electronically?

☐ Yes

☐ No

20b) If no, would you consider assessing assignments electronically?

☐ Yes

☐ No

- 21) Do you allow students to send you text messages? ☐ Yes ☐ No
- 22a) Do you make use of web blog to communicate with students regarding your module? ☐ Yes ☐ No
- 22b) If no, would you consider creating a web blog for your module? ☐ Yes ☐ No
- 23a) Do you twit with your students? ☐ Yes ☐ No
- 23b) If no, would you consider twitting with your students? ☐ Yes ☐ No
- 24a) Do you communicate with your students via Facebook? ☐ Yes ☐ No
- 24b) If no, would you consider creating a Facebook account for students in your course? ☐ Yes ☐ No

Thank you for your time