Freirian and Postcolonial Perspectives on The Development of Information and Communication Technology (ICT) in African Higher Education Institutions: A Case Study

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ABSTRACT

Information and communication technology (ICT) is seen as great opportunity for higher education institutions, and considerable efforts and resources are invested worldwide in promoting its use. As with other institutions in the world, African higher education institutions have invested considerable resources in ICT development. However, it has been reported repeatedly that the continent experiences problems with ICT development. A review of the literature has identified internal and external factors that limit ICT development as well as problems associated with bringing technology into local practices. Broadly, the thesis examines the extent to which African higher education institutions have benefited from technology. The specific aim is to investigate whether universities' decision makers have given due consideration to staff development for ICT use.

To explore issues of technology adoption, studies were undertaken. Empirical research has been conducted focusing on a single university in Uganda as a case study. Qualitative research methods were used including data collection techniques such as document analysis, observations, open-ended questionnaires and in-depth interviews. Theoretically, the study used Freirian and postcolonial theories to guide data collection and analysis. Freirian theory was also used to guide data collection, with the problem-posing approach developed by Freire being adapted to interview participants. This proved to be a valuable technique to collect data.

The study findings confirm the enormous benefits that African higher education institutions can gain from technology. The benefits that were identified included more efficient communication, teaching, and research. However, it was feared that costs and possible cultural impact would arise as negative aspects of technology adoption. ICT staff development approaches were found to be mainly ineffective and, to some extent, dehumanising. Humanistic approaches would result in more relevant, more engaging staff development that may transform ICT development within Africa.

Declaration and work count

I hereby declare that, except where explicit attribution is made, the work presented in this thesis is entirely my own.

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CHAPTER ONE: INTRODUCTION

Introduction

Information and communication technology (ICT) is thought to offer great opportunities for higher education. Flexible learning and access to materials from all over the world are among the benefits identified (Hanna & Latchem, 2002; Uys et al., 2004). Yet while higher education in developed countries searches continuously for better ways of benefiting from ICT, developing countries, particularly in Africa, are argued to be facing considerable obstacles towards ICT development (Adam, 2003; Adam & Wood, 1999; Amutabi & Oketch, 2003; Donte, 2001; Elsiddig, 1993).

The preliminary objective of this study is to review the extent to which higher education institutions in Africa have benefited from ICT development and to investigate barriers to that development. Some commentators - Adam (2003) and John (1996), for example - have identified the lack of modern ICT facilities as major obstacles to ICT development in the continent. However, Africa has modern ICT facilities that were either donated from developed countries or assembled locally (Ocholla, 2003). Yet current ICT projects in the continent continue to struggle (Engelbrecht, 2005; Elsiddig, 1993; Moyo, 2003).

The main objective of this thesis is to assess whether decision makers have neglected the human dimension of ICT: academics' development. African higher education seems to have overlooked the issue of preparing academics for ICT usage (Adekanmbi, 1999; Lelliott et al., 2000; Quinn, 2003). It appears that academic staff members are not being formally trained for ICT usage, and yet, they are still expected to use technology. This study will explore existing staff development approaches and examine their effectiveness. Thus, the study will contribute to the

ever-growing literature that discusses ICT in higher education with a particular emphasis on the human aspects of ICT adaptation.

Despite an increased interest in the pursuit of ICT in higher education by African researchers, there are no studies focused on academic development in relation to ICT in Africa, excluding South Africa. In contrast, literature from developed countries continues to investigate the issue of staff development for ICT utilisation. In the United Kingdom, for instance, there has been wide discussion of this matter in recent years (e.g., Clegg, Konrad, & Ta, 2000; Fitzgibbon & Jones, 2004; Land, 2001; Loveless, 2003; Littlejohn et al, 2003; Oliver & Dempster, 2003; McCarney, 2004; Sharpe & Bailey, 1999; Smith & Oliver, 2000).

Unlike previous literature in the field, this study will discuss staff development and link this issue with the difficulties facing ICT development in African universities. Finally, the unintended consequences of ICT development will be considered. For example, the cultural impact of importing technology from developed countries will be explored because studies have already highlighted some negative aspects of ICT (Odedra, 1990; Amutabi & Oketch, 2003; Woherem, 1993). Woherem (1993, p. 55-56), in particular, argued:

> Technology is not just the technical artifact; it is produced
> by individuals with a certain viewpoint. It is therefore not
> value–free; it affects the lives and work processes of
> individuals and their social relationships; it also affects the
> religious and cultural views and practices of people. There
> is a social and cultural dimension to science and
> technology.

Research context

African higher education provides the context for this study. ICT development is one of the most debated issues by African policy makers even though studies continue to demonstrate the lack of tangible investment in this area (Elsiddig, 1993; John, 1996; Adam & Wood, 1999; Adam, 2003; Moyo, 2003, Ocholla, 2003). The question addressed in this thesis is how African higher education institutions can benefit more from technology use. To begin developing an understanding of African higher education institutions' experiences with ICT development, a single university will be used as a case study. This is intended to lay the groundwork for further studies in the future.

A research site within the East Africa region was selected for this study. Even though countries in the East African region are diverse in many respects, they share several similarities, such as the usage of new technology, educational history, and the emergence of private universities that emphasise ICT development in order to broaden access to higher education. Additionally, ICT has been the focus for a great deal of debate both at the private and public levels in these societies.

Kenyan, Ugandan, and Tanzanian universities were selected and subsequently approached for this study. Any university appearing not to have been involved with ICT development was not approached. Five public universities were invited to participate.

Universities were contacted both by email and by telephone, and a public university in Uganda accepted my request. Recently, this institution has made ICT development a top priority, and ICT policies have been created. This university possessed typical characteristics of other institutions in the region, which suggests that the ICT experiences found in this case study might be relevant to other

institutions in the East African region. However, the same cannot be said for the rest of Sub-Saharan Africa, for example, the South, West, and Central African regions, as the ICT experiences of these regions are likely to be different from that where the study took place. The South African experience is unique because the country is making huge efforts to make itself an ICT leader within the African continent (Cross & Adam, 2007).

Personal motivation

This research began as a personal mission to enhance my understanding of the issues facing African higher education institutions in terms of ICT development. In the years I spent in South-East Asia, I had an opportunity to observe how Asian countries had benefitted from ICT in their higher education system. E-learning-based universities were greatly contributing to the expansion of higher education. Some of these countries gained their independence from colonial rule in the same year as many African countries. In fact, some African countries' experiences of colonisation are minimal because their colonisation lasted for only a few years. So why are countries that achieved independence at the same time having different experiences of ICT development? Is it possible that the countries experienced different types of colonisation? Or has the impact on colonisation on these different countries not been explained thoroughly? Obviously, the influence of colonisation was only part of a more complicated picture; African countries face distinctive barriers that are worth investigating.

The questions below are questions I have been asking myself and which I undertook this PhD research to address. Even though this small-scale research might not be able to address all these questions, the study will explore the problems facing

African higher education and the benefits that African higher education institutions can derive from ICT.

Initial research questions

This thesis will address the following research questions:

1. How far have African higher education institutions integrated ICT into their curricula?

2. What are the obstacles they face in doing so?

3. What kind of staff development policy, if any, do African higher education institutions have to support the integration of ICT into their curricula?

Organisation of the thesis

This research consists of nine Chapters. This introductory Chapter focuses on issues such as research problems, the research context, personal motivation for the research, initial research questions and the organisation of the thesis. The second Chapter discusses the literature review and investigates internal and external obstacles facing ICT development in Africa. The Chapter also addresses the issue of staff development and theoretical frameworks for the study. The third Chapter addresses methodological aspects of the study, including detailed research questions, ethical issues, and the research design. An important part of this Chapter is a discussion of how the theoretical foundations of the study will shape the empirical work. Chapter four focuses on the pilot study. The primary purpose of the pilot study was to test and refine the methodology. However, it does provide some insight into the theoretical issues identified in Chapter two. Chapter five provides a descriptive account of how technology is used in the curriculum within the university visited. This is provided in response to the gap identified in the literature review, where it became apparent that

uses of ICT in African curricula have not been documented. Attention was also given to ICT development within the university's administrative hierarchy. Chapter six explores ways in which importing ICT from developed countries could impact Africa. Chapter seven focuses on how the university trained its academics and the effectiveness of the staff development. Chapter eight examines results from Chapters six and seven from a Freirian perspective. Finally, recommendations and the contributions of my study are discussed in Chapter nine.

Conclusion

This Chapter outlined the importance of investigating difficulties facing African higher education institutions as they attempt to benefit from ICT development. It was suggested that ICT staff development issues received less attention from policy makers in the continent and warranted a detailed investigation. Chapter two will discuss the issues highlighted above in relation to the existing literature.

CHAPTER TWO: LITERATURE REVIEW

Introduction

The aims of this Chapter are to investigate how African higher education institutions, excluding those in South Africa, have benefited from ICT development and what the obstacles that they face are. Before dealing with these issues, the Chapter will explore motivations for undertaking ICT projects in the continent, including social, economical and educational benefits. This Chapter also considers concerns about the possibility of negative consequences of ICT development and discusses whether importing ICT facilities and experts from developed countries will have cultural implications for Africa.

In order to interpret this situation, the theoretical frameworks that will be used in the thesis will also be presented in this Chapter.

Having established this context, ICT use in African higher education institutions will be discussed and the important role of staff development policies and practices will be considered. As little has been written on this topic, the Chapter summarises models of staff development for ICT use in the UK, and discusses how they may relate to the African context.

Social and educational advantages for ICT

It has been suggested that a knowledge revolution is sweeping the world, changing the way people communicate, purchase goods, and learn (Donat, 2001; Joris et al., 2003). As a result of these changes, it is suggested, jobs have changed, are being eliminated and created (Hanna & Latchem, 2002). This change seems to have affected almost every country in the world. Additionally, the change represents a challenge and an opportunity for education in general, and for higher education in

particular. Thus Fitzgibbon and Jones (2004) argue the need for universities to change in order to accommodate technology in learning. It has also been argued that "open learning and distance education are at the forefront of educational responses to the changes that are taking place locally, regionally, nationally and internationally" (Uys et al., 2004, p. 69).

Furthermore, the computer, a core technology of the knowledge revolution, has entered all aspects of our daily lives. Udo and Edoho (2000, p. 329) further noted that "the potential benefits of ICT cut across all sectors of the economy and all fields of human activity". ICT has been seen as a tool for economic and social development, because it creates infrastructures for new economic growth and also creates new jobs and increases productivity (Hawkridge, 1991). It is no wonder then that international bodies such as United Nations agencies identify ICT as a tool that can enhance productivity in developing nations and has the potential to bring about economic growth in all areas of national development (Woherem, 1993). Woherem further argued that the successful implementation of ICT reduces the gap among developing countries on the one hand, and also between developing and developed nations on the other hand (Woherem, 1993). However, a clear and precise definition of "successful" ICT implementation was not provided. Nonetheless, the issue of closing the digital divide between developed and developing countries has been identified as a prerequisite for any attempt to reduce the widening gap between the South and North economically and socially (Kozma et al., 2004).

Thus ICT is not a luxury that a few countries should enjoy, but rather a prerequisite for development that no country in the world can ignore. It has become a required tool for participation in global information exchange, international trade,

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economic growth and educational development (Irwin, 2000). It has further been argued that ICT in the classroom will create a new educational environment, transform the educational process and modify the role of the teacher (Tsitouridou & Vryzas, 2004). When ICT arrives in a school, its staff, parents and students are more open to change than normal (Hawkridge, 1990).

Besides the potential economic development which ICT brings, it is also seen as a tool to support good government, improve management skills and promote democratic principles, wider community participation in the political process, and a just society in the 21st century (Lelliott et al., 2000; Sheth, 2002; Wilson & Wong, 2003). Further Akinsola et al. (2005, p. 24) have identified "increased transparency, less corruption, better delivery of Government services and greater government responsiveness" as some potential benefits that ICT can bring to society. Whether justified or not, a country's level of ICT development has become a measurement to differentiate between developed and underdeveloped countries (Lewis, 2000). Further, many commentators believe that ICT can make a tremendous contribution to human development due to its ability to reduce poverty and improve the human condition (Akinsola et al., 2005; Kozma, McGhee et al., 2004; Haigh, 2004; Lelliott, et al., 2000).

Lelliott et al., (2000) summarised a number of ways in which technology has contributed to social development in Africa:

> Technology has been used successfully in Africa in the application of Geographical Information System (GIS) in 1999 elections in South Africa. As GIS allowed the South African Independent Electoral Commission to establish a spatial database for the entire country. ... ICTs are being used to track malaria, and are assisting through email discussion groups in promoting women's reproductive health and in combating HIV/AID... In Africa a network called the Gender in

Africa Information Network (GAIN) provides an "electronic meeting place" by linking networks across the continent, collecting and disseminating information on gender issues. P. 43-46

The widespread penetration of ICT in all aspects of society has affected the education sector as well (Tsitouridou & Vryzas, 2004). It has been further argued that the process of bringing ICT into wider society has to start from schools and universities (Lewis, 2000). However, although there is a lot of research interest in this area, there is also considerable confusion. IT in education, ICT education, E-learning, Distance Learning, Blended learning and CAL are just some of the terms used to describe the use of technologies to enhance and facilitate teaching and learning process at all levels of education. ICT in education has received a lot of attention in recent years, and it has become one of the most debated issues in education. However, will the integration of ICT bring any good into education? If so what is the best method of integrating ICT into the curriculum?

Benefits of ICT in higher education

ICT has the potential to improve different sectors of education: basic education, higher education, adult education, and the education of special and gifted students. Specifically, higher education can benefit substantially from ICT. Freedom of learning, accessing materials on the net, and saving time and money are proposed to be among gains which mature students, in particular, could get from ICT (Littlejohn & Pegler, 2007). Similarly, as Uys et al., (2004, p. 69) noted: "E-learning is further seen as having the potential to increase the success rate of students through more formative feedback, repetition, access to wider materials and contact with other students and teachers who can provide additional support". Flexibility of learning time and location, savings in money and time, self-paced learning, and unlimited

access to extensive learning materials are the other advantages that ICT can offer to mature students in higher education (Kamel & Ibrahim, 2003). As such, Kirkwood and Price (2005, p. 258) pointed out:

> Independent learners can now be more flexibly supported: they can locate, retrieve and interact with educational resources and engage with teachers and fellow students in ways not previously possible.

Furthermore, Hanna and Latchem (2002, p. 116) argue that ICT offers new opportunities in higher education:

> Now, open and distance learning and information communications technology (ICT) offer powerful new possibilities for collaboration in access, equity, virtual mobility in staff and students, and, the eyes of some, commercial gain.

Ojo (2005) further highlighted the potential benefits that ICT can bring, particularly to higher education in Africa:

> Students and lecturers could access a variety of academic journals and papers via the internet as well as through electronic databases. Also, multimedia materials could also be used for teaching proposes. p. 95

Due to these anticipated benefits, there can hardly be a country in the world that is not actively engaged in the process of introducing ICT into its educational system (Tsitouridou & Vryzas, 2004). This is leading to a shift in "education from a focus on information to the process of finding and critiquing, and from the solo learner to learning in social settings" (Conole, 2007, p. 287). As such the use of ICT in higher education "has made an impressive 'big leap forward' since the early 1990s" (Stensaker et al., 2007, p.417).

Developed countries are continuing to discover different ways they could benefit from ICT, whereas the developing nations are focused on technological transfer from industrial nations to their countries. This is because, as has long been argued, "an understanding of technology is vital in the modern world, and must be part of everyone's basic education. And lack of understanding of technological methods makes one more dependent on others in his/her daily life" (Faure et al.,

1972). However, the teaching and learning process in higher education is unlikely to improve simply by applying new technology and ignoring pedagogical aspects of ICT (Oliver & Dempster, 2003; Kirkwood & Price, 2005). The integration of ICT needs to take into account pedagogical usage, the context in which learning is taking place and learners' previous experiences with ICT.

Arguably there are huge benefits that the higher education sector can gain from ICT development. Freedom of learning and accessing learning materials are some of these. Similarly, academics can access online journals that can help them to keep up-to-date in their field. This is particularly useful to the higher education sector on the African continent where libraries and resource centres are often not equipped with the latest academic journals. However, commentators have also pointed out potential problems that African countries would encounter as a result of importing ICT from developed countries.

Problems associated with of ICT adaptations in Africa

Some researchers, particularly those from developing countries, argued that there are negative elements associated with importing ICT from developed countries. Odedra (1992), Amutabi and Oketch (2003) and Woherem (1993) believe that while ICT has potential benefits, there are also negative elements associated with importing ICT from the west into African environments.

It is not only African writers who have suggested that there are potential negatives associated with importing ICT. Irwin (2000, p. 169), for instance, argued that the "computer reflects both the macro-and micro cultures of its creators… computers are artefacts that reflect the culture and perceptual and cognitive perspectives of these creators". In a highly critical manner, Nobel (1998) has argued that ICT based

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knowledge aims to enable industrial countries to control the world as developed countries realised that "their supremacy would depend upon their monopoly over the knowledge". He therefore suggests that technology is not as value free as is often assumed.

Chambers (2003, p. 251) too concluded: "the technologies do carry and favour particular cultural values and communicative preferences". Arger (1987) also argued that distance education as currently practised in the Third World is "interwoven" with the so-called "modernization paradigm" of development and noted that this paradigm has Eurocentric premises which may be unsuitable for the Third World. Lelliott et al. (2000) pointed out that much of the content and style of the materials produced in developed countries are not suited to social and cultural traditions in the developing countries.

Since the new technology which African countries use originated in western countries, arguably these technologies tend to reflect a western perspective. As such, importing technologies from the west is not without risk, as far as cultural aspects are concerned. As Odedra (1990) reported, "the internet's academic and research potential that attracts millions of users everyday makes it the greatest ensuring arena for Americanization and will ensure the greatest dependency by Africa and other developing continents of the South".

Polikanov and Abrahamova (2003, p. 51) have also highlighted the possibility of the internet being "a new form of dependency, some sort of cultural imperialism and cyber neo-colonialism" which will further deteriorate the African position in the world. Woherem (1993) also argued that "when technologies from the West are imported into Africa, they are often inappropriate and harm the domestic

culture. The reason for this is that technologies are not amoral, as many in the west tell Africans, nor are they politically neutral".

In what appears to be a recognition of the cultural negative effects that technology has, Moyo (2003) and Akinsola et al., (2005) have argued that technology should be based on local needs. Furthermore, Reeves (1997) and Henderson (1996) have highlighted the importance of cultural sensitivity in the design of distance education. Similarly, Chen et al., (1999), Collis (1999) and McLoughlin (1999) have all recognised cultural implications of distance education programmes.

Woherem (1993) has highlighted the importance of African countries becoming technologically self-sufficient and not relying on imported technology from the industrialised countries, which would increase their dependency and may affect the creativity of African researchers. He further called for African countries "to transplant the technology instead of importing it from the west".

In addition to the social and cultural negativity that might be associated with importing ICT from developed countries are the financial implications that would make the continent dependent on companies from developed countries. In this regard, Kirkwood (2001, p. 220) identified the following disadvantages of ICT for developing nations:

> Installation and maintenance of high tech infrastructure and systems can be very difficult and very costly (for example, frequent upgrades necessary; skilled technical personnel need to keep up to...For large numbers of people, the costs of gaining access are prohibitively high even where the appropriate infrastructure is in place.

The above discussions highlight the "subjectivity" associated with ICT and the potential cultural impacts. In addition to these, there are also questions about whether ICT is actually "solving" the problems that African higher education is facing. Amutabi and Oketch (2003) pointed out that, despite the promises made about the advantages of ICT, so far there is no evidence that indicates that ICT is a solution to these African educational problems. Furthermore, the promise that ICT programs are "cheaper than conventional institutions" has also not materialised in many parts of Africa. Amutabi and Oketch (2003), for instance, argued that distance education programmes in Africa are more expensive than conventional programmes, as the majority of the population do not have access to necessary ICT facilities.

It has also been suggested that ICT would increase "class" divisions within the African continent. Polikanov and Abramova (2003, p. 43) have described the profiles of the majority of Internet users on the continent as "rich males, who speak English or any other western language and live in the cities". This further demonstrates how ICT is not relevant to people who happen to be living in rural areas and who do not have a basic standard of living let alone access to the technology.

This leads to the discussion of the general problems and barriers that are facing ICT development on the continent.

Obstacles to ICT development in Africa

Despite the negative impact that might come with technology, ICT can still offer many benefits to developing countries. However, it appears that Africa is not benefiting from ICT development to the extent that might be expected. This is because the continent is reported to be facing considerable barriers towards integrating ICT into their societies in general and into education in particular. Although the nature of obstacles may vary from one country to another, there are a number of common obstacles that are facing most, if not all, sub-Saharan African countries (excluding South Africa). It is these common obstacles that are dealt with here. Barriers are divided into two interlinking categories: internal and external.

Internal obstacles to ICT development

Poverty, lower literacy levels among Africans and African culture are amongst the internal obstacles that are reported to be facing the continent. Concerns over poverty levels in Africa, especially sub-Saharan Africa, are not new and are well documented by institutions such as the World Bank. The World Bank reported that, "the depth of poverty is greater than anywhere in the world" (World Bank, no date). The report further highlighted that many African people are not only poor but are living below the poverty line. "Poverty in Africa is a threat to economic and social stability. About 45 percent of the approximately 590 million people in Sub-Saharan African live below the poverty line, implying that potential human resources are underdeveloped and underutilised" (ibid).

The UK's Commission For Africa (2005, p. 25) also noted that "Africa is the poorest region in the world. Over the last 30 years, on average, its people have seen

virtually no increase in their incomes". This appears to suggest that African countries were well off financially during the colonial era, an argument that is supported by other commentators. Castells (2000), for instance, pointed out that in the last two decades, "Sub-Saharan Africa experienced a substantial deterioration in its relative position in trade, investment, production, and consumption" (p. 84). Demographic growth combined with lack of development of resources could be blamed for worsening poverty levels on the continent. In their meeting at Gleneagles, UK, in 2005, the group of the most industrial countries, known as G8, also reported their concerns over the low level of economic development on the continent. "We should continue the G8 focus on Africa, which is the only continent not on track to meet any of the Goals of the Millennium Declaration by 2015" (p.1). Halving extreme poverty and providing universal primary education were among eight goals that all countries in the World agreed to achieve by 2015, otherwise known as the "Millennium Development Goals" (UN, 2005).

Udo and Edoho (2000) highlight how the hard choices that African leaders are facing, such as tackling poverty, have taken priority agenda over ICT development and suggested that many African countries are unable to feed their own citizens, and this has led these countries to be more concerned with basic issues than longer term concerns such as education. As such, these countries may see ICT as "a luxury". Other researchers have also discussed the problems facing African countries in balancing ICT requirements and feeding their own citizens, as the example below suggests:

> Much of the African continent remains under-developed and poverty-stricken. Civil war and famine are rife and universal basic education a dream yet to be fulfilled. What place has ICT under conditions such as these? (Lelliott et al., 2000, p. 43)

Hawkridge (1991) highlights some of the problems facing African countries: "many illiterates, few skilled people, high unemployment, disease, malnutrition and even starvation" (p. 55). African leaders have not generally shown an understanding of how ICT could be used in their fight against the poverty in their countries. But a different picture is emerging now as exemplified by the position taken by Melse Zenawi of Ethiopia, one of the poorest countries in Africa. He has made known his belief that ICT has the power to counteract poverty. He further stated that "we were convinced that we should invest every penny we have on securing the next meal for our people, we did not believe serious investing in ICT had anything to do with facing the challenges of poverty that kills. Now I think we know better" (BBC online 6 April, 2005). Arguably, ICT development on the continent needs political will and, at the same time, clear policies.

The lower level of literacy in Africa is another problem facing ICT development. Kamel and Ibrahim (2003) summarised a number of ICT problems facing the continent: "basic literacy and computer literacy problems, lack of availability of the necessary tools, poor Internet performance, lack of user support and lack of trained electronic facilitators" (p. 410). Similar concerns were also reported by Polikanov and Abramova (2003) who reported that forty per cent of adults in Africa are unable to read or write.

To make the matter worse UNESCO argued that the number of illiterate adults in Africa is increasing. "Despite the progress achieved since 1990, the absolute number of African adults who cannot read or write has increased from 131.4million in 1990 to 136 million in 2000" (UNESCO, no date; in Kitaw, 2006). UNESCO attributed this to the demographic growth on the continent. Previously, African countries have failed to achieve the target of every child having access to basic education and they

remain likely to miss the Millennium Development Goals for basic education. Adam and Wood (1999) have argued that "the widespread illiteracy is one of the main problems to have limited the effectiveness of ICT within the wider population in sub-Saharan Africa" (p. 314). Similarly Polikanov and Abramova (2003) have also acknowledged the higher illiteracy rate among Africans as a reason for the lack of ICT development on the continent.

This lack of basic education has hindered any progress in ICT development, and there is even a question about whether ICT is relevant to Africa when a great deal of its population is illiterate. Researchers have reflected on this concern:

> We question the prevalent touting of ICT as a means of education and argue that it cannot so serve unless there is already a basic level of education – a condition that, in most of Africa, has not been met...more seriously, enthralment to ICT may subvert the task of achieving universal basic education in countries that are still well short of this mark. Even where basic education is present, the advantages of ICT are not straightforward. Access to knowledge and understanding is inevitably both constrained and enabled by learning time and space. (Lelliott et al., 2000, p. 43)

Lelliott et al., (2000) went further to argue that the promises made for ICT benefits are both false and misleading. "They are false because the prerequisites for an educationally sound and inclusive access to ICT can be met by very few African countries at present. They are also misleading because they may divert attention from other more pressing concerns and other more viable solutions" (p. 48).

Therefore, the expansion of basic education is necessary and unless the literacy rate in Africa is increased, ICT would only widen the social divide that exists on the continent, as it would only be relevant to the well-off members of society. As previously pointed out, rich and middle income people in Africa get access and benefits from ICT, but the economically disadvantaged people are the ones who need these advantages most. Ojo (2005, p. 96) in this regard argued that in Africa "it is

more than 50 times more likely that people in the rural areas will be without a telephone, let alone have access to the Internet which can be prohibitively expensive".

These are obvious internal social obstacles that are restricting ICT development on the continent and that need to be addressed. However, these are not the only internal obstacles that are facing the African continent. ICT infrastructure in Africa, especially Internet connections and networking, are either non-existent or extremely poor. Thus:

> There is an extremely limited telecommunications infrastructure consisting of less than one line per 100 people in Southern Africa. Further, it is estimated that Internet users in Africa number approximately 1.5 million. Of these, 1 million are in South Africa leaving the remaining 500, 000 among the 734 million people on the continent ... despite this limited connectivity overall, there are only two countries on Africa which do not have Internet access. These are Congo (Brazzaville) and Eritrea. As this chapter goes to press, Somali has opened its first Internet service provider (ISP). The installation fee is the equivalent of the monthly income of many Somali families. (Lelliott et al., 2000, p. 44)

They further add that:

> In Africa there is only one service provider for every 30,000 people. The total number of Africa hosts is approximately that of Latvia, which has a population of only 2.5 million has compared to the African population of approximately 780 million. (Lelliott et al., p.44)

Oyelaran-Oyeyinka and Adeya (2004a) found that the major constraint to adapting the Internet in Nigeria is a low level and inefficient fixed line that is equally constrained by interchange congestion. John (1996, p. 8) also mentioned "irregular power supplies, unreliable postal services, few public/institutional libraries" as main barriers. Nevertheless, the poor ICT infrastructure cannot be due only to the economic disadvantages of the continent. As Hawkridge (1991) reported, the African governments' policy of imposing heavy duties on imported hardware and software also plays a big role in hindering ICT development in their countries. Furthermore, Udo and Edoho (2000) suggested that many African countries have been lacking

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clear policies as far as ICT infrastructure is concerned. The ICT market in Africa is controlled by a few companies; therefore competition in the market does not exist. As Oyelaran-Oyeyinka and Adeya (2004a) reported, "In Kenya the problem facing the ICT industry is the monopoly and lack of competition". This is indeed the case of many African countries. Additionally Ondari-Okemwa (2002) reported that "all fixed telephone lines are owned by Telkom Kenya, a state monopoly corporation." This would suggest that the governments need to free their ICT market and make it open, especially for African owned companies, if they are serious about ICT development in their countries.

African culture is also decried (Udo & Edoho, 2000) as one of the main obstacles towards distance education initiatives on the continent. This is not in any way to suggest that Africa is a homogeneous society, as it has diverse cultures between countries and within every single country. However, there are some cultural aspects that Africans across the continent share. The concept of distance education is new to African culture and, therefore, people are sceptical; many do not particularly value distance education qualifications, preferring conventional degrees. Amutabi and Oketch (2003) reported general apathy "by the populace and employers who prefer graduates of conventional systems of education rather then distance learning". This would no doubt hinder the expansion of distance education initiatives on the continent. The African situation would be far worse than for other developing countries as they are, in general, as John (1996) noted, a predominantly oral society with a limited tradition of a reading culture.

As discussed, poverty, lower literacy rates, poor ICT infrastructure and the African culture itself, are all part of the internal obstacles that are hindering attempts

by African countries to develop ICT projects. In addition to these internal barriers there are also external obstacles that hinder ICT development in Africa.

External obstacles to ICT development

If we put aside these internal obstacles, there are also external issues that Africa is facing. Policies of international financial institutions such as the IMF and the World Bank are reported to be damaging the overall economic development of Africa. The Structural Adjustment Programme is a notable example of a policy that negatively impacted development on the continent. As Gibson (2004) reports, "it is now generally accepted in African studies that Africa's 20-odd years of experience with structural adjustment has been a devastating failure". Adam (2003) points out that the Structural Adjustment Programmes have affected universities in Africa to the extent that they "cut journal subscriptions altogether" due to the significant reduction in the budgets they were receiving from the government.

The influence of international financial institutions on Sub-Saharan Africa has been increasing over the last thirty years due to economic deterioration in the region. In fact, as Castells (2000) reports, as a result of economic malaise "the survival of most African economies has come to depend on international aid and foreign borrowing... in the1990s, Africa received 30 percent of all aid funding in the world." (p.87-88). Castells further reports a significant increase of external debts across Africa in the last twenty years. This had allowed external creditors to increase their influence on Africa further.

> Since its generally acknowledged that a debt cannot be repayed, government creditors, and international institutions have used this financial dependence to impose adjustment policies on African countries, exchanging their subservience against partial

condonement of the debt, or renegotiation of payments servicing the debt. (Castells, 2000, p. 90)

Alongside damaging policies, developed countries' policies on donations to the continent have also caused problems. As Adam and Wood (1999, p. 311) note, most ICT resources come through donations, but with "various strings attached" which sometimes affect the long term growth of ICT negatively. This is because when a country makes donations to an African country, one of the conditions attached is typically to buy computers or ICT facilities from the donor country's companies (Hawkridge & McMahon, 1992). This policy is not helping ICT development on the continent as it gives these countries little option to buy ICT infrastructures from the company of their choice, or to develop national industries. In the worst case, an African country gets the equipment companies want to sell, or perhaps get rid of, rather than what they need and as such the continent has became "the dumping ground for a mass of equipment made obsolete by fast-moving technological revolution" Castells (2000, p. 95). A lack of fair trade policies between developed countries and African countries is badly damaging local productivity in Africa. This economic disadvantage makes African countries an arena where developed countries' companies compete among themselves and has further increased the continent's dependency. Hawkridge and McMahon (1992), for instance, have long reported the existence of a strong competition between companies from developed countries to supply hardware and expertises to developing countries.

Globalisation can be considered to be another external obstacle that is hindering development on the continent. Globalisation has been described as a multidimensional phenomenon as it "involves a range of global flows and networks"

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(Tikly, 2001). But this concept was born and developed by the industrialised world as Gibson (2004) notes:

> From its birth, capitalism has been a globalizing system, and political power has been employed to gain advantages, exploit inequalities, and crush competition.

This suggests inequality and dominance of rich and powerful countries, which is one of the characteristics of globalisation. But globalisation is having a particular impact on the social and economic development of the continent. The "brain drain" of well qualified individuals from the continent to other parts of the world can be seen as a major problem hindering development. Huynen et al., (2005) argued that "the globalisation process can also result in a 'brain-drain' in the health sector as a result of labour migration from developing to developed regions" (p. 8). Even though at the moment there are no comprehensive studies that cover the extent of the brain drain in Africa, statistics from individual countries give some idea of the problem. In South Africa, for instance, 41,496 professionals have emigrated to developed countries over a nine-year period (Meyer et al., 2000). Even the poorest country in Africa has been affected by the brain drain; as an Ethiopian politician noted, "there are more Ethiopian doctors in the United States than there are in Ethiopia" (African Research Bulletin, 2005).

The continent clearly faces external barriers towards ICT development. Policies of international financial institutions, developed country donation policies as well as globalisation that hinder ICT projects in Africa.

At a later stage the discussion will come back to a more detailed consideration of current ICT development in higher education on the continent, but for now, the

discussion will turn to a consideration of the theoretical frameworks of this study that will arguably give us a better understanding of current ICT issues in Africa.

To summarise, the continent is facing combinations of internal and external barriers when it comes to technological development. The review also suggests that technology could be particularly used to deal with internal obstacles. However, technology itself appears to be increasing African's dependency as the continent is increasingly tied to developed countries economically. Thus, there is a need to employ theoretical foundations that would help explain the historical relationship between the African continent and developed countries, shedding light on the issues of oppression and empowerment.

Theoretical Foundations

This study employs two theoretical frameworks, namely, Freirian and postcolonial theories. The two theories are discussed below. (Details about how the two theories will be used throughout the study are discussed in the next Chapter.)

Freire's theory

Paulo Freire is an influential Brazilian scholar. He is particularly well known for his methods of educating illiterate and semi-illiterate adults in his native country through dialogue and problem-posing. The methods that Freire developed have attracted the attention of those concerned with adult education issues both in developing and developed countries. Freire has lived in different countries of the world, which made him known internationally, and his method and ideas have created considerable debate among educationalists globally. It is no wonder then that Freire is described as one of the most influential educationalists of the twentieth century, such that, even after his death, his ideas and methods continue to generate considerable interest among scholars across the globe (Roberts, 2005).

Understandably, Freire's methods have been used or recommended for use in various different countries.

Guinea-Bissau and Tanzania were the first African countries that used his method, with Freire himself being involved in the process. The reasons that led Freire to single out these two countries are largely unknown. The two countries are geographically separated as they are in the East and West of the continent respectively; this could perhaps suggest Freire's desire to spread his method across Africa. Tanzania has language and cultural links with other Eastern and Central African countries, which could easily facilitate the spread of the Freirian method to other Swahili-speaking countries. Guinea-Bissau too is in a strategic position in West

Africa as the country is easily accessible to its neighbours and, like Freire's native Brazil, the country is a former Portuguese colony. Freire appears to have wanted his method to spread smoothly and quickly to other African countries due to similarities that he believed existed between Africa and his country:

> ... how important it was for me to step for the first time on African soil, and to feel myself to be one who was returning and not one who was arriving ... the presence among the people of expressions of their culture that the colonialists, no matter how hard they tried, could not stamp out-all of this took possession of me and made me realize that I was more African than I had thought. (Freire, 1978, p. 5-6)

Since then African scholars have been familiar with Freirain methods and, as Godonoo (1998), reported Freire has influenced them considerably.

In the Asian context, Raja (2005) argues that applying Freirian methods in his country, Pakistan, would solve educational and social problems such as the sectarian violence that the country is facing. He further pointed out that "Pakistan's education system is promoting and perpetuating dehumanizing social behavior. The worst thing which hurts 'critical literacy' is the way of thinking which has no concept of tolerance".

Developed countries too have been attracted to the methods and approaches that Freire developed. In Ireland, Mooney and Nolan (2006, p. 240) have used it, for instance. Despite acknowledging the challenges of employing Freire's theory in the nursing education field, they argued that if the Freirian approach is used, "inherited problems can be realized and this will encourage nurses to challenge and question. Through this process the students and teachers become co-learners" (p, 242).Browne (2001) too has argued the important of using Freirian approaches in the nursing education field.

Over the last twenty years, Freirian methods have also been in use in Scotland, especially in the Gorgie Dalry Adult Learning Project. Kirkwood and

Kirkwood (1989) discuss in detail how Freire's methods have been used successfully at the ALD, thus, the Centre had received recognition from the local education authorities and has become a success story of using Freirian methods in a developed country setting. Additionally, in the US, Paulo Freire's ideas have been adopted by feminists, blacks and Hispanics in teacher-training programmes and in other areas such as health care, economics, and sociology (Gadotti, 1994).

However, Freire's educational ideas have not passed without criticism. In particular, Freire's ideas have met with resistance from dominant classes in his own country (Gadotti, 1994). Furthermore, different scholars have identified what they consider to be loopholes and shortcomings for Freirain ideas. Freire was even accused of lacking originality and being dehumanising himself (Gadotti, 1994).

Specifically, Freire's view of reality has been as argued to be too simplistic, too black and white. One is either an oppressor or oppressed. His rigid structuralist view of the world, it is argued, does not allow for its complexity (Facundo 1984, 3, 5-6; Ohlinger, n.d.). Both Facundo and Ohlinger have further argued that Freire's ideas are self-contradictory "about the mutual roles of teachers and learners and freedom of the human subject, Freire's theory involves manipulation of the oppressed by elitist outsiders". Lately, Sharma (2006) described the Freirian model as "too utopian". Sharma added, "there is excessive idealism in the description of knowing and for the learner and educators to participate as equals. Such participation is seldom achieved in real world" (p. 48).

The most systematic criticism to Freirian theory came from a group of third world activists who claimed to have used Freirian theory. The group argued that "Freire's pedagogy is based on western assumptions that undermine indigenous knowledge systems" (Bowers & Apffel-Marglin, 2005). However, the group have

received considerable criticism for their work from different commentators (Au & Apple, 2007; Kahn 2005). Au and Apple particularly have argued that the activists' criticisms of Freirian theory are misplaced and further pointed out that same group appeared "not have understood to the conceptual and political depth of Freirian's conception of liberatory pedagogy" and also lacked "substantial evidence to support their claims" (p. 458). While agreeing the importance of the ecological understanding issue raised by the activists, Au and Apple concluded that the group have attributed too many "fallacies to Freire". They added that the criticisms by the group to Freire's theory could be motivated by market interests, as any book associated with Freire will be of interest to educationalists. "This will enable their work to get more attention" (p.467).

In order to address the criticism that Freirian theory is "simplistic", which seems to be related to the concept of dehumanisation, this study will use "dehumanisation" in a way that avoids absolute classifications. Instead, graded classifications of dehumanisation will be used. Dehumanisation will be divided broadly into categories: high, medium and low. A high level is when individuals experience "exploitation" and "subjugation," while experiencing "injustices and denying of freedom" is considered to be a medium level of dehumanisation, and the absence of these is a low level of dehumanisation. This is not quite what Freire has done or even recommended; however, the definitions that Freire provides suggest the possibility of such classifications.

Despite the criticisms levelled against Frierian theory, his approaches have been implemented in different areas both in developed and developing counties. It is the contention of this study that ICT staff development in higher education in Africa is yet another field that could benefit from Freirian approaches.

However, since Freire's ideas touched on and discussed several different areas, it would be unrealistic and unhelpful to try to discuss all of these ideas in this thesis. Consequently, this section discusses only five Freirian concepts, drawn from *pedagogy of the oppressed* (Freire, 1970). These have been selected for their potential relevance to ICT staff development, especially in developing countries. The five concepts are:

- Dehumanisation
- Internalisation
- Humanisation
- The Banking Style of Education
- Problem-posing

Dehumanisation

Freire points out that dehumanisation takes place when human beings treat a particular group of people as less human or not fully human. As Freire explains, dehumanisation "is not a given destiny but the result of an unjust order that engenders violence in the oppressors, which in turn dehumanise the oppressed" (1970). He further argues that subjugation, denying of freedom, injustice, exploitation, oppression, and violence are all practiced in order to dehumanise the oppressed.

Freire also points out that dehumanisation affects oppressors as much as it affects the oppressed. The oppressor is dehumanised by the act of oppression while the existential reality of oppression and the internalisation of the image of the oppressor dehumanises the oppressed. Furthermore, Freire defines oppressors as those who deny personal autonomy to others by imposing a worldview onto the

oppressed that will persuade them that their circumstances are unalterable, except through intervention by the oppressors or ruling classes. The oppressors smother any possibility of action by the oppressed that might contradict this.

The dehumanisation process is helped by the fact the oppressed live in a dual mentality scenario: they are not led by their own consciousness but rather the consciousness of the oppressors, Freire argues. He further explains that the oppressors perceive the oppressed as adaptable manageable beings, and not critical thinkers who are able to solve their own problems.

Freire predicted violent acts from oppressed individuals. He argued that sooner or later dehumanised individuals would lead the struggle against those who made them so; they would engage in the process of liberating themselves from oppression and gain their lost humanity. But as soon as the struggle begins the far-reaching effects that dehumanisation has on the oppressed become clear. Freire noted that during the initial stages of the struggle, the oppressed leaders may themselves act like oppressors. This leads to the concept of 'internalisation'.

Internalisation

As a result of dehumanisation, oppressed individuals act and think like their oppressors as they lose their own identity and their worldview. The oppressed also believe the images of them that the oppressors project. Consequently, the oppressors become the role models of the oppressed and they may come to follow the models, techniques and approaches of the oppressors unconsciously. Thus, internalisation is the process of becoming somebody else. Freire additionally points out that this process of "being somebody else" becomes apparent "during the initial stage of the

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struggle, [when] the oppressed, instead of striving for liberation, tends themselves to become oppressor, or sub-oppressors."

This is due to the fact that the "very structure of their thought had been conditioned by contradictions of the concrete, existential situation by which they were shaped". Freire continues, "their ideal is to be men; but for them, to be men is to be oppressors". Their model of humanity is to follow their oppressors.

As has been pointed out earlier, the oppressors dehumanise the oppressed in the sense that the oppressed not only loose their identity but also are only able to see the world in terms of their oppressors' view of reality. This is because their thoughts have been structured or conditioned by the contradictions of the concrete, existential situation by which they were shaped. This is why, when the oppressed initiate the struggle to regain their lost humanity, their leaders tend to employ the same approach as the oppressors; this is the only model they are familiar with.

Humanisation

Unlike dehumanisation, humanisation is treating individuals as fully human – even though they are oppressed – in the sense that they take part in the process of liberating themselves. Humanisation attempts to restore stolen humananity by trusting human abilities and skills. It involves treating human beings as critical thinkers, even if they need specific interventions (such as education) to make them use these skills.

As with dehumanisation, humanisation is enacted through education and culture. But, as we will see, the education and culture used in the humanistic approach are completely different from those used in dehumanisation. Humanising education is based on problem-posing. According to Freire, in order for humanising

pedagogy to take place, it has to pass through two stages. The first stage is for the oppressed to reveal the world of oppression and seriously commit themselves to its transformation. The second stage of the process is to make the pedagogy belong to all oppressors and make the oppressors engage in the process for permanent liberation.

Banking style of education

Freire was the first person who used this term to describe an education system which is based on memorising facts and figures. In the Banking Education approach, passive learners have pre-selected knowledge 'deposited' into their minds. The topics are developed without the learners being consulted, or without their local needs being considered. In the banking educational style, the teacher is the subject while the students are objects or containers that are filled by deposits of information.

As such, the main task of a teacher in a Banking educational system is to 'fill' the students with contents of his narration, which is completely detached from the reality, disconnected from the totality that engendered them and could give them significance. This narrative method of teaching results in students mechanically memorising the narrated subjects, without questioning the workability or the logical implications of the subjects being taught. Freire further argues that this banking style of education does not consider students as critical thinkers but, on the contrary, positions them as ignorant beings who possess limited critical thinking skills.

Furthermore, the scope of this Banking Concept goes only as far as receiving, filling and storing the deposit. This is because the ultimate aim of this education is to produce students who will "fit" the world that oppressors have created for them, and not attempt to change the realities they are living.

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Problem-posing

Problem-posing is another important term that Freire uses. Problem posing posits a problem that reveals oppression. That is because, as Freire mentions, the oppressed individuals need to recognise that they are under oppression. Thus problem-posing has its own criteria.

The first criterion of this system of education is that it is based on dialogue and tries to overcome the contradiction of teacher-student relations. Unlike the Banking Concept, the teacher does not only teach, but also learns. Similarly, the students do not only learn; they also teach the teachers. In other words, this system of education places responsibility on both teachers and students. Problem-posing education, Freire argues, must trust the learners' abilities to think critically. In order to achieve this, he suggests a partnership between students and teachers should be established. Similarly, students should raise questions concerning the situation they are in, instead of trying to fit into the world that the oppressors created for them. Thus, Freire argues for the importance of dialogue between students and teachers. Freire furthermore points out that, in the teacher-student relationship, the "teacher cannot think for her students, nor can she impose her thought on them".

Additionally, Freire compares the problem-posing education system to the Banking style of education by labelling "banking theory and practice, as immobilising and fixating forces, [that] fail to acknowledge men and women as historical beings. Problem-posing theory and practice take the people's historicity as their starting point".

Methodologically, problem-posing education uses a cognitive approach, and gives problems to the students that will enable them to think critically, and a problem posing teacher continuously re-forms his reflections such that the students do not

only become good listeners but also critical thinkers and co-investigators in dialogue with the teacher. In addition, as can be understood from its name, this approach to education poses problems to the students about the world, so that they become increasingly challenged and obliged to respond to that challenge. Hence, the students' responses to the challenges result in new challenges until this approach of problem-posing becomes part of their daily activities. Similarly, the problem-posing teacher believes in the concept of education as the practice of freedom and denies that man is abstract, isolated, independent, and unattached to the world, as also denies that the world exists as a reality apart from people.

Postcolonial theory

Postcolonial theory has recently been seen as a powerful tool that academic developers in the developed countries could use (Manathunga, 2005, 2006, 2007). The term 'post-colonial' is used to describe the period following the decline of European colonialism in "third world" countries (Ashcroft *et al.,* 1998; Gandi, 1998; Chambers & Curti, 1996; Young, 2001; Loomba, 2005). But defining this term has never been an easy task as Castle (2001) points out: "postcolonialism is a problematic term. It refers both to an era after colonialism and to a set of critical attitudes taken towards colonialism". One reason why there is a problem in appropriately defining this term could be due to the fact that there is no "tradition per se for such a theory - as we might say there is a philosophical tradition for deconstruction, a psychoanalytical tradition for Lacan's "return to Freud," a Marxian tradition or cultural materialism, and so on" (Castle, 2001). It could also be due to existing arguments that question whether colonisation has ended or not, and

consequently whether this period can correctly be called "post-colonial" (Loomba, 2005).

Nevertheless, it is widely accepted that the focus for this theory is the colonial legacy and the impact of colonisation on third world societies. Though the European colonisers in these countries were not homogeneous, either in their policies or the duration of their colonisation, yet the scale of cultural, social and political impact on colonised countries was very similar. Economic and social exploitation and loss of identity are some common inherited experiences from colonisation (Ashcroft et al., 1998). Thus the legacy of colonisation is still shaping these countries. Gaining political sovereignty from colonisers after political or armed struggle is also another common shared experience in almost every third world country. The end of direct rule in the coloniser's era thus marks the beginning of a new era, a "post-colonial" period.

Historically, the phrase "postcolonial" was first used by historians after the Second World War; however, from the late 1970s the term has been used by literary critics to discuss the various cultural effects of colonisation. Thus the term "post-colonial" developed both as a political and academic movement (Ashcroft, Griffith & Tiffin, 1998). This indicates that usage of this word has changed over the years with the changing social and political landscapes. Young (2001), for instance, points out that "the term postcolonial was used in the social sciences with a specific Marxism reference, a usage that continues today in the language of contemporary area studies, economics, political science and international relations, and which can still be found in the discourse of politicians." Thus, he added, the term "postcolonial" has been used to describe the many states from Albania to Vietnam that have since mediated Marxism in its various forms with a free-market economics (Young, 2001, p.58).

Similarly, the term was extensively used during the cold war era and the subsequent period that followed the collapse of the Soviet Bloc to refer to anti-western dominance. Additionally, Young (2001) argued that "postcolonial" theory has developed as a result of western and tri-continental anti-colonialism, as "many of the greatest anti-colonialists were educated in the western institutions and encountered there the anti-imperialist Marxism and socialism which they then developed for their own specific needs".

As pointed out earlier, some commentators (Ashcroft et al., 1998; Chambers & Curti, 1996) strongly debate whether the colonial period has in fact ended or not and are thus sceptical about describing this period as "postcolonial". They believe that many of the colonised countries that gained their political independence decades ago still live under the shadow of their former or new colonisers educationally, culturally, economically and intellectually. Young (2001) argues that because not all colonisation is over, new terms have arisen, such as "neo-colonialism" and "imperialism", which emphasise the continuation of the colonisation process. Similarly, Loomba (2005, p.11) differentiates between "colonialism" and "imperialism". She argues that, while colonialism involves direct rule, "direct rule is not necessary for imperialism in this sense, because the economic (and social) relations of dependency and control ensure both captive labour as well as markets for European industry as well as goods". She further explains that "in the modern world, then, we can distinguish between colonisation as the takeover of territory, appropriation of material recourses, exploitation of labour and interference with political and cultural structures of another territory or nation, and imperialism as a global system" (p. 11) but one expressed in different forms than previous direct rule.

As has been mentioned, the postcolonial movement calls for society to be re-examined in the aftermath of the colonial period. The movement uses language and culture as a means to eliminate or minimise the effects of colonisation on society. Thus, postcolonial writers are concerned with concepts such as ideology, image, senses, identity, tradition, otherness, colonialism, neo-colonialism, culture, imperialism, diaspora, nativism and Euro-centrism.

Postcolonial theory has drawn its conceptual vocabulary from a wide range of disciplines and theoretical agendas including anthropology, feminism, history, human geography, Marxism, philosophy, post-structuralism, psychoanalysis and sociology (Young, 2001). But there is concern that because the concept has no tradition *per se*, this diversity may be a weakness.

Post-colonial thinkers try to expose in their writing what may be assumed to be an economic exploitation by rich countries using the concept of neo-colonialism and, at the same time, promote local cultures and ideologies. But looking critically at the structure of these societies is equally important. The weaknesses of local cultures had, arguably, facilitated colonisation processes, as Algerian philosopher Malik Bennabi points out. Bennabi (1991) developed the concept of "colonisability" or "readiness for colonisation" to describe the situation that existed in third world societies prior to colonisation. He argued that, due to internal weaknesses that colonised people faced, they were ready and willing to be colonised long before the colonisation took place. Thus he argued that any attempt to liberate colonised society should address the "colinisability" issue in society. Similarly, long before Bennabi, British historian and philosopher Toynbee (1975) indicated the importance of looking at internal weakness as reasons for the fall of a civilisation. Strengthening some parts of local cultures while at the same time eradicating the negative or weak

elements of native cultures are both vital actions so as to resist any future or current colonisation. This would be a balanced view which, at the moment, the post-colonial writers seem to neglect.

Broadly speaking, colonisation negatively impacted on colonised nations but it would be unjust to blame former colonisers for all the problems that once-colonised countries are now facing. There are third world countries that were never colonised but seems to have more or similar problems than the colonised countries have. Ethiopia is a good example: the country has never been colonised (although they were under Italian rule for few years) and since the1940s Ethiopians have had a national government, yet the country remains amongst the poorest countries in Africa.

Even amongst the previously colonised nations, it may be interesting to look at how different countries responded to the aftermath of colonisation. While some countries have achieved significant development after becoming independent, others have not done that much in regard to their national development. Ghana and Malaysia are examples that fall under this category. Both countries gained independence from British rule in 1957 but the two countries are in complete contrast now in terms of level of social and economic development. So it is important for post-colonial theorists to look at the post-colonial countries and social structures of these societies for explanations. The role of local cultures before and after colonisation is an obvious element that needs to be examined critically and, again, one which seems to be lacking in postcolonial theory.

Despite these limitations postcolonial theory remains relevant to the third world countries as it calls for examining the aftermath of colonisation and localisation of knowledge on the previously colonised societies.

ICT in Higher education in Africa

Broadly speaking, embedding ICT in higher education has happened in almost every country in the world. Flexible learning systems which use different applications of technology have been introduced in almost every university to reflect the social changes that ICT has brought (Lazenby, 1998). This is due to the potential benefits that integrating ICT into higher education would have on both students and faculty members alike. It has been further noted that distance learning programmes have the potential and capacity for contributing to the growth and expansion of higher-quality university education (Amutabi & Oketch, 2003). Additionally, flexibility and cost-effectiveness for students are given as benefits of the use of ICT in higher education (Littlejohn & Pegler, 2007).

However, ICT use in higher education could take different forms. Distance education where students rely entirely on materials they receive by post, television or radio broadcasting, is one of oldest forms of ICT in higher education. It could also take the form of E-learning, which has been defined as "use of electronic media (the internet, DVD, CD-Rom, Videotapes, television, cell phones, etc.) for teaching and learning at a distance" (Engelbrecht, 2005, p. 218). Distance learning programmes such as this are increasing and many countries in the world have begun introducing E-learning programmes. Some countries are establishing completely virtual universities and many educational institutions are becoming mixed mode, utilising both face-to-face and ICT-based support. The ICT revolution has changed the way in which students seek knowledge. As Lewin (2000, p. 314) reported: "a second generation of internationalisation is taking place in further and higher education. Students no longer have to travel and stay for extended periods in developed country institutions to obtain international qualifications". Similarly, Adam (2003) suggests

that "higher education institutions have been undergoing transformations in response to the promise of ICT in teaching, research and training" (p, 196), and Hanna and Latchem (2002) describe how, as a result of this new technology, the trends of higher education have been changing from targeting local or national students to students globally.

Thus, the distance education industry is expanding in many parts of the world. In Britain, for instance, the Open University (OU), which is a distance learning institution, produces 9 per cent of all undergraduates nationally each year, for 5 per cent less cost than traditional universities (Amutabi & Oketch, 2003). Other countries, especially developed nations, have gone a long way in using ICT in their higher education (Van de Wende & Beerkens, 1999). Even some developing countries in Asia and Latin America are far better than their counterparts in Africa in terms of using ICT in higher education. Haddad and Jurich (1992, p. 30), for instance, argued that "in 1992, 41% of higher education students in Thailand and 38% in Turkey studied at a distance… The China TV University System (Republic of China) and Anadolu University in Turkey each serves more than 500, 000 students per year." Elsiddig (1993, p. 138) noted, at the same time, "Africa is the only continent which has not witnessed any development of distance education at university level, if we exclude South Africa and the external degree at the University of Zambia". Even a decade later, Moyo (2003) pointed out that while other parts of the world have witnessed "considerable advances" in distance education, the situation on the African continent remains a "cause for concern". As a result, the continent faces the risk of being "marginalised in the new knowledge-based world economy" (p. 498).

The efforts of some African countries to use ICT have not been successful so far (Elsiddig, 1993), although South Africa leads other African countries in the

advancement of ICT and distance learning programmes. As such The University of South Africa has the largest student enrolment in Africa in its distance programmes as it is an entirely distance based institution. Its alumni include several distinguished personalities in Africa, playing useful roles in the development of their countries (Amutabi & Oketch, 2003). Similarly, the University of Pretoria has 26,000 distance students enrolled on Diploma courses (Lazenby, 1998). Vergnani (2000, p. 46) also describes distance education programmes at residential universities in South Africa, including "the six campuses with the largest distance education programmes [which] have about 65,000 students in distance courses".

Higher education is an ever growing sector in Africa as is the case with other developing countries. Kenya, for instance, "had only one public university in 1996, and no private university. Today it has six public universities and over 10 private universities" (Amutabi & Oketch, 2003; Oketch, 2003). Even Somalia which has had no central government or ministry of education since 1991 has witnessed a dramatic increase in new universities, rising from just one in 1991 to nearly ten in 2006 (Leeson, 2006). Accessing higher education in developing countries and in Africa in particular is the best way to gain high salaries and better employment (Elsiddig, 1993). As such the higher education sector is rapidly expanding.

In spite of this expansion, higher education remains a privilege that only a few well-off people enjoy – a tiny minority of the large population. Many qualified students cannot get access to universities due to the limited places available. In Ghana, for instance, in 1996 only 27% of the 22,500 students who qualified to enter a university were actually admitted (Donat, 2001). Similarly, over 40,000 students qualified for public universities in Kenya, however these universities can take in only approximately 8,000 to 10,000 students (Oketch, 2003). This is a clear indication of

how many qualified students have missed the chance of getting into higher education. Public universities in Africa are unable to accommodate each and every student who qualifies for entrance. As a result, studying in private universities locally or abroad becomes the only option open to these students. Since the majority of African students are from poor family backgrounds, paying tuition fees for their children is a great challenge, which a large majority of the population cannot afford.

Expanding distance education based on ICT facilities has been proposed as a solution for the problem of accessing higher education (Donat, 2001). It has been further argued that distance education is cheaper and more flexible than traditional institutions. Katz and Yablon (2002, p.72) noted that "the day-to-day running of the Internet based course was highly cost-effective when compared with the traditional lecture-based course". Similarly, Elsiddig (1993) argues that most developing countries would be unable to maintain real expansion in higher education without seriously considering distance education initiatives. Due to globalisation, which affects every country in the world, African educationalists have realised the importance of ICT for universities and communities alike. This has led these universities to expand, modernise already existing distance programmes or establish new universities that use ICT programs. As a result there are many developments taking place within Africa, especially in the sub-regions, which aim to introduce ICT in education (John, 1996).

It should also be noted that the notion of distance education programmes is not an entirely new concept to Africa; several African universities have had distance education courses for many years (Jenkins, 1989; Moyo, 2003). However, these distance programmes relied mainly on printed materials, and the budget was generally too limited to complement these efforts by leveraging the power of ICT

(Donat, 2001). To respond to the current challenges, African educationalists started looking to ICT and distance education as a solution. A new university that only uses ICT facilities was established on the continent in order to provide distance education for nine African countries. The World Bank provided the funding for it. The mission of this African Virtual University is:

> To bridge the digital divide and the knowledge gap separating Africa and the rest of the world by dramatically increasing access to global educational resources throughout Africa. This mission is to be achieved through the integration of satellite technology and the internet to allow the cost-effective and efficient delivery of educational programmes throughout the continent and increased access to global educational recourses in Africa. (Donat, 2001, p.579)

The aim for the African Virtual University was to bring high-quality education to a large number of African students thereby producing sufficient numbers of well trained African scientists, technicians, engineers and business managers, which are required for economic development (Aguti, 1999; Light, 1999; Donat, 2001; Hanna & Latchem, 2002; Amutabi & Oketch, 2003; Moyo, 2003). This is a result of the fact that local universities have failed to fill this position (Amutabi & Oketch, 2003).

However questions have been raised as to whether the African Virtual University is solving the problems in at least one of the countries where it operates (Amutabi & Oketch, 2003). The higher fees at AVU are one of the reasons why this university has not attracted the lower income earners in Kenya. It is reported that "AVU programmes cost more than the most expensive locally operated courses such as architecture, medicine, engineering etc. The cost is very prohibitive to ordinary parents who have problems paying the lower local fees" (Amutabi & Oketch, 2003, p. 65). As AVU is based in the capital city, and since 80 percent of the Kenyan population lives in rural areas where there are no internet connections, this university is not relevant to the majority of Kenyans (Amutabi & Oketch, 2003). Not only that,

but Ondari-Okemwa (2002) argues that, as most students who enrol at the AVU graduated from Kenyan high schools which use chalkboards and are not familiar with ICT, they would take a long time to adjust to a classroom where "there is no chalkboard". Additionally, since lecturers at this university are based in Europe or in North America it is "not easy to establish rapport with students in a Kenyan university setting". He further points out the potential cultural differences which the university planners might not have taken into the account: "a professor based in a North American or Western European university may not be quite sure of what to be sensitive to, and what not to be sensitive to, in a virtual classroom situation" (p. 326-327).

Wolff (2002) has argued that the AVU "did not recognize the full extent of the complexity, cost and human resources required to become a degree granting international distance learning institution in Africa" (p. 24). A similar concern was also reported from AVU's sites in Zimbabwe (Moyo, 2001, 2003). Indeed, the whole issue of ICT use is riddled with doubts, as Engelbrecht (2005, p. 218) reports:

> many e-learning initiatives have failed to achieve the desired learning outcomes, because not enough attention has been given to good learning design, management of the e-learning event, the selection of the right technology or the to the adoption of e-learning by instructors and learners.

This suggests that not only the AVU but many E-learning initiatives are failing to fulfil their aims. As John (1996, p. 3) noted, "the state of art, however, seems to suggest that many distance education practitioners in sub-Saharan Africa constantly struggle to fulfil the aims and aspirations of their institutions". This has resulted in African education institutions remaining far behind other institutions in the world:

> African higher education institutions have remained very much behind other regions in embracing sector reforms and ICTs. They have also lacked research on what ICTs mean to the reform process,

their students, and teachers and to their evolving o organizational structures. ... ICTs in most universities in Africa have remained clutters of computers and networks that have either worked badly or are islands low bandwidth connections with frequent breakdown. ... ICTs applications in African higher education have been remain far from satisfactory. For some time, policymakers were not interested in the universities in the region because higher education was considered to be something that benefits only the individual elite, rather than all of society... universities in Africa seldom plan or budget for ICTs, since most of their investments come through donations. (Adam, 2003, p. 196, 198 & 210)

However, in spite of the internal and external ICT barriers discussed previously, several researchers argue that the cause of the failure of ICT in higher education is not the poor ICT infrastructure, as the continent has "some of the most modern ICT facilities, that have been either donated or sold to its people, or have been assembled with the use of cheap labour" (Ocholla, 2003, p. 182). Britz et al., (2006) made similar points by arguing that Africa has made progress in terms of ICT development. "Not only is there an exponential growth of ICTs on the African continent, but to a certain extent Africa has leapfrogged into new technology" (p. 32).

This suggests that Africa has developed technologically beyond the expectations of many. However, as Ojo (2005, p. 95) rightly argues, "having technologies is one thing, but whether or not people can use them effectively is another thing entirely". This is what seems to be happening on the continent. The availability of "modern" technology simply did not make the higher education institutions on the continent automatically use the technology.

So, arguably, the obstacles that African higher education institutions are facing are not due primarily to poor ICT infrastructure but rather to the readiness of the continent for ICT changes (Ilfinedo, 2005). Readiness for ICT development must

start by considering how well prepared the staff in higher education are for these changes before considering any ICT program that might be implemented. This does not imply that academics are to blame for the lack of progress with ICT development, as academics are mainly not "anti-technology" (O'Donoghue, 2006); instead it reflects the lack of perceived relevance that such technology has to many educators (Cuban, 2001).

It should be mentioned that ICT adoption at the school levels in Africa has been relatively well studied by researchers. There is, for example, a significant literature focusing on ICT utilisation in primary and secondary schools (e.g., Adeogun, 2006; Aduwa-Ogiegbaen & Iyamu, 2005; Bove´e et al, 2007 Cossa & Crunje, 2004; Howie et al, 2005; Mutonyi & Norton, 2007 Seifu, 2006). It even appears that the debate about how best to prepare both school teachers and academics for ICT utilisation is alive among researchers in South Africa (e.g., Leach, 2005; Leach, et al, 2004; McKenney, 2005; Stables & Kimbell, 2001; Unwin, 2005). However, as mentioned previously in this Chapter and also in Chapter one, the rest of the Sub-Saharan African higher education institutions appear to have overlooked these issue, particularly in relation to preparing academics for ICT use. This is what the current study will focus on.

ICT Staff development

The issue of staff readiness to use ICT cannot be underestimated. The intention to adopt ICT in higher education is not an aim in itself, but rather a means to achieve pedagogical and instructional objectives. ICT should not be acquired because it has some special status and is different from traditional approaches but rather because of

its usefulness to the teaching and learning processes. Thus, Oliver and Dempster (2003) have argued that the process of integrating ICT curriculum should be pedagogically led rather than technology driven. Changing practice by academic staff has been considered vital for the successful implementation of ICT projects in higher education. However, such changes do not automatically follow from a flow of information or just by providing the latest technological development (ibid). Thus, Stensaker et al., (2007) argue the importance of linking effectively between "purpose, people and pedagogy" for the success of ICT in higher education.

Training academics to use ICT has generally been accepted as a critical step towards successful ICT development in higher education. Some countries, such as the UK, have gone a long way towards producing different approaches to supporting academics in this way, and many universities have given considerable attention to this matter.

The emphasis on training academics for ICT utilisation, however, has in some instances put academics under pressure as Clegg et al. (2000) noted. "Internationally, university staff are under increasing pressure to respond to patterns of globalisation, and changes in local labour markets" (p. 138). Academics came under pressure from national governments, as well as other agencies, to innovate using ICT. Whether university faculty members should bow to these external pressures or not is a debatable issue; however, the fact remains that higher education institutions are under huge pressure to use ICT in their teaching and research activities, and to make staff ready to employ modern facilities. The reasons why academics were put under pressure could include the assumption that higher education institutions are largely "bureaucratic" institutions that resist any change (Tapscott, 1996) or are conservative

institutions that have been highly resistant to change or reform over centuries (Uys et al., 2004). African institutions are not necessarily an exception to these assumptions.

Arguably, there is no evidence to suggest that African higher education institutions, excluding South Africa, have given as much consideration to staff development as they did to ICT facilities. As Lelliott et al., (2000, p.50) noted: "Little attention seems to have been given to the question of how best to prepare teachers in Africa for the educationally-sound use of ICT". There are strong forces at play who want to create computer facilities but who are less interested in the support of human resources being made available. Furthermore, Quinn (2003) argued that university teachers in Africa have undergone little or no training for their role as lecturers let alone being trained for ICT usage. Adekanmbi (1999, p. 20) has further argued that "while African distance education has witnessed a level of growth over the years; its early practices in human resource development reveal a general lack of a systematic education and training strategy for its practitioners". Making ICT facilities available at macro and micro levels would not be sufficient if the micro level (staff teaching at higher education institutions) is not ready to employ them. To complicate the matter further, it is probable that higher education institutions on the continent are using imported ICT staff development approaches, which would mean that Africa is not only importing ICT facilities but also ways of training their own people.

Academics' negative attitudes towards ICT and their fear of change have often been reported to be barriers to the adoption of ICT in education. This fear may be due to the fact that faculty members were not being trained to use ICT as part of their professional development. In fact, many faculty members in African higher education institutions have access to computers as reported by Oyelaran-Oyeyinka &

Nyaki (2004a) in a study conducted in Kenya and Nigeria. Similarly, Ocholla (2003) also found that, in Uganda, six out of eight academic staff members have computers in their offices. The available literature in the field seems to suggest that, generally speaking, computers are available in African higher education but it appears that training academics formally has not received a great deal of attention from policy makers. The reason why the Sub-Saharan African higher education institutions have not given due attention to this matter is unclear, but it is reasonable to argue that developing the ICT infrastructure was viewed by policy makers to be more important than developing academics to use the new technology. This suggests that policy makers have failed to recognise the possibilities of developing academics and developing infrastructure going hand in hand, as is the case in other parts of the world.

Models for staff development

Again, in the UK context, a significant number of papers have dealt with the issues of staff development both at school and higher education levels (Clegg et al., 2000; Littlejohn, 2002; Littlejohn et al., 2003; Loveless, 2003; Oliver & Dempster, 2003; McCarney, 2004; Quinn, 2005). But McCarney, (2004) suggests that the current literature has focused more on the technical skills of using ICT, rather than pedagogical approaches. For instance, studies have discussed, in great detail, staff attitudes towards new technologies, but less attention has been given to the pedagogical side of using ICT as a learning tool (McCarney, 2004). Similarly, less attention has been given to developing models for the adoption of ICT among academics at university level. However, Oliver and Dempster (2003) have discussed different models for staff development common in the UK, and have provided a typology of approaches. Hence, this section examines these approaches. After a brief summary of each, the three central points of Freire's theory are used to analyse each approach (Tables 1-4). The final part of this section identifies the staff development model best suited for adoption in Africa.

Table 1: Formally Accredited Course model

Course description	Humanisation/deh umanisation	Educational Concepts	Overall evaluation of suitability of the formally accredited course model
The aim of this model is to embed the use of ICT through programmes of professional development. The developers of the model follow the approach of addressing local issues and difficulties faced by local academics. In advance they agree on a framework of learning outcomes. Furthermore participants share their experiences; there is also negotiation and dialogue among the project partners involved in this course.	This model usually encourages the input of course participants, since the organisers deliver only an agreed framework with the participants. But it does not go as far as the humanistic approach.	The educational approach of this model is based on the Banking concept. The organisers have pre-planned topics for training which they want participants to select from. More importantly, this training was specifically designed to introduce techniques and approaches to whoever takes part. There is no suggestion that designers of the project proposed and delivered the course in the problem-posing approach that Freire suggested; as such Freire's banking concept is a better description of this approach. The term "dialogue" has been used in the course description, but it does not meet the standard that Freire sets for dialogue. It is more concerned with social conversation and choosing the topics for more academic discussion rather than critical and liberate dialogue.	The overall evaluation of this model is that, although the course uses some themes from Freire's theory, it does not adequately implement these. Therefore, this accredited course model does not completely fulfil Freire's critical and liberating theory.

Table 2: Institutional Workshop model

Course description	Humanisation/dehumani sation	Educational Concept	Overall evaluation of suitability of the institutional workshop model
As can be understood from the title, these are a series of workshops that are used to provide an integrated formal series of workshops that link pedagogy and technical issues and focus on staff development. They are also used to give motivation and support to lecturers in developing specific ICT and pedagogy competences. Methodologically, the course follows discussion and peer learning approaches in order to share concerns, and needs approaches as a group. The model focuses more on technical help for the staff rather than giving the academic, philosophical and theoretical aspects of what they are doing.	Such workshops typically give pedagogical and technical support to staff so they will become competent in ICT. As such there is no indication that this training involves a humanistic approach. Similarly it cannot be argued that this training will lead to a dehumanisation approach. In other words, the result is not conclusive.	The Banking style is the best fit for this approach. The contents are limited and already planned. No problem-based education is typically involved in such workshops.	These workshops aim to give motivation and technical help to the academics. The content and style of delivery are not in line with Freire's theory of liberating the oppressed; however, nor does it contradict this theory. The results are therefore inconclusive.

Table 3: Informal learning at work model

Course description	Humanisation/dehumanisation	Educational Concept	Overall evaluation of suitability of the informal learning at work model
This model suggests that learning is a daily, routine activity and "it's not something we switch on and off". As such, staff are constantly learning, constantly being developed, simply through the practice of their daily engagements. What is needed, however, is a goal directed activity that will reinforce or refine what the individuals already know, or that can lead to new knowledge.	This model focuses on technical aspects of ICT, and does not really focus on identity. The conclusion we can draw here is that informal learning does not lead inevitably to humanisation or dehumanisation. In other words the result is inconclusive. This is because the model is simple and not comprehensive, and thus does not allow us to conclude whether it is in line with the humanisation or dehumanisation models.	The concept of education - if there is one - is unclear. It does not involve delivery of content that has already been organised, nor does it let the academics plan the content of learning for themselves. Unlike previous models, this approach does not follow specific courses that can be easily evaluated. There is no intentional internalisation – however, the model fails to meet Freire's criteria because it does not pose problems. There are dialogues and conversations involved in this informal approach, but these dialogues or conversations are not specific.	It seems as though this approach is an informal model, and does not fit Freire's theory. There are no specific steps that staff or staff developers might be able to follow. Its advocates believe that learning – including learning ICT - is an everyday activity which will happen anyway. As such academics will learn at their work place and from their colleagues.

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Table 4: Staff Secondments and learning technologists model

Course description	Humanisation/ Dehumanisation	Educational Concept	Overall evaluation of suitability of the staff secondments and learning technologists model
This model is increasingly common. Staff in this model collaborate with each other with the aim of improving the student learning experience, thus collaboration is an important aspect of this project. Furthermore, the characteristics of this model are, that it centres on a collaborative curriculum that will be suggested by one of the staff, and it focuses on a particular selection of technology. The second characteristic is practical. This means that the academics teach each other during the collaboration. The final characteristic is the fact that a learning technologist is placed in a responsible role without authority. Practially, this model follows three phases. The first phase involves negotiation among the academics and learning technologists about what should be delivered. The second involves investigating how a certain approach or tool works in a particular context. At this stage, the problem of implementation will be discussed, with the learning technologist learning about this specific topic and context. The final phase is the integration of the development into the curriculum.	This is a humanistic method since academics are trusted to select the contents for the discussion rather than these being imposed on them.	This model is based on academics learning from each other, at the same time developing the contents of the topic together with technology experts. Obviously, the style is not part of the Banking Concept, but is closer to the Problem-posing style. The fact that academics develop the contents of the topics together suggest (but only implicitly) that they are posing questions and problems in order to agree a suitable topic for all of them. Dialogue is involved with this model, as academic and technological expertise is needed to negotiate the topic for the discussion.	As this model emphasises dialogue and collaborative methods, it is therefore, in line with Freire's theory. Furthermore, this model has a clear characteristic and has different phases for its implementation. Thus, this suggests that this model is the most suitable staff development model so far, hence it needs to be explored further.

Action learning

Another important ICT staff development approach that should be considered here is the action learning approach. In this section we examine how far this approach is in line with Freire's theory (Table 5).

Table 5: Action Learning

Course description	Humanisation/ Dehumanization	Educational Concept	Overall evaluation of suitability of the action learning model
ICT Staff development can involve "action learning". Action learning involves a group of people (called a set) working together for a concentrated period of time (McGill & Beaty, 2001). "Action" signifies that the group is more than a simple support group; each member takes action on their own issue after reflection with the group. Similarly, the term "learning" is used because the opportunity to reflect on experience with the support of others, followed by action, means that set members engage in learning from experience in order to change, rather than simply repeating previous patterns. Thus members of a set enable their colleagues to understand, explore and judge their situation as well as helping them to realise underlying feelings which influence behaviour (McGill & Brockbank, 2004).	Action learning is a humanising approach, since set members are bringing their own problems and sharing these with their professional colleagues with the aim of learning and reflecting. Thus, this approach gives due consideration to the inputs of the set members. However, implementing this approach needs planning if it is to be used as a staff development model, especially if it is to be used with Freire's theory.	Action learning seems to be a "problem posing" model. The fact that members of a set group bring their own problems and have an opportunity to reflect on them is not a banking style approach, but rather a problem posing approach. The question, however, is who is in the position for raising "problem posing" questions or drawing critical questions to set members? In the staff development sessions, facilities of a set group would pose problems to the members and leave it to the members to come up with possible solutions. In his theory Freire has identified two dimensions for the "critical and liberating dialogue", namely, reflection and action. These components are part of this "action learning" approach. Members of the set engage in conversation, discussion and dialogue. Thus critical thinking and questioning are important elements of this approach. This means that Freire's standards for dialogue are met here.	The over conclusion is that the "action learning" approach fulfilles Freire's theory in almost every aspect. The ultimate aim for Freire's theory is "humanisation". Other concepts such as problem-posing and critical dialogue - as well as other notions - are all means for that bigger aim. The "Action learning" approach fulfills all the criteria that Freire sets for his theory. However, in order to maximise the benefits of employing the "action learning" approach along side Freire's theory for staff development, staff developers should give enough thought to who is responsible for generating critical and problematic questions to its members.

Identifying a suitable model

What is clear from the above summary of models is that there are different approaches available for ICT staff developers to choose from, at least in the UK context. Although the source used for this review was secondary data, sufficient and detailed information about each model is provided to allow for a critical assessment of its suitability (except for the action learning model where different sources were used).

Obviously, these models were developed in non-African contexts and therefore may reflect the needs of other environments. This is not to suggest, however, that the approaches and techniques of the models are not applicable. The models can be borrowed and applied to the different contexts as long as they contain similarities to the context for which the developers designed them. Thus as this study will involve reviewing staff development and proposing a new model as an intervention, it is important at this stage to identify the models that might best suit an African context.

Close examination of all the discussed models suggests that the "Staff Secondments and learning technologists model" is a suitable model to the African context, and also appears to be in line with Freire's theory. This model balances the technical and theoretical aspects of staff development in ICT. In this training the staff are able to discuss what to deliver and the model emphasises collaboration and negotiation between staff developers and academics. Hence, this model can be employed as an intervention for staff development on the continent. However, to ascertain the full extent to which it may be applicable, further investigation is necessary.

The action learning approach too is in line with Freire's theory and could suit an African context. Indeed, it seems even more appropriate to African context than the "staff secondments" approach. A staff secondment model would require staff members to leave their work for a period of time and focus on a particular project. This would obviously be a burden on institutions as they would need to find a replacement for the staff member who might leave their work for a period of time as a result of the secondment. Action learning therefore, is more flexible than the "staff secondment" model and is consistent with Freire's theory.

Conclusion

The aim of this Chapter was twofold: to investigate the extent to which African higher education institutions have benefited from ICT development and to examine the nature of barriers that might be hindering African ICT projects. The Chapter initially discussed the general benefits that ICT will bring. Social, educational and economical benefits that will come with technology were reported. Similarly, the Chapter addressed the general obstacles, categorised as internal and external, which are facing the continent. In addition to these general-level discussions of ICT, the Chapter has also reported potential cultural negatives that might come with technology. The cultural influence of technology featured prominently.

By reporting internal and external obstacles, the Chapter addressed the research questions that focused on whether there are obstacles facing Africa towards ICT development.

Similarly, the Chapter revisited the research question that addressed the extent to which higher education on the continent has integrated ICT into curricula. African higher education was found to be far from "successful" with its ICT projects.

The Chapter reports that there are not necessarily ICT shortages in African higher education institutions, since African countries have "leapfrogged" technology-wise and have benefited from external donations and investments. However, what decision makers at universities seem to be ignoring is training academics for ICT utilisation. This includes having clear ICT policies for academic development. Preparing academics for ICT utilisation based on local needs can be argued to be an important area for exploration, as it seems neglected, based on the literature that was reviewed.

There are two further issues that arose from the Chapter that are worth investigating empirically. The first of these is the suggestion of potentially negative cultural influences that might come with importing technology. The review suggested possible negative cultural impacts that ICT will bring if it is imported from developed countries. However, these suggestions were made by commentators who either did not draw their arguments from empirical evidence or else on the basis of studies that took place in non-African contexts. Thus, this matter will be investigated empirically in this thesis.

The second issue worth investigating empirically, which also arose from the literature, is the lack of ICT staff development on the continent. African higher education institutions appear to have neglected ICT staff development issues. Nonetheless, the absence of this matter from the literature does not necessarily mean that this has not happened on the ground. Existing ICT staff development will therefore be investigated empirically to assess the attention given to this matter.

However, before investigating these matters, methodological questions will be dealt with. The next Chapter discusses the methods that the study will employ and

how the theoretical frameworks discussed in this Chapter will be utilised throughout the research.

CHAPTER THREE: METHODOLOGY

Introduction

This Chapter presents the methodology that will be followed throughout the study. The first section details research questions of the study. As seen, Chapter one presented initial research questions; however, carrying out the literature review raised further questions about the issues under investigation. Thus, an updated list of research questions will be provided in this Chapter. A review of the most common methods and approaches used by researchers in this field was also carried out. This was done to ascertain whether methods and approaches used by other researchers can be adopted here. As this research will be carried out in an African environment, particular emphasis was given to approaches and methods used by African researchers in the field.

Importantly, this Chapter discusses the theoretical frameworks that will be employed in this study. Another important issue discussed in this Chapter is the design of the study. A case study design will be followed, and in-depth interviews, document analysis, field notes and open-ended questionnaires will be used as tools for data collection. Finally, the ethical implications of the research design are considered.

Research questions

This section presents details of the research questions that this study attempts to address. Chapter one presented initial research questions that remain the heart of this study. However, the literature review Chapter answered some of the initial research

questions; further questions also emerged. As such, this section presents all the research questions for the study.

1. How far have African higher education institutions integrated ICT into their curricula?

2. What are the obstacles they face in doing so?

2.1. Are there external obstacles facing African higher education institutions with regard to ICT development?

2.2. Are there internal obstacles facing African higher education institutions with regard to ICT development?

2.3. Will importing ICT from developed countries have cultural implications for Africa?

3. What kind of staff development policy, if any, do African higher education institutions have to support the integration of ICT into the curriculum?

3.1. How far has the staff development policies of African higher education institutions led to changes in staff practices?

3.2. Are the practices of staff development enacted in African higher education institutions aligned with Freire's theoretical recommendations?

In order to answer the above research questions, this Chapter will explore the following questions:

- What theories and concepts can be used to understand these issues?

- How should these topics to be studied?

- Can an empirical study be conducted that provides deeper insight into these issues?

Answering the above questions would follow the phases listed below:

Phase 1: A literature review was conducted to identify internal and external obstacles that affect ICT development in Africa. Staff development approaches that exist in other parts of the world will also be identified since there is no information about staff development in African universities. This is reported in Chapter two.

Phase 2: Theories and concepts that can be used to understand the topic were identified. This was also reported in the literature review.

Phase 3: Framing the study, based on the review. Since the literature has not provided any suggestions about the form of staff development that exists in African contexts, the study will collect empirical data about this, and about its effectiveness. The literature review raises the question about whether importing ICT from developed countries would have any implications for Africans culturally. Answers to this question will be sought empirically, too.

Phase 4: In order to gather empirical data relevant to the research questions, a methodology will be developed, piloted, and then implemented.

Phase 5: The final phase will involve analysing the empirical findings using the theoretical framework and then implementing the findings in the research setting and other similar institutions. In addition, this phase will revisit the other phases in the light of any new questions.

Methods used in previous literature

An investigation of the methods reported in the literature was carried out in order to explore different techniques used by researchers in this field. The purpose of this was, first, to find out whether methods and strategies used in the literature are applicable to this study and therefore worth adopting. Second, this was used to identify any methodological shortcomings or weaknesses of previous studies. For practical reasons, this section will not list all the methods and approaches used in the literature but will discuss only the major strategies adopted by researchers.

Document review is particularly common and is often used to analyse policies at a national or an institutional level (e.g., Van de Wende & Beerkens, 1999). Such analyses were sometimes supported by interviews with institutional leaders (e.g., Cross and Adam, 2007). However, some studies have relied only on literature reviews for their analysis (e.g., Polikanov & Abrahova, 2003). In this thesis, however, it has already been argued that the literature does not adequately address all the research questions. Literature has not, for example, identified what types of staff development exist in Africa. Additionally, since the literature has been written, changes, which need to be explored empirically, might have taken place.

Questionnaires with follow-up interview are also widely used by researchers (e.g., Oyerlaran-Oyeyinka & Adeya, 2004a). One weakness of using questionnaires is that the researcher determines the questions that are asked, and the range of answers given can be predicted by the researcher. In other words, there is the risk of presupposed respondents' answers (Gillham, 2000). Further, using questionnaires may offer "little opportunity for the researcher to check the truthfulness of the answer given by the respondent" (Denscombe, 2003). Since the current study is

intended to be explorative, aiming to investigate the process of ICT adaptation in an African setting, quantitative questionnaires and surveys would not be relevant.

The case study design is another popular method among researchers (e.g., Donat, 2001; Mays, 2005). The design could be a description of a single site or a comparison of multiple sites, such as cross-county studies. Ondari-Okemwa (2002), for instance, used a case study design, employing observations and interview techniques to investigate challenges that were facing the African Virtual University site in Kenya. Akinsola et al., (2005) also used the case study approach, employing a semi-structured interview, a non-participant observation document, and literature review analysis as data collection approaches. A study conducted by Mays (2005) investigated the cost of distance education and open learning in sub-Saharan Africa, and the researcher drew data from three different sub-Saharan countries as case studies. Data was collected through a mixture of telephone interviews, emails, and face-to-face sessions. The researcher endeavoured to perform desk-based research but that was ruled out due to the dearth of literature in the area to be studied. The researcher cautioned that the findings of the study should be seen from a perspective of raising important issues rather than representing an exhaustive picture of what is actually happening in the field.

Another study conducted by Adam (2003) explored the challenges African higher institutions faced and initiatives towards ICT in all African countries using quantitative indicators. This study analysed information that higher education institutions in Africa have chosen to place on the Internet. One reason that the study employed this technique was to provide "comprehensive, up-to-date information on ICT's status in African universities." Adam (ibid) ruled out using questionnaires to collect such information because the data discovered through questionnaires would

not provide the "comprehensive up-to-date information" the study was seeking. However, this current study will not use Adam's method because the Web data would be a self-representation from the concerned institutions, and thus, the data obtained online would not necessarily be trustworthy.

Studies (e.g, Ocholla, 2003) have similarly used qualitative open-ended questionnaires that have been mailed to potential participants. This study will not consider using such a method because it would not adequately allow us to address the appointed research questions.

Other studies have used conceptual tools to analyse the knowledge gap, including knowledge about ICT, which exists between Africa and other countries. For instance, a recent study using a theoretical framework for professional development in a South African university was carried out by Quinn (2005). The subject of this article was not professional development specific to ICT, but rather to general professional development. Quinn's study employed a qualitative research design, using qualitative questionnaires, focus group interviews, and individual interviews. Interviews seem to provide rich information about the topic under investigation as participants can be questioned in depth. Additionally, combining interviews with other techniques, such as qualitative questionnaires, allowed responses to be triangulated. The current study would consider using such conceptual tools.

In their investigations of the impact of ICT in sub-Saharan African, Adam and Wood (1999) ruled out using quantitative research methods as they considered this to be inappropriate for analysing the impact of ICT on society, which they see as a social construction. They, therefore, used qualitative research methods and grounded theory. In this current study, it is agreed that social aspects are best studied

qualitatively. Since one aspect that this study is attempting to investigate is the social and cultural impact of importing ICT into African culture, a naturalistic approach seems to be the most appropriate technique since it emphasises understanding and portrays social action from the point of view of social actors (in terms of meaning, character, and the nature of social life). It assumes that these kinds of understanding can be forthcoming only from a firsthand, eyewitness account (Schwandt, 2001).

Other studies (e.g., Oyerlaran-Oyeyinka & Adeya, 2004b) have, nevertheless, used quantitative research methods when investigating the Internet access of some African countries. Quantitative measuring is, perhaps, perceived to be more appropriate in such settings because the focus for the study was physical deployment and this approach would give a clearer understanding of the Internet access level among different countries. As mentioned previously, some studies have used both quantitative and qualitative methods, using (for example) document analyses, interviews, and questionnaires. It seems as though these studies were attempting to overcome the shortcomings of using a single method, but it is not clear how these studies have reconciled the epistemological differences that exist between a qualitative paradigm and the quantitative research methods. This is not to suggest the impossibility of reconciling the two approaches as vast literature has reported how techniques for the two methods can be combined (Bryman, 1988; Brannen, 1992; Hammersley, 1996; Hammersley, 1992; Bryman, 2001; Neuman, 2003; Sarantakos 2005). However, such combinations need to be considered for each topic separately. Because of the Freirian focus here, as a result of the philosophical differences between the two methods, this study will not use quantitative research techniques alongside qualitative research methods.

A useful example of the use of mixed methods, which was carried out in the United Kingdom, is provided by Clegg et al. (2000). Their study examined how academic staff are prepared to use ICT to support their students, and it employed triangulation techniques, combining questionnaires with observations and analysing email correspondence. This study considered these methods to be appropriate because of "the pressures of time and other commitments communicated by the group", because methods "were considered to be those least obtrusive." Arguably, however, interviewing people in depth could be a useful way to generate information, which the Clegg et al. (ibid) study could not use in this situation.

Understandably, researchers have employed a wide range of methods due to th different research questions and problems that they were addressing. Additionally, it appears as though researchers have employed methods and techniques that seemed to be appropriate or available to them. Thus, having reviewed this situation, it is now possible to draw conclusions that will help contextualise the present work.

The first conclusion is a lack of a unified method that researchers across the field have favoured. As addressed earlier, researchers seemed to have adopted varied methods and approaches, clearly demonstrating the methodological flexibilities that exist within this field.

An obvious limitation that some studies have encountered, and which this study will avoid, was the use of a single-method approach for data collection (examples include literature review and document analysis). As presented, some studies appeared to have relied on a single method to address issues that they investigated. For this study, just using a literature review has not enabled the researcher to answer the research questions.

Another important conclusion is that access to "real data" through interviewing potential participants was difficult to achieve for some researchers in the field. This difficulty has led past researchers to mail their questions/questionnaires to potential participants or to analyse available information freely available on the Web. Using a Web-search analysis method is becoming common; for instance, in two consecutive years, from 2006, a research centre based in Spain has been using a method referred to as "Webometrics" to identify top universities in Africa (as well as other regions in the world) based on the available information on the Web (Centro Superior de Investigaciones Investigaciones Científicas, 2007). As a result, the centre has been producing rankings for the universities in Africa. These rankings have generated debate between the individual researchers and institutions (Mugaba, 2006; Ahimbisibwe, 2007). Because smaller stateless universities, such as Mogadishu and Burao in Somalia, were ranked ahead of some well established universities in the continent, the results created controversy. For this study, however, "real data" may be better understood in terms of perceptions, attitudes and actions; these may be more appropriately gathered by talking to people in order to develop a better understanding of how technology is really being used and how it changes peoples' practices. Thus, unlike the studies that have relied on Web analysis, this will involve collecting data empirically and spending time with participants in order to collect their accounts of the issues that are under investigation.

The case study design with qualitative research methods, which will be adopted here, appeared to be useful. This method will enable the researcher to investigate the issue under study in-depth. Particularly, techniques such as document analysis, interviews, observation, field notes as well as open-ended questionnaires, are all to be used. This will allow the researcher to collect rich information about the issues

under study by drawing together a range of perceptions about and attitudes towards the introduction of ICT.

Theoretical commitments

Three main reasons led the researcher to consider employing Freirian and postcolonial theories in this research.

First, the two theories place issues of colonisation and oppression at the heart of their arguments. For example, the impact of colonisation that developing countries have experienced throughout their history has been discussed extensively by postcolonial commentators. Political, cultural, and social impacts of colonisation are all considered. Since this study is taking place in a postcolonial country, it seems likely that Freirian theory can help the researcher understand the situation under investigation. Employing postcolonial concepts would also enable the researcher to put participants' responses into their historical and social contexts.

Second, as pointed out in Chapter two, there is a question among postcolonial thinkers about whether or not colonisation has ended. As seen in Chapter two, some postcolonialists strongly contest the appropriateness of using the term "postcolonial" as they argue that colonisation persists. This argument has been further strengthened by the failure of international financial institutions' policies towards Africa because these institutions have been labelled as "imperialistic institutions" that safeguard the interest of powerful countries. Technology has also been presented as having a negative cultural impact on developing countries.

All of this information indicates that "colonisation," involving technology, might be taking place in developing countries. In this study, the researcher wanted to examine that assumption and use theories and concepts that can unveil any form of

colonisation that might exist. For that reason, Freirian concepts were used because his theory was created to identify and explore colonisation and oppression.

Thus, the two theories are useful as they both address the issue of historical and current forms of dominance and colonisation in the African continent but from complementary perspectives.

Using Freirian theory to frame the research process

This study is using Freirian and postcolonial theories as the theoretical foundations of its research. Freirian and postcolonial theories have a great deal of commonality as they both address issues such as identity and oppression. Giroux (1992), for instance, has long argued the importance of reading Freirian theory as a postcolonial text.

Researchers have previously used Freirian theory to frame their research. Thus, this section discusses how researchers from different fields have employed Freirian theory empirically. What is worth noting is that postcolonial theory has been omitted from this discussion. There are two main reasons for this.

The first reason relates to the different target audiences that the theories are intended to reach. Despite the obvious similarities that exist between the two theories, the target audiences differed. Postcolonial theory's target audience was initially academics. The theory has been developed by intellectuals for intellectuals to discuss and debate issues related to colonial questions. It would not be a surprise, then, for postcolonial theory to be applied in an academic context as the postcolonial debate is already alive in the academic community. The same is not true, however, for Freirian theory. As discussed in Chapter two, Freire meant his theory to be used with illiterate and semi-illiterate people. As such, a question arises about how a theory that is meant to guide the education of the illiterate can be applied to highly literate people.

In order to address such a question and demonstrate the value of Freirian concepts to empirical research, different ways in which researchers used Freirian approaches are reported here.

The second reason for singling out Freirian theory is related to the methodology of the study. Freirian concepts have been employed as a data collection technique. Particularly, problem-posing has been used to generate data. Postcolonial theory has not been used as a data collection method; it provides analytic concepts rather than a method of intervention. Again, it should be noted that using Freirian theory in this manner is beyond what Freire originally proposed. This prompted the need to explore ways in which other researchers have adopted Freire's techniques as research methods.

In the context of preparing teacher trainees for multicultural settings, Malewski et al. (2005) reported how Freirian approaches were used to give pre-service teachers experience and understanding of multicultural environments using technology-based virtual field experiences. The aim of their project was, among other things, to give pre-service teachers observational and instructional experiences in diverse settings in an interactive way using two-way video conferencing. The authors further added that "the virtual interactive field experience described herein was developed by two faculty members to provide pre-service teachers with practical experience observing and instructing in diverse settings while enrolled in a teacher education programme in a predominately white and rural area" (p. 411).

Three Freirian themes were employed in the above study -personalisation, dialogue, and praxis. Although Malewski et al. (ibid) have acknowledged that Freire developed a range of concepts that are all relevant to understanding multicultural

settings, they did not explain their reasons for choosing the three themes they had selected. However, the article illustrated different ways in which the three concepts could contribute to pre-service teachers' understanding of multicultural environments.

The authors reported that the project proved to be successful and achieved its goals because the host teacher, faculty members, as well as host students have all benefited. More importantly, the project was beneficial to pre-service teachers as it offered them the possibility of teaching in schools they had not previously considered. Malewski et al. (ibid) further added that some teachers "expressed an interest in working with diverse groups of students." The authors additionally mentioned that some "pre-service teachers internalised a praxis-orientation and started to regularly advocate on behalf of the host students" (p. 422).

Thus, the researcher reported that using Freirian concepts contributed to the success of the project as they allowed pre-service teachers to gain a deeper understanding of and appreciation for instruction and observation in diverse settings. The article concluded that Freirian approaches "increased the possibility for successful virtual field experience" and "pre-service teachers began to understand that overly formal, rigid approaches to teaching and learning were often inconsistent with the needs of their mentees" (p. 423).

This study presented a unique way of using Freirian approaches as it incorporated and delivered Freirian concepts through technology. More importantly, the article further presented how Freirian approaches can be applied to enhance teachers' understanding and knowledge of multicultural settings. Though the authors selected three concepts that they thought would help them achieve their goals, they did not apply Freirian pedagogy completely.

Other studies have, however, adopted Freirian pedagogy fully. Baird (1999) used Freire's pedagogic model to educate women prisoners. Women prisoners were given the choice to attend a course; attendance was not made compulsory. Course participants were not required to sit pre- nor post-testing. The author pointed out that "instead of measurement of learning skills, the intent was to introduce them to women's literature with themes relevant to their own lives, to initiate reflection and dialogue for meaning and as a problem-solving process, for making the link to their own situation" (Ibid, p. 04). The author finally reported that Freirian approaches enabled women prisoners to "assume ownership of their learning, engage in critical thought and become liberated while still in prison" (Baird, 1999, p. 103). As discussed, Freire meant for his pedagogy to educate illiterate adults and empower them with skills that they could use to become critical thinkers but, clearly, his approach also has a wider relevance.

Padilla (1992) used Freire's approaches to collect and analyse data. Padilla employed Freire's "dialogue" concept as a research tool to generate themes from her participants' discussions. Discussions between researcher and participants and also among participants themselves were held so as to identify "generative themes." Padilla (ibid) justified this by arguing that such dialogue if "carefully analaysed, can reveal the group's generative themes for a given historical moment." The researcher additionally stated that "generative themes are important because they provide a window through which, one can witness an individual's comprehension of the world and the actions that he or she is likely to take within it" (p.176). After themes were generated, the "dialogue" technique was used further to present these themes to the participants in a "stimulating" manner to collect additional data.

Padilla's research aimed to investigate educational experiences of ethnic minority undergraduate students. Padilla followed two stages in implementing the "dialogue" method. The first stage involved an investigative team that analysed the research setting to identify the "salient social contradictions" which participants experienced in their settings. Second, the identified "contradictions" were presented to the participants in a "stimulating" way.

By employing a "dialogue" approach, Padilla (ibid) found that Chicano college students were experiencing "three contradictions during their formal schooling: isolation, achievement at a price, and ethnic identity." Finally, the researcher worked with students to provide suggestions about how identified problems could be tackled.

Padilla's study appeared to be one of the earliest studies that has adopted Freirian approaches as a data collection and analysis technique. Researchers often use Freire's pedagogy to educate or liberate "disadvantaged" people, but until recently, Freire's ideas have not been used as a research tool. Padilla's study represents an attempt to do so.

In a slightly different way, Stigmar and Körnefors (2005) used Freirian approaches as a means to problemitise ICT staff development. Stigmar and Körnefors (2005) used problem-posing in the context of faculty development in Web-based education. The authors aimed to stimulate course managers' "reflective processes when planning web-based education" (p.1).

The above study portrays how a problem-posing approach demonstrates the flexibility of Freirian approaches and also shows different ways in which they can be used. More interesting, however, is the context that Stigmar and Körnefors have

addressed. The focus of their article was on ICT staff development, which is also the focus of this current study.

The previous discussion highlights different ways in which studies have employed Freirian concepts. To summarise, researchers have suggested three possible ways of employing Freirian approaches: to adopt Freirian pedagogy in order to educate a particular disadvantaged community, to use the concepts as a tool to gain understanding of a situation, and finally to use Freirian concepts as data collection and analysis techniques.

How Theoretical Frameworks are employed in this thesis

This section specifies how the two theoretical frameworks will be used through the research for this study. The theoretical framework will be used in the following ways:

1. **As a tool for evaluation**: Theoretical aspects of the study are used as evaluating tools for staff development models discussed in the literature. As reported in Chapter two, a number of ICT staff development approaches that exist in the United Kingdom were analysed. Thus, their suitability for use in an African context was examined.

2. **Collecting data**: The theoretical frameworks were employed during the data collection process. The theories were used as an approach for questioning participants and also as sources for generating questions during the interviews. As will be discussed further, the problem-posing approach was used as a technique of questioning while the postcolonial concepts have helped in generating the questions that the participants were asked.

3. **Intervention**: As well as exploring the nature of obstacles faced by African higher education institutions and in particular scrutinising existing staff development and its effectiveness, the output of this research will be to propose an alternative staff development model that takes into account local identity and needs. Such a proposal will be shaped by the theoretical framework of the study.

Concepts such as the banking style of education, internalisation, humanisation, and dehumanisation will be the main conceptual tools used for analysing and evaluating findings. Alongside these Freirian concepts, postcolonial concepts such as identity and anti-colonialism were used in the analysis. The concept of identity is relevant when proposing an ICT model for staff development. Even though, as stated in Chapter two, the study uses two theories, this does not mean that they are intended to be equally visible throughout the thesis. Frerian theory is more visible during the empirical work as it focuses on pragmatic issues, whereas postcolonial theory is more useful at a strategic level, such as when proposing alternative approaches to training academics.

Philosophical underpinning

The critical social science paradigm is the foundation for the philosophical stand of this research. Critical social science theory is being defined as a "critical process of inquiry that goes beyond surface illusions to undercover the real structures in the material world in order to help people change conditions and build a better world for themselves" (Neuman, 2003). The theory is well known for its vocal criticism of positivistic approaches to social science. This approach criticises positivism as being

narrow, antidemocratic, and non-humanist in its use of reason and for its inability to deal with the meanings of real people and their capacity to feel and think (Ibid). Within this study, the researcher is interested in exploring and reporting participants' accounts of the issues under investigation through in-depth interviews and discussions instead of imposing a quantitative approach on them.

Perception of reality is one of the most central elements of the critical social approach as it considers reality to be subjective, constructed, multiple, and diverse (Neuman, 2003; Sarantakos, 2005). Furthermore, it argues that reality is experienced internally (not through the senses) and resides in the minds of the people who construct it; thus, each person constructs his/her own reality, which is subjective (Sarantakos 2005). This researcher agrees with the subjective account that this theory highlights. Thus, the researcher will be exploring the social construction of the knowledge of the participants.

The ultimate aim for a researcher in critical social science is to change the world; hence, this involves conducting research to critique and transform social relations. "They do this by revealing the underlying sources of social relations and empowering people especially less powerful people" (Neuman, 2003). It particularly tries to uncover and highlight myths, reveal hidden truth, and help people to change the world for themselves. Additionally, a critical social researcher often asks sensitive and embarrassing questions, exposes hypocrisy and investigates conditions in order to encourage dramatic grass-roots actions. Again, within this research and as pointed out in the previous section of this Chapter, the researcher will attempt to expose dehumanisation practices that might exist within the institution visited. This will be done through the problem-posing approach that Freire suggested. The Freirian theory that this study adopted as a theoretical foundation forms part of the

critical science paradigm (Neuman, 2003). This demonstrates the consistency between the theoretical positions and the research techniques, all of which fit within a broader tradition of critical social theory. As a consequence, terms such as "reliability" and "validity" are not relevant to this research because they are part of the positivistic tradition.

Research design

Based on the review of research, it was proposed that this thesis will follow a case study model. This section explains the suitability of a case study design for this topic. However, this choice should not to be taken to imply that the case study design has no limitations. Like any other design, the case study model has its shortcomings (Punch, 2005), which are also discussed.

Bryman (2001) pointed out that the case study design "allows intensive examination of the setting under investigation." This is precisely what this current study is required to do in order to provide the narrative accounts of teaching and staff development currently missing from the literature. A single university will be focused on and extensively examined both in its ICT policies and the way it prepares its academics for ICT usage. Practically, case study designs suit the needs and resources of small-scale researchers because they focus on particular settings (Blaxter et al., 2001). This is relevant here since access to the fieldwork site will be limited.

The case study design also allows a phenomenon to be observed as it occurs naturally (Yin, 1994). "It is not like an experiment where the research design is dedicated to imposing controls on variables so that the impact of a specific ingredient can be measured" (Denscombe, 2003, p. 31).

Case study designs are also argued to allow the usage of different research techniques at the same time (Denscombe, 2003). For instance, observation, interviews, document analysis, and open-ended questionnaires can all be used. It also gives flexibility when cross-checking data in order to check whether or not it is consistent and coherent. The researcher would, for example, be able to challenge participants if their account seems to contradict what the researcher has observed or has been informed of by different participants. More importantly, the case study model allows both theory testing and theory building, which is well suited to this study. As discussed in Chapter two and in previous sections of this Chapter, the theoretical framework will shape both the data collection process and its interpretation. As has been pointed out, the current form of using ICT in higher education in general does appear to embody "banking style" education rather than "problem-posing" (Leinonen et al., 2000). From this perspective, the case study setting permits theory testing by considering whether or not Freirian and postcolonial theories are useful in explaining what is observed and theory building by prompting interpretations of descriptive data.

However, criticisms of the case study approach must also be considered. The first criticism deals with generalisation: how findings from a single study can be generalised to a wider society. However, this study will not be used to make general claims about the country where the study took place, nor the entire continent. The findings should be seen as a reflection of the views of those who took part in the study. This suggests the models and approaches that this study might develop would be more appropriate to the environment and context where the study has been conducted. However, since the study has been contextualised with a literature review,

it can be seen as raising important questions that might be relevant to other African countries, especially in the East African region.

Bell (1993) has additionally reported that in the case study design, there is an element of "distortion" as the researcher decides which materials to present in the final report. This point seems to be a weak criticism since presenting all of the data is quite impossible for any research. In any research design, a researcher has to be selective in presenting data that answers his/her research questions. Nonetheless, this study will present data that addresses the determined questions as a principle for deciding which data should and should not be reported.

Denscombe (2003, p. 39) mentioned that "negotiating access to the case study setting can be a demanding part of the research process. Research can flounder if permission is withheld or withdrawn." Indeed, early attempts to obtain access to institutions in the region proved unsuccessful. It is not entirely clear why institutions decided not reply to the requests. For the current case study, however, the researcher was given unlimited access to documents, people, and locations that were related to the research. As Denscombe (2003, p. 39) further highlighted, however, "access to documents, people and settings can generate ethical problems in terms of things like confidentiality." A separate section has been included in this Chapter to discuss the ethical considerations for this study.

Finally, there is the possibility that observed individuals can act differently if they become aware that they are being observed (ibid). This could result in misleading conclusions being drawn. However, the study is not using observation as the only technique for collecting data. It will be one of five techniques employed. The diversity of the data collection will allow participants to be questioned during interviews about inconsistencies between the sources of data.

The sample used for the study and the Participants' backgrounds

Participants in the study differed in reference to experience and knowledge but had common links with the issue of ICT staff development. A total of twenty-seven (27) participants and respondents took part in this study. Twelve (12) of those participants were interviewed in-depth while the remaining fifteen (15) of them responded to the open-ended questionnaires.

Of the twelve participants interviewed, six were academics who had all taken part in ICT staff development. These interviews lasted from a half an hour to nearly an hour and mainly focused on their experiences of ICT staff development. Three of these academics were females while the remaining three were males. The academics were mainly in their thirties and possessed a few years of teaching experience. This is because the faculty was relatively new compared to other faculties in the university; it had only been upgraded to faculty status a few years before my visit took place.

Interviewees also included two senior staff developers who were in charge of designing and implementing E-learning staff development programmes for the entire university. Interviews with staff developers lasted from an hour to nearly two hours. The university also had what it called "trainers of the trainers," which meant that academics could also train other academics as part of their jobs. Thus, they were still considered to be staff developers and came directly under the staff development department. Two "trainers of the trainers" were also among the participants interviewed for the study.

An E-learning coordinator at the faculty where the researcher was based was also interviewed. The responsibilities of the E-learning coordinator included arranging training and links between staff members and the department that was in charge of delivering training. The E-learning coordinator was asked questions about

his role and about the relationships between lecturers and the staff development department. The interview with the E-learning coordinator lasted over an hour.

Importantly, a senior staff member who was part of the university senate also agreed to be interviewed. This interview lasted for nearly two hours and focused on E-learning policies for the university, in general, and the issues of staff development. The head of the Human Resources Department at the university was also met with, but it was decided not interview him because it became obvious that his unit was not directly involved with ICT staff development. A draft proposal for general staff development including ICT staff development was, however, obtained from this department.

Similar attempts were also made to meet with the Deputy Vice Chancellor for academic affairs for the university who was in charge of ICT staff development policies and practices, among other things, but due to her busy schedule, it was not possible to interview her or to meet her in person.

The sample of the study also included fifteen academics who responded to the open-ended questionnaires. As will be discussed further in the subsequent sections of this chapter, a total of thirty questionnaires were distributed to the academics, but only fifteen of them were returned.

Methods used in the study

In-depth interviews

As pointed out in the previous section, twelve participants were interviewed in-depth. Participants consisted of academics, academic developers, an E-learning administrator and a senior staff member. Since the empirical data from the interviews was focusing on how academics are prepared for ICT usage, it was vital to speak with the academics as well as academic developers so as to explore this issue from these two perspectives. Additionally, since academic developers did not make decisions regarding what type of technology would be adopted at the university level, it was important to interview the "decision makers" at the university level. Interviews were mainly done on a one-to-one basis; however, in one instance, a focus group interview was conducted.

The problem-posing method developed by Freire was used during data collection, following the approach used by Stigmar and Körnefors (2005).

Interviewees were questioned in relation to their different capacities, and problems were posed to them that were intended to raise their critical awareness. For instance, academic developers were challenged as to why they were developing training without consulting academic staff members. Similarly, the senior staff member's policy for using a humanising method with higher ranking staff members and not with junior staff members was challenged, and academics were questioned as to why they were simply accepting whatever was decided for them by staff developers and not formally requesting to be involved in the process of planning. The aim of the research was to develop a better understanding of the problems faced in that faculty by challenging participants in their different capacities so that issues of dehumanisation, oppression, and the banking style of education would become clear

to everyone involved. This process was not expected to solve the problems, although it was hoped that it would encourage people to start changing the situation.

This interviewing technique was, to some extent, quite radical and there was some concern that it could lead to the researcher being forced to leave the field. As a result, this work was constantly monitored by a supervisor who received regular briefings about the progress of the work. Ethical steps were followed strictly during the visit. This will be more closely examined later in this Chapter.

Document analysis

The university's policies towards staff development, in general, and ICT staff development, in particular, were added to the interview transcriptions and treated as part of the data set. The university has recently developed an ICT policy and started implementing this on pilots in five selected faculties. Similarly, handouts that academics were given during training sessions were investigated.

Observations

During the fieldwork, no staff development training was observed and no training took place. As will be discussed in Chapter seven, it was a common practice for ICT staff development training to be carried out during holidays and not during the semesters, which was the time when the visit took place.

However, there was an important meeting for E-learning coordinators at the five faculties that implemented E-learning programmes and with the department that was in charge of all ICT issues. The researcher was invited to attend the meeting and had an opportunity to observe the issues that these coordinators discussed.

Additionally, as the researcher was sharing a common room with the academics, this gave the researcher the opportunity to observe how academics were implementing E-learning as a result of their training. In that room, there was also a staff developer and it was interesting to see how academics interacted with her whenever they had problems or questions relating to ICT.

The researcher was also able to observe and examine the ICT facilities that the university had. For instance, computer labs for students as well as E-learning labs for academics were visited. This enabled the researcher to obtain an overview of the levels of ICT provision at the university.

Field notes

The researcher also kept notes about issues relating to ICT. Notes of informal meetings that the researcher had with different participants were kept.

Open-ended questionnaires

In addition to the above approaches, open-ended questionnaires were also used (Appendix C). The ideas in the questionnaires were derived from literature, the field, and from the theoretical frameworks of the study. The questionnaires consisted of thirteen items. Three questions addressed the background of the participants, while the remaining items were open-ended questions that were related to the nature of the staff development training academics had attended. Before the questionnaires were distributed, two academics, who have background knowledge in the field, were consulted to check the validity of the questions. Valuable suggestions were provided by these consultants and the suggested corrections were made.

As discussed, a meeting for e-leaning coordinators for the five priority faculties was held and the researcher was invited to attend. Three out of the five coordinators attended that meeting. After briefly explaining the aim of the study, the researcher requested that the coordinators distribute the questionnaires to their respective faculties. In total thirty copies were given out but only half of those were returned. Because of the small data set, no attempt will be made to generalise from this data; instead, it is used as a point of reference for interpreting other sources of data.

Ethical considerations

Due consideration was given to the ethical aspects of generating and analysing the data both at the pilot stage and main study stages. Both studies followed ethical guidelines provided by the British Educational Research Association (2004). Additionally, a summary of the ethical considerations of the study were forwarded to the Ethical Committee at the Institute of Education, University of London and were approved.

The following steps were followed for both the pilot and the main study:

i. **Permission**: Before any data were collected, potential participants were contacted by email (in the case of the pilot) or in person (in the case of the main study) requesting that they take part in the study. Only individuals who responded positively to the request were interviewed. Additionally, as it was important to record the voices of the participants digitally during the interview, participants were asked to give permission to allow voice recording. Each participant signed a consent form, a copy of which was

kept by the researcher while another copy was given to the participants to keep as a formal record (Appendix A).

ii. **Briefing**: In the first meeting, the researcher explained the overall aim of the research and specific objectives of the study. Similarly, participants were invited to ask any questions that might clarify any confusion or ambiguity. Further, in the main study, the researcher gave a copy of a document that briefly provided the main aims and objectives of the research (Appendix B).

iii. **Right to withdraw**: Participants were informed that they had the right to withdrawal at any stage of the interview. Additionally, it was explained that if they decided to discontinue an interview they had previously agreed to, any data obtained from that individual would be destroyed in their presence.

iv. **Assurance of anonymity**: The researcher gave assurances of anonymity to all the participants. Thus in no stage of this study will the names of the individuals who took part in this interview or who were observed be mentioned. For the main study, participants were described based on their gender and job. In both studies, the institution's name was concealed.

v. **Draft of the interviews**: After the interviews were transcribed, participants were forwarded a copy of the transcript to see if there was any misquotation or misrepresentation.

vi. **Contact with supervisor**: In addition to the above steps, the researcher was also in regular contact with a supervisor, who continuously provided valuable suggestions in the consideration of the ethical issues involved.

This ongoing dialogue with a supervisor was deemed to be particularly important given the potentially disruptive nature of the Freirian approach.

The strategies for data analysis

After data were collected, the theoretical frameworks of the study guided their analysis. The interviews were transcribed and then read, and on the basis of this reading, certain repeated (or similar) phrases from across the transcripts were gathered together. Where phrases related to more than one idea, a judgment was made about the main concern of the excerpt, and it was classified into one category. Each category was then reviewed to see the range of ways in which this topic had been discussed. After describing the categories, their theoretical relevance was established by relating the categories to the concepts drawn from the theoretical foundations. Thus, the categories' relationships to the concepts of humanisation, dehumanisation, the banking style of education, and anti-colonial ideas were further explored. This was achieved by reviewing the categories to assess the relevance of each to the concept that was under consideration. Conclusions were therefore drawn about the extent to which the categories were humanising, dehumanising, problem-posing, based on the banking style of education or else otherwise demonstrating anti-colonial ideas.

Finally, quotations were used to illustrate each theme. The choice of quotations as an illustration of these themes was based on one of the following two criteria: either because it was the best description of an issue or because of its typicality. If a particular view was expressed by a number of individuals or best

describes a situation, then it was used here. (Sample transcripts from the different groups who participated in the main study can be found in appendix F.)

Conclusion

This Chapter discussed methodological aspects of this study. Firstly, the Chapter presented the detailed research questions that this thesis addresses. As seen, Chapter one presented initial research questions. Some of the initial research questions, however, were addressed in the literature review Chapter and at the same time, further questions were produced as a result of reviewing the literature. Thus all the research questions that the study addresses are reviewed in this Chapter.

Secondly, different methods and approaches used by researchers in the field were highlighted. This demonstrated that there is no single approach that dominates studies; researchers used a variety of research methods, depending on their interests. However, the qualitative paradigm is considered to be the most appropriate method for this study because qualitative approaches allow the situation to be investigated within its natural contexts and the experiences of individual participants to be documented.

Additionally, the Chapter presented theoretical commitments that the study will follow. As reported in Chapter two, Freirian and postcolonial theories were identified as theoretical foundations for this research. Furthermore, the Chapter provided information on how previous researchers have used Freirian theory. The philosophical basis of the research was also discussed, as was the design of the study.

The Chapter also examined the ethical steps that this study followed, such as obtaining permission, briefing participants, explaining their rights to withdraw, and

creating an assurance of anonymity. Particular care was taken with the problem-posing interviews.

The Chapter directly addresses the research question, "What theories and concepts can be used to understand the issues under investigation?" Freirian and postcolonial theories form the theoretical foundations of this study. Different ways of using the two theories and the reasons for using them were discussed.

This Chapter has proposed answers to the methodological issues of the study. Next, the approaches identified in this Chapter were tested in a pilot study. The next Chapter will discuss the pilot study that was carried out using the methods and techniques described here.

CHAPTER FOUR: THE PILOT STUDY

Introduction

It is generally accepted that a pilot study is a vital part of social science research, and is carried out before the main study (Mouly, 1978; Neuman, 1993; O'Leary, 2005). The aim of the pilot study was, among other things, to give the researcher a clear picture of how the process of collecting data in the main study would work and to help the researcher decide what to include and what to exclude in that process. Although, in some instances, an insight into a study can be obtained through a review of the literature, it is often necessary for a pilot study to be carried out before a study can be finalised (Blaxter et al., 1996; Mouly, 1978). A pilot study is also seen as the only way of really knowing that a study design is going to be practical (O'Leary, 2005). O'Leary recommended that the participants in a pilot study should have a similar background to those in main study, although the study would typically have a relatively small sample size.

The pilot study here was carried out to achieve two main goals. Firstly and most importantly, the aim was to test techniques that were to be used in the main study. Secondly, it was used to test the theoretical framework of the study in a department whose work is similar to that where the main study would take place. This meant talking and discussing with academics, non-academics and academic developers to see if their work was in accordance with the theoretical aspects of the study. It was also necessary to check if the theoretical framework of this study would be informative in such a setting.

What is worth mentioning here is that the terms "ICT staff developer" and "ICT academic developer" were used interchangeably to refer to the individuals who provided technology-related training and support to academics and non-academic

staff members within the college where the pilot study took place. Although a different term was used within the college to describe their role, for ethical reasons to do with confidentiality, the term used within their college will not be used here as that would likely reveal their identity.

Data were collected from participants over a four-month period at the end of 2005 and beginning of 2006.

Design of the pilot

The study followed a case study design. A college that is part of a federal university system was chosen as the research site. As mentioned in Chapter three, a case study design was chosen because of the benefits that it can offer and its suitability to the nature of this study.

Profile of the participants

A total of five participants took part in this study: two from a group responsible for ICT staff development, two academics and an administrator. In order to honour the researcher's commitment to ethical principles in carrying out research, participants remain anonymous. In this context, the ICT staff developers' gender is not disclosed as this might compromise their anonymity, given the small size of the group. However, the gender of the other participants and whether they were academic or non-academic staff is made clear when appropriate. After potential participants were identified, ICT academic developers were first contacted by email. They were given a brief outline of the research and were invited to take part in the study. Both ICT academic developers accepted the invitation.

Accessing the site

One of the most difficult tasks for any researcher is to gain access to fieldwork sites (Blaxter et al., 1996). Since this study was mainly focusing on the training which academic developers provide to academics and non-academics, ICT staff developers were considered to be the "gatekeepers", without whose permission, the pilot study could not be conducted. It was for this reason that they were the first to be contacted and their permission secured.

A list of academics was obtained from the ICT staff developers. Three academics who took part in the training were chosen from this list and invited to take part in the pilot by email. Two of the academics emailed back their acceptances while the third academic did not respond. The researcher also talked to an administrator and requested in person for him to participate in the pilot, which he agreed to.

Ethical considerations

Just as in the main study, the pilot study took ethical issues very seriously and strictly followed the guidelines provided by the British Educational Research Association (2004). Additionally, a summary of the ethical steps that were followed in this study was approved by the Ethical Approval Committee at the Institute of Education. Some of the ethical considerations for this study included: Briefing; Rights for Withdrawal; Assurance of anonymity; Access to Drafts of the interviews. How these steps were used is discussed in Chapter three.

1.   Research questions

The pilot study was attempting to answer the following research questions:

a)   Can we describe ICT academic developers' practice?

b)   Are the practices of ICT academic developers in line with Freire's theory?

c)   Is there evidence that the practices of ICT academic developers lead to changes in academic practices?

Research techniques

The pilot study used qualitative research methods. Specifically, the following research techniques were used:

a)   Structured interviews

b)   Document analysis

c)   Observations

Structured interviews

A total of five participants took part in this pilot study. The questions were structured before the interviews. Academic and non-academic staff members were asked questions that were almost the same, with only slight differences in wording. The questions were formulated to help understand their experience of the training in which they took part (see appendix E). However, the ICT developers were asked different detailed and in-depth questions, so as to have a better understanding of the nature of their work (see appendix D).

Document analyses

Handouts for the training sessions, emails between academics and ICT staff developers and registration forms for Blackboard training were analysed in order to get an understanding of how training is carried out, topics that are covered and the most common questions that academic staff raised with the ICT staff developers. As a result of discussions with the ICT staff developers, it was agreed to keep all e-mails anonymous. ICT staff then selected only those emails that contained typical problems which academics and non-academics had forwarded to them. Just like the other data, these emails were treated strictly in accordance with the ethical steps that were followed.

Observations

The researcher observed and attended different types of meetings. Some of these included meetings among ICT academic developers. During these, academic developers planned for the next training session and sometimes evaluated previous training. In these meetings, they discussed issues such as which academics needed to attend the next training session, or when a particular course leader was to be seen.

Similarly, meetings between ICT staff developers and course leaders were also observed. Sometimes more than one course leader attended these meetings, but usually the initial meetings were arranged on an individual basis. During such meetings, the researcher did not ask questions. However, in such meetings, participants were always informed about the presence of the researcher and their permission for the researcher to stay and observe was obtained before meetings began.

The researcher attended Blackboard training sessions. These were arranged for academic and non-academic staff members, and again participants were made aware of the presence of the researcher.

FINDINGS

Introduction

As mentioned in the previous section of this Chapter, this pilot study attempted to answer three questions. The first question focused on understanding the work that academic developers do. This is an important question as it clarifies existing practice, which is not well documented in the existing literature. The second question attempts to evaluate the work of academic developers, based on the theoretical foundations of the research. The final question focused on whether the training that academic developers provide changed the practices of those who took part. The results were divided into three main sections. Each addresses one of the research questions. Each section also contains themes and sub-themes.

The wider impact of the study is also presented in this section. Specifically, the section discusses the methodological and theoretical implications that this pilot has for the main study. Furthermore, the Chapter presents limitations of the pilot that need to be taken into consideration when reading the findings of the pilot.

Section one

Describing the practices of ICT academic developers

The work that academic developers do is, as one staff developer put it, "multifaceted". This is due to the complex nature of their work. For the sake of simplicity, however, we can divide the work of ICT academic developers into three main categories, namely: to identify the technological needs of academics, to train academics for ICT utilisation and, finally, to continue to provide support to them after the training. The first role involves identifying the technological requirements of academics, which means that academic developers often talked to individual academics in order to assess their technological needs. Identification also has another dimension, which is to check the market on a regular basis for technology that has pedagogic value, so as to introduce it to the academics.

In addition to identification, academic developers provide training to the academics on how to use technology. This is an important role and one which academic developers called the "actual support" of staff. This takes at least two different forms.

> *Support of staff can take on various roles or various methods; from one to one consultancy which is just talking and explaining possibilities of technology,... . And it can go or may end up on the other hand through training sessions, training seminars.*

The two forms of support that this academic developer suggested are: firstly, talking to academics directly, so as to explain different ways in which they can use technology or can help them overcome a particular problem that they are facing; and secondly training academics in how to use technology. This could be in the form of providing on-going training for academics or the monthly talks about ICT that the academic developers organise.

In addition to these two main roles, ICT academic developers also provide support and technical help to academics and non-academics whenever they require it, which typically means that it is a daily task. However, this third role is less visible than the other two.

Based on the above discussion, we can divide the work of academic developers into the following three main categories: *identifying and researching*, *training* and *continuous support*. Each of these roles will now be discussed in turn.

Identifying and researching

The identifying and research role is, perhaps, the first thing which academic developers do before any training is conducted. There are two aspects of this role: (identifying and researching). The following section discusses these two aspects of this function separately.

Identifying

Arguably, this is the most important task that academic developers perform. This is because academic developers meet with academics on a one-to-one basis in order to explain how to do certain things, or to offer them any necessary support that the academics might require. One-to-one meetings were powerful tools for ICT academic developers to identify how much support or training the academics required. By talking directly to the academics, staff developers can explore areas and discover where a "technological gap" might exist, and subsequently provide training, based on this identified need.

One-to-one meetings serve yet another important function. Through these meetings, ICT academic developers were able to identify academics that, for one reason or another, might have a negative attitude towards ICT usage, or who were, as

one ICT academic developer described them, "reluctant users". By identifying individuals who are "reluctant users" academic developers are in a position to target these academics, with the aim of changing their attitude. Lack of "accurate" information about technology could lead academics to be "reluctant users". For this reason, academic developers could give "motivational" talks about the possible benefits of technology for academics.

In one-to-one meetings, academic developers also explain the procedures for registering for training. Issues about filling in forms and other administrative procedures are discussed.

> *One-to-one consultancy which is just talking and explaining possibilities of technology ...This consultation process is also very important for us to identify those staff members who are reluctant users, or the areas where technological gasp exist and organisational procedures such as registration (an academic developer).*

The importance of the "identifying" role can also be seen in its potential for academic developers to tailor the training to the academics' needs instead of simply developing a course without "consulting" with academics. It is, however, unclear as to the extent to which academics might be able to contribute towards the contents of the training that academic developers delivered (the next section explores this in more detail).

Because of the "identifying" role, academic developers were able to meet with academics and explain to them the usefulness of using ICT and offer them training that they can attend. Thus, the "identifying" role can be described as the basis of the academic developers' work.

Researching

As mentioned earlier, one role that meetings between academic developers and academics serve is to give the academic developer ideas about what training is required. In addition to the face-to-face meetings, the academic developers also carried out surveys so as to understand the academics' levels of ICT use. These surveys also helped the academic developers decide on which *"courses or technologies would be beneficial or suitable"*. This obviously helped the ICT academic developers to have a better understanding of the level of ICT proficiency among academics. It is, however, unclear as to how the training that the academic developers provided was based on the responses received from the academics. What is more, it is also unclear how many academics took part in these surveys and what their needs were.

As already mentioned, academic developers were actively engaged in researching and identifying the needs of academics through surveys and meetings. However, sometimes academics identify their own needs and approach the academic developers directly for support.

> *The staff members identify some needs or may have heard*
> *(of) some technology and want to use it, so they approach us.*

This suggests that some academics are keen to increase their knowledge and technical skills. But there is a strong suggestion that the number of academics that approached academic developers was negligible. This is because it was the policy of academic developers to "force", directly or indirectly, academics and non-academic members to take part in the training. Arguably if sufficient academics were coming

forward and requesting that academic developers train them, the policy of "forcing" would not have existed in the first place.

As part of their work, academic developers also researched the market and searched for new technology that might have a pedagogical use. An academic, for example, may hear about a particular program and may want to find out more about it, so they approach the staff developers. The staff developers would then carry out research about this through market or other colleges.

The academic developers also keep on eye in the market themselves about the arrival of technology that might be useful to the academics and non-academics.

The above discussion suggests that identifying and research are part of the academic developers' job and are performed before embarking any training. After "identifying" and "researching", academic developers move on to the next step, which is delivering "actual training". The next section discusses how academic developers carried out training and the nature of the training that they delivered.

Training for ICT usage

Training academics in ICT usage is an essential part of the academic developers' work. It is the part of their job which ICT academic developers thought was the most important; they often referred to it as the ***"actual support of staff"***. The academic developer further explained what this actually involves:

> *We are there not only to train them in the use of the technology but also to train them how to use it pedagogically.*

This means that the technical training that academic developers provided has a pedagogical focus.

Different ICT program were introduced to the academics. Programs such as Blackboard, First Class, Whiteboard Interactive and locally developed software were all delivered to the academics. Apart from the First Class program, academic developers either delivered this training themselves, or organised other experts to deliver it. First Class training was not delivered by ICT academic developers; instead different departments carried out this training.

At the time when this study was taking place, for instance, ICT academic developers were providing training in Blackboard usage. *"We have run or are running in this term 6 introductory basic seminars (on* Blackboard*) and 2 advanced seminars."*

Having two different levels of Blackboard training sessions suggests that the technical competency of the academics varied. And it seems that the academic developers became aware of the academic's level through the surveys and meetings that they had with academics before any training had been conducted.

What is also obvious from the above quotation is that the majority of the academics were at the introductory level of Blackboard. This could be due to that Blackboard had only recently been introduced to the college and few academics had any prior knowledge of this program. Academic developers, however, expected that in the subsequent term there would be equal numbers of advanced and introductory Blackboard courses: *"It is likely that in the next term to run three basic seminars and three advanced training."*

As pointed out, Blackboard training was not the only technical training that ICT staff developers were providing. As an ICT academic developer explained, other

training was also provided, not only to academics and non academic staff members but sometimes also for the students.

> *We also run training (sessions on) how to design websites and training on the interactive whiteboard technology- although we did not do this in ourselves, we invited experts, but we organise these courses.*

As part of their work, academic developers taught academics how to design websites. Learning how to design a website is arguably an important skill, as academics would then be able to design their own websites on which they could communicate with their students. Also, as mentioned before, academic developers organised training sessions on how to use an Interactive Whiteboard, which is yet another important piece of ICT.

The academic developer further highlighted the relationship between their department and the department of Information System (IS), as the department of IS provided training to the academics on how to use First Class. It is not clear whether the department of IS still provides training on First Class or if this has been suspended after the adoption of Blackboard as a virtual learning tool by the college.

The above discussion indicates that academics and non-academics have been exposed to a number of technological aids that have a pedagogical use. As seen, a range of ICT programs was introduced to the academics and non-academics by the ICT staff developers.

Delivering the training: When and How?

As seen, academic developers provided regular training and, at the time that this study was taking place, there were a number of training sessions going on. However, training is delivered to academics whenever the academics require it. *"We (are) actually doing training whenever it is required"*. This means that if academics want to have organised training sessions, they can approach the academic developers who would be willing either to deliver any required training, or to invite experts who would deliver training on their behalf.

The academic developers usually provided formal training on a group basis. Individuals who were expected to attend are notified about the date and venue of the training in advance. The ICT staff developers reported to the researcher that they prefer training academics on a group basis; however, there was the possibility of providing training on a one-to-one basis in *"exceptional circumstances"*. What can be considered as an "exceptional circumstance" is unclear, however.

The final thing that needs to be mentioned here is that the academic developers have trained a large number of academics and non-academics for ICT usage. In the term when this study was taking place, for instance, close to ninety academic and non-academic staff members were trained and it seemed likely that a similar number would be trained in the term following the study. Furthermore, as we will see in the next section, the relationship between academic staff and ICT staff developers did not end with the end of training. Academics were contacting the academic developers on a regular basis, whenever they needed technical support.

Continuing Support

The role of continuing support that academic developers performed is less visible than the other two roles. Yet, unlike the previous roles, the supporting role takes place on a daily basis. This is because academic and non-academic staff contacted the ICT academic developers whenever they needed to ask questions or receive support for ICT. On average, an academic developer received five emails per day that were either asking questions or requesting technical help. Academics were aware of the availability of this service, and they contacted ICT academic developers whenever they needed help.

> *Whenever I needed to (ask questions for support). ...., maybe since the beginning of this academic year I have asked them maybe four questions. And they always answered promptly, and they always gave me the information I needed. (female academic)*

This academic was interviewed about ten weeks after the start of the academic year. This means that, on average, this particular academic had asked for support an average of every two weeks. What is surprising is that, as we will see later on, this academic had some basic knowledge of Blackboard and, as such, she took part in the advanced training sessions. It is unknown, however, how often the academics who had no prior knowledge of Blackboard contacted the ICT academics developers.

ICT academic developers usually received requests for support from academics and non-academics by different means such as email, telephone calls or even in person. Academic developers told the researcher that they preferred to receive academics' requests by email, as this would give them the opportunity to direct the requests to the most appropriate person to deal with them. Academic and

non-academic staff members forwarded ranges of questions to the academic developers. The following sections discuss the nature of the common questions that the academic developers received.

Nature of questions

After analysing the emails that ICT academic developers received, it was found that the questions they dealt with varied, but can generally be divided into two main categories, namely: technical help or wanting reassurance. In the first category, academics wanted to know how to do certain things, while in the second category academics wanted to know whether what they were doing was correct or not.

The next sections discuss each of these two categories.

Needing technical help

The need for technical assistance accounted for the most frequent questions that ICT academic developers had to deal with. Staff members contacted the academic developers whenever they required technical help. For instance, questions such as the one forwarded by an administrator were very common:

> *I want to add some audio files to Blackboard and I'm having*
> *some difficulties. The files are now attached under resources-*
> *... workshop, but they don't open even when you save them*
> *on the desktop.*

A similar question was also forward by another administrator:

> *(Group x) want to add DVD clips to Bb (Blackboard) would*
> *this be ok? There are quite a few clips so is there a way of*
> *loading on a batch of items and not one by one?*

All these questions were asking ICT academic developers for technical help. These are typical examples of the type of questions that academic developers handled. Academic developers have therefore dealt with the frustrations that staff members experience almost on a daily basis.

The interesting thing to note here is that most of the above technical questions were forwarded by non-academic staff. This shows that administrators were a vital part of the process of the virtual learning environment. As seen from these questions, academics seemed to pass their concerns and questions to the administrators who would then contact the academic developers for help. It is not clear why academics did not directly approach to the academic developers for technical help. However, it is quite possible that the academics believed solving or requesting technical help from academic developers was an administrative duty.

Wanting reassurance

The other major type of question that the ICT staff developers received was less technical. It seemed as if academics who forwarded this type of question had a basic understanding of technology, yet wanted support.

> *As you know, I hope to run my course starting Jan 23rd.*
> *Before I finally decided to go for BBD (Blackboard), can you*
> *pls tell me your experience this term regarding the student*
> *registration and issue of passwords? In your view, how much*
> *time is required between the necessary student information*
> *being sent to Registry, and the issue of the password?*

It is obvious that this academic wanted to know how the procedure worked. The academic clearly wanted to be reassured that the procedure would be a smooth one. The academic also wanted logistical information about the planning procedures.

Another academic forwarded a similar question.

> *I wonder if you have a few minutes to spare to help me establish which is the best way for what I am trying to achieve with the BTs? Are you able to pop by Tuesday to chat/talk through?*

These academics knew broadly about how this program worked, but wanted further information. Additionally, the fact that this academic requested a face-to-face meeting with the academic developers suggests that he wanted the "best" usage of technology to be demonstrated.

Those academics who submitted such questions did not need technical help as they seemed to be familiar with the technical aspect of technology; however, they still wanted support of ICT academic developers.

Table 6 summaries the nature of the ICT academic developers' roles that this section discussed.

Table 6: Summary Table of ICT academic developers' work

	Identifying needs/researching	Training	Continuing support
What ICT academic developers do?	One of most important things which academic developers do is to identify training needs for academics and try to offer training that the academic would benefit from. Academic developers meet face to face with academics to assess their needs. The research of new technology is another task which academic developers performed.	Academic developers provide training to academics and non-academics in technological utilisation. From time to time, academics were introduced into a number of ICT program, but Blackboard was the program that academics were training in at the time this study took place.	This is the work which academic developers do on a daily basis. Academics and non-academic staff contact the academic developers for support. Question mainly fell into two categories namely, asking for technical help or requiring reassurances.

Section Two

Analysis of the ICT academic developers' work using Freirian theory

As mentioned in Chapter two, Freire's work is used as the theoretical foundation of this study. Freire developed a number of concepts and only four of them that the researcher believed were related to training academics for ICT utilisation are used. The four concepts used are: dehumanisation, humanisation, banking and dialogue.

As was explained in Chapter two, "dehumanisation" is the opposite of "humanisation", while "banking" is the opposite of "dialogue". The discussion of these terms followed the approach of discussing unfamiliar concepts first. As such, "dehumanisation" precedes "humanisation". This is because people may not be aware that "dehumanisation" is happening, and may even be in denial about it.

The following section discusses whether the findings of this study were in line with these four concepts.

Dehumanising aspects

The move to Blackboard

The first issue that this study reveals is to do with the move to Blackboard. As mentioned in an earlier part of this Chapter, Blackboard has been adopted as a virtual learning environment and academics were trained in how to use this software. However, the decision and discussion to move to Blackboard was not something in which academics were involved. Additionally, the need to move to Blackboard was not based on the academics' needs; as an academic developer explained, other factors contributed to the move to Blackboard.

> *Blackboard came as an opportunity which (a senior member*
> *of Information Systems IS) he has (a) background of using*
> *Blackboard and then there was also another development*
> *going on at (name was provided), the colleges were using*

Blackboard and we are part of (these) so it was a very reasonable move to join (name was provided) and(to) start using Blackboard together with other colleges.

It is unclear why academics' views were not sought; it even seems that the academic developers were not part of the decision making process. An ICT staff developer pointed out that Blackboard was something which *"was imposed on us"*. The academic developer added that the process of moving to Blackboard was carried out with great rapidity. Blackboard was started on a pilot basis much faster than was anticipated.

The dehumanisation argument referred to here was the non-involvement of the academics in the process of moving to Blackboard. According to Freire's theory, this can be viewed as a dehumanisation of the academics as they were not consulted. Instead "senior" staff appeared to have decided it for them. It is possible that those who made the decision to bring in Blackboard would argue that it was adopted on a pilot basis and, after using it, academics would be in a better position to have an informed opinion about this product. In other words, academics would still be able to voice their opinion about whether to adopt Blackboard or not. While this argument might seem logical, it cannot, however, negate the dehumanisation conclusion that we have drawn. As it is stands, the issue of moving to Blackboard was a process in which academics were not involved; for that reason it supports the dehumanisation argument. This was not the only example of dehumanisation that this study revealed.

Taking part in the training

The participation in training was yet another dehumanising activity. As an academic developer stated, it was not compulsory for academics to take part in the training,

"but usually staff members would be forced to do some practical training in this regard." Even this academic developer has highlighted the issue of "forcing" academics to take part of training; however, forcing academics was less visible than forcing non-academics. In the case of non-academic staff, "forcing" was obvious, as the academic developer pointed out: *"The decision has been made. So we have to actually force the administrators to go down with us, so they cannot really opt out."* This shows the unequal ways in which academics and non-academics were handled. Administrators were "forced" to attend training, while similar things have not been done with academics.

Administrators were aware that they had little choice, and that the option of opting out of the training was not available to them. A male administrator clearly said that taking part in the training was something which had been "forced" on him: *"Yeah everyone in our office was told to do so, or has to do it because it's thought it might be useful"*, and when asked if the administrator would have had attended the training if he was given the choice he replied: *"I wouldn't have attended."* We do not know exactly which methods academic developers used to "force" administrators, but academic developers approached the heads of departments, who would then direct administrative staff to attend training. Academics who took part of the study, however, said that they attended training because they chose to and not because it was "forced" on them. *"It was my choice."* to take part of the training, reported a male academic staff; similarly a female academic explained that *"I chose to do it."*

This suggests that academic developers used a different approach when it came to training academics. It is not entirely clear why non-academics were forced and academics were given the choice of taking part in training. Even though academics who took training, however, an ICT academic developer revealed in a direct way that they did "force" academics to make them attend the training.

> *We were offering so many Blackboard courses that they could not opt out, they had to attend. And we were really making clear that (to attend) we were bothering them with emails, until they finally signed up.*

The above discussion suggests that dehumanisation was present in the process of forcing non-academics to take part in the training. Non-academics made it clear that they would not have attended training if they had had the choice. On other hand, academics who took part of this study pointed out they attended training based on their choices and it was not "forced" on them at all.

Humanisation aspects

Not all the practices of the ICT academic developers were dehumanising though. Alongside the dehumanising approaches discussed, there were also humanising aspects of the work. Just as with dehumanisation, this study found two forms of humanisation in academic developers' practices.

Readiness to meet with academics face-to-face at any time

An ICT academic developer pointed out their willingness to meet with academics and non- academic staff at any time they were required. *"If there are specific things, we are always available to discuss these things face to face individually."* The willingness to meet with academics at their chosen time also shows that academic

developers understood the workload and other commitments that the academics had, and the importance of providing continued support to them. It would also convey to them the sense that they are valued.

As reported in section one of this Chapter, academics did indeed contact ICT academic developers with requests for face-to-face meetings. More importantly, in the one-to-one meetings, academics appeared to set the agendas for these meetings. This is can be considered a significant indication of humanisation as it shows that academic developers were not only available to meet but also ready for academics to be in control during these meetings. The willingness of the academic developers to meet with individual academics who might have problems is yet again an indication of the dedication of the staff of this department, especially if we consider its size. The ICT department is run by a small number of academic developers; as such their willingness to meet with individual academics in person shows the importance they attached to supporting academics.

Giving choices

Another humanising aspect that this study found was the offering of multiple training sessions for the academics to choose from. Academic developers did not, for example, offer just one training session and "force" all academics to take part in this. Instead, academics appeared to be taking part in the training sessions that seemed to be most convenient for them.

> *It was convenient. There had been several courses, several opportunities so I was able to choose which was more convenient from, I think there were couple (of) options.*

As a result, a range of training sessions were offered to the academic and non-academics. Academics who took part in this training described this as being

convenient in terms of timing and the content of the training. One academic member, for instance, stated that the training session that she attended *"was perfect"*.

Having discussed two parts of Freirian theory, we will now turn to the two remaining parts: banking and dialogue.

Educational concepts

Freire's educational concepts can be used to describe how the training programmes were designed, developed and delivered to the academics. As discussed in Chapter two, there are two educational concepts that Freire identified: the banking style and the dialogue style of education.

Banking Style

It appears that the design and delivery of the training were both based on a banking style. This is because, as previously mentioned, the training package that the ICT academic developers used was brought in without consultation with the academics. It was, therefore, not surprising to discover that there was a banking style to the design and in the formal training. This conclusion does not contradict the earlier finding, which suggested that ICT academic developers often met with academics in order to assess their technical needs; indeed it could be seen as being complementary. Academic developers divided the Blackboard training into different levels: introductory and advanced.

Delivery of the training also seemed to follow a banking style. It was observed, for example, that training sessions were well attended by both academics and non-academics. In these training meetings, academic developers provided information about Blackboard step-by-step to the participants. They looked as if they were trying to impart the maximum information and skills that the participants could

retain. The banking style was further demonstrated by the handouts that academic developers had given to the academics which explained step by step how to perform tasks. There were no questions of a problem-posing nature; on the contrary, questions that academics asked were only related to the technical aspects. The design and delivery of the formal training appeared to be consistent with the banking style of education.

Dialogue Based

Dialogue between learners and teachers is a fundamental part of a problem-posing educational system. For this reason an analysis of the education system must involve consideration of whether the training that academic developers offered was dialogue-based.

Before any training was provided, it was common practice for academic developers to meet with course leaders and to explain to them such things as the registration procedures for the training. In these meetings, course leaders were given the opportunity to ask questions and voice their concerns about any issues relating to the training. For instance, in a meeting held in late October 2006, between an ICT staff developer and a course leader, the concern was raised that her name would be quoted in this research. She explicitly requested anonymity relating to her expression of frustration about using the technology that was in place. The course leader complained about difficulty in deleting information from this program and added that there was also a lack of information about this technology. The course leader further went on to say that: "students are not happy with how this technology is working". The academic developer later gave her some different options and seemed to agree with some of the issues that the course leader was complaining about. Additionally, the ICT academic developer offered the course leader an alternative program that the

academics could use. Finally, a date for the next training session was identified by the academic developers and agreed to by the course leader.

After the meeting with the course leader was over, the researcher asked the academic developer to explain to him why this course leader seemed to be showing such frustration and anxiety. The academic developer suggested that she seemed so unhappy because:

> *This* (is) *because the system does not work the way it should be working. So the system she is using now isn't well developed. That why we have been keen in offering (*to offer*) her a different system that works well. Regarding the problems she mentioned, such as* (it) *not* (being) *possible to delete and it isn't easy to find things, and names are not easy to be added. etc. I knew beforehand that* (when) *she started using* (locally developed program) *a year ago. She was using it anyway because it works in the minimal, but it's not perfect at all.*

A similar meeting was observed involving ICT academic developers and all administrators in a department. This meeting meant that the usefulness of Blackboard could be explained to the administrators, and how they could use it. In the meeting, administrators gave examples of anticipated problems and difficulties that they might face should they move their work into Blackboard. For their part, the ICT academic developers explained possible solutions to any problems they might encounter with this program.

The academic developers' policy of talking to course leaders and explaining to them what would be covered in the training sessions appeared to be a successful strategy. As we have seen, course leaders found these meetings to be useful to voice their concerns. The meetings also presented an opportunity for academic developers to explain to the participants different ways in which they could use technology, and

the benefits that they could accrue from training sessions. This suggests that a form of dialogue between academic developers and potential recipients of the training took place. Nevertheless, as pointed out earlier, the extent to which course leaders and non-academics contributed to specifying the training content remains unclear.

Academic developers were holding pre-training meetings primarily with course leaders (there was just one meeting with department administrators). ICT academic developers therefore did not have a similar opportunity to meet with individual academics in order to explain about the training that they intended to offer and the benefits that the academics would gain from it. Instead academic developers seemed to rely on the course leaders to explain for them. This indicates that academic developers did use a dialogue and discussion approach, but only on a limited scale. Why academics were not involved in the dialogue could be due to how time consuming such a process could be. Nonetheless, since most academics did not take part in the dialogue, it is argued that the educational approach was only partially dialogue based.

This also suggests that the educational approaches that academic developers used in their training were a mixture of banking and dialogue approaches (Table 7). Initial meetings between course leaders and academic developers used dialogue. On the other hand, the training that ICT academic developers delivered to academics on a group basis followed the banking approach.

Table 7: Summary table of ICT academic developers' work and Freirian theory

	Dehumanisation	Humanisation	Banking style	Dialogue
Academic developers' work and Freire's theory	Evidence of dehumanisation was found. Academics had not been consulted about the decision to move to Blackboard. Additionally, it was the policy of academic developers to "force" academics and non-academics to take part in the training, especially administrators.	This study also found forms of humanising practice. One was the willingness of academic developers to meet with academics and non-academics face-to face whenever they required it. Secondly, academics were given opportunities to attend training sessions that were convenient to them. These humanisation steps that academic developers used could have been more effective if academics and non-academics were given opportunities to attend topics that were of interest to them.	The sets of the training followed a banking style approach. In the training sessions, academics were given pre-planned contents which the academic developers expected academics to "master" and familiarise themselves. It was also very obvious that academics were not involved with the design and development of the training.	Academic developers met with course leaders and explained the training before it was offered. In these meetings academic developers dealt with course leaders' views and worries. So these meetings were an opportunity for dialogue and discussion between academic developers and course leaders. However, academics were not part of these meetings. In other words, the dialogue was limited.

Section Three

Changing practice after training

In the preceding sections, it has been demonstrated that the academic developers were totally dedicated to helping and supporting staff. Thus, they provided training to both academics and non-academic members and even occasionally to students on how to use ICT. The purpose of this training was to enable academics and non-academics to use, and be familiar with, ICT facilities in their teaching and learning. So the question to be addressed here is, have academics adopted ICT after their training? In other words, has training led academics and non-academics to do something which they had not done prior to taking part in the training? The following section deals with this question and presents the views of academics, academic developers and administrators.

Academic developers' views

The academic developers believed that the work they do with academics and non-academics had led to changes in the practices of those who took part, since the academics could now handle working with technology.

> *We enable staff members to maintain their own websites. We develop, we sometimes developed websites for them- after consultation- but we train them how to use them themselves, update them and so on. And they were not doing this before.*

This was a skill which academics had not had before they took part in the training. To highlight the changes in the academics after attending training, the staff developer

further added that *"they have basically changed from just sending out emails to the students to working with websites; working with the technology."*

The academic developers then argued that:

> *they have changed their practices because firstly they had to learn how to handle technology and new systems and secondly they had to change the procedures they were working on as it is different emailing things out to the students or putting things on a website or putting news on the website and making sure that students have really seen it and so on.*

This shows that academic developers believed that academics could now do something which they were not able to do prior to their taking part in the training. This can be considered an example of changing the practices of academics.

Academics' views

Academics pointed out that they had high expectations about the training when they decided to take part.

> *My expectation was particularly high in terms of what it would be able to do, because I have had heard a little bit already (about) virtual learning environment.*

This same academic went on to say that the training he had attended matched the high expectations that he had had. *"It was very much what I expected."*

Another staff member mentioned that *"I just expected them to tell me how to do what I need to do"*. The interesting point which this academic pointed out is that she expected the approach of training to follow a "banking" style.

As predicted, some academics started using the skills in which they had been trained. A male academic, for instance, was one of the academics who had already started using the skills:

*Yes, I have used these skills before for (*course Y*) we do in* (name of a subject was provided)*, and we use Blackboard so I have accessed Blackboard. And I am working actually with an administrator and I.. to put things on Blackboard as well.*

The academic further highlighted the important role which administrators played. **"The administrators are very, very important process, especially in the Blackboard project"**, reported an ICT academic developer. It was this perhaps that led administrators to be trained alongside academics.

On other hand, another academic who took part in this study revealed her plan to put into practice the skills she gained.

I have scheduled this weekend to take some questions that my students have written, and to make them into a questionnaire on Blackboard. What I did was, I gave my students input on a certain topic, and then for their task I asked each person to write two, two or three test questions on this topic; and I'll put them all together and then everybody can answer all the questions. This is something I'm planning to do it for and I'm confident to be able to do it.

As pointed out, the Blackboard training which academic developers offered had two levels, introductory and advanced. This was based on levels of academics' knowledge of this program. The one academic who took part in this study had no previous experience with Blackboard and therefore attended introductory Blackboard training, while the female staff member had taken introductory Blackboard training

elsewhere before she joined her current college and, for that reason, participated in advanced training sessions.

However, it is clear that the male academic who had not experienced Blackboard training before had in fact used the skills gained from training. While the female academic who attended advanced training had not used the skills as she was only at the planning stage. What this might suggest is that academics who had no previous experience of Blackboard may be more enthusiastic in using skills gained from training than those who had prior knowledge of Blackboard. "*Not all staff are very proactive, some are. Obviously those early adopters of technology are really proactive*", pointed out the academic developer.

The academic developer added that they monitor academics' views and feelings about the training as they gather data from them.

> *Well, we have collected feedback from training sessions, and there was one single case that replied: ok I have seen Blackboard and I cannot see me using it at all. That was very negative, and it was anonymous survey. Given that all course leaders are using Blackboard this problem has been overcome somehow, I do not know how.*

It is, however, fair to argue that the academics who took part in this study were positive about the Blackboard training they had received. The academics have either used or planned to use the skills gained.

The Administrator's views

The result of this study seems to suggest that the administrator's view of Blackboard was generally negative. The administrator who took part in the study pointed out that he and other administrators at his office had not used Blackboard:

> *No, I have not. I have not done anything from Blackboard. I do not think anyone in my office has yet..... yeah. But I don't think, I mean from what I gathered it has not been officially launched yet, so we have not started doing any thing on it yet.*

The reason this administrator gave for not using Blackboard was that it "has not been officially launched" yet. But ironically this administrator pointed out that academics had started putting things on Blackboard "***I know some of the academics started putting something on, but we have not started yet***". The question that can be raised here is why the administrator seemed to be waiting for "the official launch" for Blackboard, while academics appeared not to wait for a date that may never have come? This could be due to busy schedule that administrators had, compared to academics, as they had deferred using Blackboard until it is officially launched. In other words, since administrators had an idea of when Blackboard would be officially used, they had prioritised their time in dealing with work that was more urgent.

All in all, it is obvious that the administrator has not used the skills he gained in training. Therefore, the training sessions that he attended did not lead to the administrator changing his practice. Despite attending a number of training workshops, the administrator appeared to still carry on doing things in the "old" way, while academics had either started using Blackboard or intended to implement it in the near future. Why did the academics seem to be more proactive than the administrator in applying the skills learnt from training? Based on the findings, this

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can be attributed to the different perceptions of the training that the academics and non-academic expressed. As previously mentioned, the academics felt that they were not forced to attended training, and the choice of which training cycle to attend was available to them, a choice which the administrator was not given. We therefore argue that lack of humanising approaches in the case of administrators was the source of the resentment found among administrators towards training. The following table (Table 8) summaries what is been discussed in this section and briefly touches on the extent to which academic developers' work led to changing the practices of those who took part in the training.

Table 8: Summary table of changing practices of academic and non-academics after training

	Academic developers' views	**Academics' views**	**Administrator's views**
Changing practices of academics	Academic developers believed that those who took part in training changed their practices, as they can now do something which they had not been able to do before.	Academics who took part in this study suggested that they had either used the skills gained from training or were planning to use them in the near future. The study has also reported academics' positive feeling about training.	The administrator who took part in this study said that he had not used the skills gained in training. The study also found that the administrator generally had negative feelings about the training.

Discussion

Literature has continued to demonstrate the importance of supporting academics in ICT usage (Roberts et al., 2002; Littlejohn, 2002; Irani &Telg, 2002; McNaught, 2003a, 2003b). It seems that the decision makers at the college where the pilot study was carried out were aware of the importance not only of training academics, but also non-academics. A small but dedicated team of ICT academic developers provides training and continues to support academics and non-academic staff members at the college. We have, however, found the work of ICT academic developers to be so complex that it cannot easily be described. What academics expect from ICT academic developers seems to be vague and not clearly defined by academic developers or by academics themselves.

Despite the complex nature of their work, it is possible to make a general division of the work of academic developers into three main categories, namely: identifying needs and researching solutions, training and providing continuous support.

Four concepts of Freirian theory were used here to examine the extent to which academic developers' work was in line with Freirian theory. The four concepts used were: humanisation, dehumanisation, banking style of education and dialogue-based education.

Dehumanisation was the first concept discussed here. This study found two examples of dehumanisation. These were the non-consultative move to Blackboard and forcing non-academics to take part in the training. It was decided to use Blackboard as a virtual learning tool without academic developers being involved. The reasons that powered the move to Blackboard appeared not to be based on consensual professional considerations, but rather personal ones such as the college's

membership of a local consortium (i.e. the politics of membership preempted local choice in this matter) and a senior staff members' background in Blackboard.

Forcing non-academics to take part in the training is another example of a dehumanising act that this study has found. Administrators felt that they had no choice about attending the training, but rather were "told" to attend. It was the policy of academic developers to "force" academics as well, but academics were given the flexibility to choose from different training sessions that fitted in with their other commitments.

What this shows is that a great deal of inequality existed in the treatment of academics and non-academics by academic developers. As pointed out in a previous section, these different ways of dealing with academics and non-academics had produced different perceptions towards training and attitudes to using the skills gained from this training. Academics were found to be more enthusiastic than non-academics. The dehumanisation practices found here can be described as being of a 'lower level'. This is because academic developers used dehumanisation techniques alongside humanisation approaches. As a result, the dehumanisation findings reported in this Chapter could not be extended to the medium or higher levels of dehumanisation.

Alongside these aspects of dehumanisation, we also found two humanising practices: academic developers' readiness to meet with academics at any time face to face and giving the academics the choice to attend the training sessions that were "convenient" to them. Academics would feel valued by being given the option of meeting with academic developers. It also shows that the academic developers were considerate of the academics' need for support. But as pointed out, this choice was not available to non-academics. This shows that humanisation was limited.

The study also found that the educational approach used in formal training was based on the banking style in the sense that the academics had not been involved with the training development, but rather were only expected to choose which level of training was appropriate for them. They then attended a training course that had been developed without consultation with them, and were expected to internalise information. On other hand, it was the practice of academic developers to meet with course leaders before any training was delivered, to talk to them about the nature of the training and to listen to their views. However, this form of dialogue was found to be limited, as it did not include all the academics.

The above discussion shows that academic developers used mixed approaches with regard to educational concepts of the training. As discussed, academic developers provided two forms of training: formal and informal training. Meetings between course leaders and academic developers were examples of informal training while formal training was provided to the academics during training sessions.

It appears that the dialogue based approach was used in the informal training sessions with course leaders while the formal training had the characteristics of the banking approach. Finally, whether the work which academic developers do has led to changing the practices of those who took part in the training was also considered. The academic developers believed that those individuals who took part in the training were doing something they had not been doing before. Academics were using technology as part of their pedagogical apparatus, which the training they attended had enable them to do. It is hard to disagree with this as the academics themselves said the same. The academics have shown that they have either used or planned to use the skills that they learnt from training. In addition to this, the volume

of emails that academic developers received on a daily basis asking for support provided even more evidence that training had led to changes in behaviour.

However, the administrator seemed to disagree with this view. As he first pointed out, he was "forced" to take part in the training and never used the skills he gained. The Administrators' non-use of Blackboard seemed mainly due to prioritising their time and waiting for the use of Blackboard to be officially launched for the whole college. In addition to this, administrators seemed to be reluctant about the training, compared to the academics. The administrator resented feeling that he was "forced" to take part in the training, and the dehumanising way he was handled could be the source of his negative feelings.

Academic developers handled academics and non-academics differently on a number of issues that can be described using the concepts of humanisation and dehumanisation (Table 9). For instance, unlike academics, administrators were not consulted on a one-to-one basis. One meeting that I attended was attended by all administrators in the department, as a group, rather than on a one-to-one basis. In contrast and as explained before, there were series of one to one meetings between academics developers and academics before training took place. Also, while academics had a choice about which training session to attend, a similar choice was not made available to the administrators. As the administrator who took part in the study explained, administrators were simply "told" to attend training.

Despite these different ways of handling academics and non-academics prior to the training sessions, both academics and non-academics attended the same workshops for training. In these workshops, academic developers delivered content to the participants that they had not consulted with their trainees about. In this respect, both academics and non-academics experienced a form of dehumanisation. This

suggests that academic developers mixed both humanising and dehumanising approaches in their dealings with academics and non-academics although humanising aspects were less visible than the dehumanising. Therefore, it is difficult to conclude whether the work of academic developers was either entirely humanising or totally dehumanising. This shows that the issue of humanisation and dehumanisation is complicated and, as seen here, it is possible to employ two approaches in one context.

Table 9: Summary table of different ways that academics developers used

	Humanisation	**Dehumanisation**
Academics	• One to one consultancy particularly with course leaders; • Choosing which training to attend that suited to their commitments.	• Workshop training based.
Non-academics	• Similar opportunities were not offered to non-academics.	• Workshop training based.

Implications of the pilot study

The aim of the pilot study was to test the methodological and theoretical foundations of the proposed larger study. Therefore all the research techniques that are to be used in the main study, as well as the theoretical foundation, were tested. Thus, the results have implications for the methodology and the theoretical aspects of the study. The following sections discuss these.

Methodological implications

As a result of the pilot study, there are a number of methodological implications that need to be mentioned.

Firstly, as reported in an earlier part of this chapter, testing methodological aspects of the research before they are being used in the main study was one of the most important goals behind conducting the pilot study. The chapter has achieved that goal. Qualitative research methods were used and this adequately addressed the research questions identified for the pilot. The chapter, therefore, suggests the suitability of using qualitative research techniques in the main study. Data collection techniques such as structured interviews, observations and field notes were used. However, not all the data collection techniques used in the pilot study will necessarily be suitable for the main study; nor they are they the only techniques that will be employed. For instance, structured interviewing was used in the pilot study but this technique will not be considered for the main study; instead unstructured interviewing appears to be more suitable. This is because the focus for the main study is arguably deeper and much more in-depth than the pilot. For instance, understanding the work of ICT

academic developers was one focus for the pilot study, but in the main study while understanding ICT academic developers' work remains important, the main study also attempts to go beyond understanding the work of ICT staff developers and towards challenging examples of dehumanisation using the problem-posing approach reported in chapter three. Arguably, this will not be possible with a structured interviewing style. Also, qualitative questionnaires, which have not been used in the pilot, will be employed in the main study. This is mainly due to that the sample size for the pilot being small which made it possible to interview most of the participants. However, as the main study aims to reach a larger sample, interviewing most participants might not be possible. Thus other qualitative research techniques will be used to reach participants that it might not be possible to interview. Additionally, qualitative questionnaires will allow the data to be collected in different forms. This would provide an opportunity to contrast different data and may allow an exploration of how robust the claims made and interpretations drawn are.

Thirdly, from the pilot, it became clear that there was a need to challenge the information which different participants provided. Freire suggested using a problem-posing approach and raised the importance of challenges to realise the "oppression" that participants might not be conscious of. Problem-posing could also be used as a technique for collecting data, as well as a concept which refers to the form of education which Freire proposed. This approach will be used to guide the interviews in the main study.

Theoretical

Freirian theory was found to be helpful and appropriate in the setting discussed.

The four concepts used were found to be useful in analysing the setting, but at least one term could usefully be changed. "Dialogue-based education" was found to be unclear and perhaps confusing. For that reason, the term "dialogue" will not be used in the main study. Instead "problem-posing", a term which conveys the same message and at the same time allows participants to be challenged, will be used. However, the remaining three concepts could still be used in the main study. "Internalisation", a term which is related to post-colonial ideas, will also be used. Therefore a new (modified) concept of Freirian theory will be used in the main study.

Despite the usefulness of Freirian theory and particularly the concepts used, this theory has it own weakness. It does not directly address the issues of identifying and the impact of colonisation. For this reason, post-colonial theory will be used alongside Freirian theory for the study in Africa, especially in the data analysis, so as to put participants' answers in their historical contexts.

Findings about academic development

The findings of this study revealed that academic developers used different approaches in preparing academics and non-academic staff for

ICT utilisation and interacted with them in different ways. One-to-one meetings with the flexibility to choose the training session of their choice were made available to the academics. Non-academics were simply "told" to attend training. The findings of the study also suggest that the training approach that academic developers used with academics used a mixture of the elements of Freirian theory. Simultaneously, it was in line with some elements of the theory, while in other respects it was not. The training that non-academics received was found not be in line with Freirian theory. These findings will have implications for the main study as it suggests that using different approaches of training and treating target groups differently could produce different results.

Limitations of the pilot

This pilot study has it is own limitations. The first limitation is that the pilot was done in a non-African country as the college where the pilot took place was not a post-colonial institution. This has led post-colonial concepts not to be used in the pilot study as the post-colonial concepts were not appropriate to the context. Another limitation is that the pilot study was mainly drawn from Blackboard training which itself was provided to the academics and non-academic staff members on a pilot basis. As an academic developer pointed out, Blackboard would only be adopted on a permanent basis if its benefits outweigh its negatives. For all these reasons, the academic developers were constantly monitoring this and took time to talk to academics to get their views about the benefits of Blackboard. It can thus be said that this was not a typical example to study.

The number of participants in the pilot was small; it included the views of different categories of participants such as academic developers, academics and non-academics, as specified in the methodology. However, the results and findings only reflect the views of those who took part in the pilot and not all academics at the college where this study took place. The final limitation that needs to be noted here is a theoretical one. This pilot study used Freirian theory to "judge" the work of academic developers. It should not be interpreted, however, that this pilot was conducted to evaluate the work of the ICT academic developers at the college. This clearly was not the scope of this pilot. The aim and objective of this pilot was rather to test the workability of the methods and theoretical foundations of the study.

Conclusion

The aim of this Chapter was to test the methodological and theoretical aspects of the work before they are used in the main study so as to see whether planned methods and techniques will work effectively in a setting similar to that where the pilot study took place. The pilot demonstrated the appropriateness and applicability of all the techniques used here for the main study. However, some shortcomings in the theoretical concepts were found. Ambiguity of the term "dialogue", for instance, was revealed. Instead the term "problem-posing" which, by and large, serves the same purpose as "dialogue", will be used in the main study. Further, the pilot study has also suggested the importance of challenging participants when they are interviewed. This is because by challenging participants, issues such as oppression and dehumanisation

will be revealed. This too can be achieved by using the "problem-posing" concept. Additionally, the importance of using the concept "internalisation", which is also a Frerian concept, was highlighted by the pilot. Internalisation is understood to be the product of dehumanisation. Thus, the term "internalisation" goes one step further by demonstrating the impacts of dehumanisation.

The decision to use postcolonial theory for the main study is one of the most important issues to come out of the pilot. That contribution has informed the design of the main study in a significant way. It has been revealed that, in addition to the compatibility of this theory with Freirian concepts, the theory addresses historical and social contexts of postcolonial nations, which Frerian concepts do not appear to have addressed. Thus, as the main study was to take place in a postcolonial nation, employing post-colonial theory remains an imperative for the study.

Finally the Chapter demonstrated the practicality of collecting empirical data. As seen, different participants involved with ICT staff development issues took part in this study. However, more participants will be involved in the main study.

The suggestions made in this Chapter were incorporated into the main study. The findings from the main study will be presented in the following four Chapters. The next Chapter presents a descriptive account of how technology was used in the curriculum within the university visited.

CHAPTER FIVE: HOW TECHNOLOGY IS USED IN THE CURRICULUM WITHIN THE UNIVERSITY: A DESCRIPTIVE ACCOUNT

Introduction

The main aim of this Chapter is to present an account of how technology is used in the curriculum within the university visited. This directly addresses one of the research questions of this thesis. The information presented in this Chapter is based on field notes taken during informal discussions as well as observations of the setting and of meetings recorded there.

Descriptive information about where the study took place will also be presented in this Chapter. The university's administrative structure and attention given to ICT staff development matters within the university's administrative hierarchy will be described. As a result of the ethical commitments discussed in Chapter three, the university's name will not be mentioned in any part of the research. However, a general picture that would help enhance readers' awareness of the place where the study took place will be provided. Similarly, the Chapter also presents brief information about the profile of the university and its history.

Furthermore, the Chapter presents information about the faculty that was the focus for the study. The duration of the study and the nature of problems that the researcher encountered during the fieldwork are also among the topics discussed in this Chapter. Last but not least, conclusions about how technology is used within the university are drawn at the end of the Chapter.

The university's profile

The university dates back to the early twentieth century when the country was under British rule. It was the British who established the university and continued to

manage it until the country gained its political independence. However, the university maintained strong links with Britain even after independence; it remained part of the University of London years after the country became independent.

As a result of this long history and also its connections with Britain, the university has enjoyed a good reputation with people inside and outside of the country. Similarly, many political leaders and top administrators in the country have graduated from the university.

Since its establishment, the university has continued to expand both in terms of student population and the number of faculties and institutions. At the time of the visit, the university had more than 30,000 students in over ten faculties. This is relatively high compared to other universities' student intake in the country.

The academic population of the university has also been steadily increasing over the years. Recently, the university has been giving attention to developing academics professionally and, as a result, established departments that specifically deal with this. The departments of staff development and ICT support were recently established. The ICT support unit particularly focused on developing academics technologically and helping them with any technological problems they might face. It was this unit that was in charge of providing ICT development training to the academics. However, a separate department was responsible for providing non-ICT training to academics. The ICT support unit was more organised than the other department in terms of providing training to academics. Academics appeared to receive regular training in ICT but this was not the case for non-ICT training. This reflects that the university's decision makers gave more attention to ICT development than non-ICT professional development.

The university has a clear administrative structure in which students, disadvantaged members of the community as well as politicians are members of its stakeholders. The university administrative system is divided into three different levels: university council, the senate and a central administration. The senate is where policies such as ICT development and ICT staffing levels are proposed discussed and decided. The head of the ICT unit, as well as deans of faculties, were among members of the senate. Furthermore, the head of the ICT support unit reports directly to the Vice Chancellor for Academic Affairs. This again highlights the attention given to ICT-related matters by the university's decision makers. However, there was a great deal of variation in terms of ICT development within the university faculties as some faculties had more extensive ICT facilities than others.

The faculty where the study took place

Although the researcher was based at the university, in practice, one faculty hosted the research. It was not required for the researcher to send his request for permission to do the research to the university's three administrative systems described in the previous section. This was because the university had a decentralised system that allowed faculties to grant permission to external researchers. As reported in Chapter three, the researcher initially contacted the central administrative unit of the university by phone and explained to them his intention to come and visit the University for research-related matters. Contact details for a head of department were provided to the researcher, and they were subsequently contacted by email. However, after explaining the nature of the research and the people that the researcher would likely need to talk to during his visit, the head of the department came back with a negative reply and no explanations. Nevertheless, the head provided the researcher with contact details of the dean of a faculty that he thought would be in a position to host this research. The researcher then emailed his request to the suggested dean. It was this dean who accepted the researcher's request and granted him the permission to carry out the research. As a result, the researcher focused his attention on interviewing academics who were based in the faculty that hosted the researcher.

The faculty where the researcher was based was particularly relevant to the research because almost all the academics in the faculty had considerable computer knowledge and had participated in ICT staff development training. Furthermore, compared to other faculties, the faculty had a relatively good ICT infrastructure. It had computer labs, one of which was specifically designated for E-learning. More importantly, the faculty was also one of the five "priority" faculties that university decision makers decided to develop technologically including training its academics

for ICT utilisation. The faculty divided its academics into two groups: junior and senior staff. The differences between the two groups were primarily based on their qualifications and years in teaching. Professors and PhD holders came under the senior academic category, while academics with master's qualifications and less teaching experience were referred to as juniors. As will be discussed in Chapter seven, senior academics enjoyed more flexibility and privilege than the junior staff. Many junior academics were also employed part-time or on fixed term contracts. However, this study did not identify any form of unequal treatment among academics that can be attributed to gender or other similar factors. In this study, more junior academics participated than senior academics. This was largely due to the fact that junior academics were more accessible to the researcher than seniors and also that there were fewer senior academics than juniors.

History of the university's ICT staff development initiatives

Over recent years, the university has paid a great deal of attention to its ICT development. Clear policies that deal with ICT development in general and ICT staff development in particular were drawn up and put into practice. The university's ICT policies were published in different documents and publicised within the university. The university's comprehensive policies towards ICT development began in 2001. However, its ICT activities before that time are largely undocumented. Since developing ICT policies in 2001, considerable attention has been given to all ICT development including staff development. However, the focus is primarily on setting up and managing ICT infrastructure; less attention has been given to academic development. This can be seen from looking closely at the ICT support unit, which now provides ICT staff development training. The department was mainly meant to

focus on technical aspects and deal with infrastructure but, with time, training academics for ICT utilisation came under their jurisdiction. This suggests that the university did not initially recognise the importance of establishing a department that focuses on pedagogical aspects of ICT development and left this matter to people who were trained as system administrators or computer engineers.

Training is provided by three groups: external experts, local staff developers and trainers of the trainers. All three groups are organised and coordinated by the ICT unit. It appears that the overwhelming majority of trainers were from the "trainers of the trainers'" category. This term had a specific meaning, which will now be explained.

Academics were trained locally, either by academic developers who attended training outside the country or by external experts. Academic developers were mainly trained in two countries: South Africa and the Netherlands. Academic developers travelled to these countries to attend training, usually for a short period of time but sometimes for longer periods. However, from time to time, trainers from these two countries visited the university to give intensive training to academics locally ("refresher courses" as they were often referred to within the university).

Academic developers in the Netherlands focused on general capacity building matters; in South Africa, they mainly focused on development, knowledge and skills about an application called, the Knowledge Environment for Web Learning: The Next Generation (Kewl). Thus participants in the study included academic developers who were trained in both countries. Academic developers trained in these two countries were meant to provide training to academics locally when they came back. "Trainers of the trainers" was the term used to refer to those academic developers. The trainers of the trainers were part of the ICT support unit and they

carried out training under its direction. However, training academics was not their only responsibility. Prior to their training roles, these trainers of the trainers were academics who had teaching responsibilities, a role which they still held even after they became trainers. The training they provided was based in their respective faculties, even though some of them were based at the ICT support unit on a secondment basis.

Basing these trainers in their own faculties seemed to be intended to support academics through a bottom-up approach, making training more accessible to them when and if they required it. However, one of the trainers of the trainers who participated in the study pointed out that, although he attended training in both countries and sometimes provided training to other faculties under the direction of the ICT unit, academics in his faculty were yet to be trained. He blamed this on the slow and bureaucratic system of the university which, according to him, "was taking too long" to put policies into practice. The "slow" process to which the trainer of the trainer is referring to was that he wanted academics to be trained in their respective faculties, as was originally intended, instead of sending academics to attend training that was organised centrally by the ICT unit. Academics were also given reasonable knowledge about teaching methods as part of this; however, technology related training appeared to be the focus.

Using technology for pedagogical proposes

As discussed in previous sections of this Chapter, the university developed ICT policies including for staff development. Subsequently, training was provided to academics based on these policies. Training academics for ICT utilisation mainly focused on two tools, Blackboard and Kewl. At first, Blackboard was introduced to the academics and was used until the arrival of Kewl. About a year before my arrival at the university, Kewl was introduced as a new virtual learning environment which the university wanted the academics to use instead of Blackboard. This has not led to the discontinuation of Blackboard within the university, as the university was still paying the Blackboard licensing fee and therefore it was available to the academics to use. However, academics were encouraged to use Kewl rather than Blackboard and all the training was based on Kewl. There are ranges of differences between the two tools; not least that Blackboard costs a substantial amount of money while Kewl is an open source platform. However, mixed views about usefulness and usability between the two tools were found among academics. Topics such as emailing, messaging, course calendars, forums, designing online courses, running on an online course, assignments and essay management, were among the topics covered in the training sessions.

As reported, academics had reasonable knowledge about technology and therefore were keen to use it in different ways. However, when it comes to using technology for pedagogical purposes, academics mainly used it in three ways, namely, communicating with their students, accessing online learning materials and researching.

Using technology for communication purpose was the most common practice. Academics communicated with their students on issues relating to their courses by

email using either Kewl's email facilities or conventional services such as Yahoo. Additionally, academics were observed participating in chat rooms and online forums with students. Nevertheless, the academics' common room was still attracting a large number of students wishing to receive feedback about their work. This suggests that virtual communication has not replaced face-to-face meetings. Academics were still meeting with their students in and outside of the classes.

Accessing online materials was another way in which academics used technology. Some academics were teaching courses that were already available online and which were developed mainly in America (particularly at MIT). As a result, students as well as academics were accessing these learning materials for teaching purposes. Similarly, academics were accessing externally produced online materials to give more examples to their students about the courses they were teaching face to face.

The third and final way in which academics used technology was for research. This was less frequent than the previous two uses. Some academics were accessing online journals in order to update themselves in their fields. However, the focus of most academics was more on teaching than researching.

These were the three ways that academics were observed to be using technology. As discussed previously, a desire to gain technological skills was found among academics. Academics generally appeared to give high regard to the important role that technology can play in today's higher education.

Accessing the main study site

Before the researcher accessed the site for the main study, a pilot study was conducted. The pilot study took place in a college that is part of the federal University of London. As discussed in chapter four, the main focus of the pilot was on the training that academic developers provide to academic and non-academic members of their college. As such, ICT staff developers were considered to be the "gatekeepers"; without their permission, the pilot study could not be conducted. It was for this reason that they were the first to be contacted in order to obtain permission. Building on this experience, the researcher contacted the ICT staff developers in the main study site initially by email and subsequently met them face-to-face. Thus, the ICT staff developer facilitated meetings with academics.

For the main study, securing access to the site was not a straightforward task as some institutions did not respond to the initial contact made by the researcher.

Since the researcher had no connections with any African universities in the region (except those in Somalia, which as a result of the lack of functioning central government and security the researcher decided not to approach as potential research sites), an Internet search was undertaken to identify East African higher education institutions that would be willing to host this research. A list of potential universities in three countries was created and subsequently contacted by email. The email contained an introduction to the study and its objectives. The researcher also asked if the institution would host this research. None of the recipients replied to the request. One possible reason for the lack of response could have been because the correct department had not been approached. Hence, a public university in Uganda was contacted by telephone asking them for the department or person to speak to about a possible visit to their university. Thus, contacts details for the head of a department

which was in charge of training academics were given to the researcher. Contact was made with the head of that department by email, explaining the nature of the research and forwarding him the request to host the study in his department. However, he emailed to me with a negative response in which he stated that his department was not willing to host my research and instead he suggested another faculty member within the university who might be in a position to accept my request. Even though the head of this department had not given the reasons for his refusal at the time, it became apparent later on that this department had few staff members, none of whom had any teaching responsibilities.

Subsequently, the Dean of the Faculty nominated by the first contact was contacted and accepted my request. Because the country was preparing for a general election, a date for the study was set for after the general elections.

During this time, a research visa was obtained from the Ugandan Higher Commission in London that allowed the researcher to carry out the research in that country legally. The researcher then travelled to Uganda.

Duration of fieldwork and problems encountered

After arriving in the country, the researcher reported to the Dean of the Faculty. In the first face-to-face meeting, the nature of the research and the people whom the researcher would need to interview were explained. The Dean assigned a senior administrator to facilitate the visit and introduced the researcher to the heads of the departments and other senior academics at the faculty.

The researcher's visit to Uganda lasted over a month and it was during the winter/spring term of 2006. For the whole of the fieldwork period, the researcher stayed on the university's main campus, and this allowed him to spend a lot of time with faculty members as the researcher stayed within a short walking distance from the faculty. Academics, particularly junior staff, spent a great deal of time in the faculty and some of them often stayed until the early hours of the morning. During this time, they stayed in a common room, which the researcher had permission to share with them. This allowed him to observe them and understand what these academics were doing, such as online discussions or online chatting with their students. The room which most academics regularly used was equipped with PCs and facilities that academics needed, and it was open twenty-four hours a day. This has further given the researcher a chance to approach academics directly and request for them to take part in the study. However, since the room was shared, it was not an ideal place for interviewing participants; another common room, which was also in the same building, was mainly used as a venue for interviewing since no private rooms were made available for this work.

It took a few days to become familiar with the environment and it was only in the second week that the researcher started interviewing the participants. Academics and academic developers were interviewed first, while the senior academic members

and the E-learning coordinator were the last people interviewed. In order to understand the situation better, a strategy of interviewing not more than two participants per day was followed. This allowed the researcher to plan upcoming interviews and also to go through interviews that he had undertaken the previous day.

Interviews took place at any time of the day including late evenings or the early hours of the morning. The timing was based on interviewees' wishes. Almost all the academics at the faculty took part in training for ICT staff development and this gave the researcher an opportunity to balance the participants in terms of gender and years of experience. An equal number of male and female academics were selected. The academics who took part in the study also had a range of years of teaching experience. They similarly varied in the forms of training they had taken. Some of them had attended a three-day long training programme, while others attended a week-long slot. Furthermore, academics were also trained in different forms of E-learning tools.

Most of the interviews were carried out on a one-on-one basis. An attempt to carry out group interviews with a staff developer and academics proved to be unsuccessful. This was because the academics were not ready to talk about their experience of the training sessions that they attended in the presence of the staff developer. So no meaningful data was collected on that occasion, and future group interviews were not set up.

In spite of using a potentially problematic problem-posing technique when interviewing participants, the visit was largely trouble free. This was largely due to the high regard that faculty leaders gave to this research (which meant that academics were requested to participate in the research) combined with regular monitoring of the work by the supervisor. Academics were cooperative and happy to talk to the

researcher about their experiences. No single academic that the researcher approached refused to be interviewed. However, despite all of these positive aspects, there are some points that are worth noting.

Firstly, only half of the questionnaires distributed were returned. As mentioned in Chapter three, questionnaires were sent to academics in three faculties through their respective E-learning coordinators. A total of thirty questionnaires were given out; however, only half of the questionnaires were returned. This problem arose outside the faculty that hosted the research and the researcher's lack of direct links with these faculties prevented him from chasing up the questionnaires.

Secondly, comparing information provided by academics at different times during my visit, it appeared that the academics interviewed at an earlier stage provided extensive information and detail about the situations under investigation. However, academics interviewed later in the visit seemed to be reluctant to say more and sometimes appeared to be in denial about some of the information that had been provided by fellow academics, even where this had been confirmed by staff developers. However, after challenging these academics, they did elaborate. The reasons why the second group became reluctant remain unclear, although the researcher developed the impression that the more he delayed in interviewing particular academics, the less likely they were to take part in the study or talk during interviews.

Thirdly, interruptions occurred during interviews. This was mainly due to the fact that some interviews took place in a public hall that everyone, including senior faculty members, could enter. Thus academics were interrupted during interviews and sometimes said phrases like, "I don't want to be quoted", especially if they thought what they were saying would be considered controversial by the

management. As such, in the middle of the recordings the researcher reassured them that their names will not be released under any circumstance and also repeated the ethical commitment that the researcher undertook and had explained to them at the beginning of the interview. This seemed to ease the interviewees' anxiety; however, continuing the interview by returning to the topic being discussed before the interruptions happened was not always easy. Thus, sometimes the researcher restarted interviews when such things happened.

Fourthly, lack of privacy in the room used for the interviews was a problem. Those conducted in a public room made academics feel uncomfortable about being seen being interviewed. They especially did not want staff developers or E-learning administrators to see them being interviewed. This could be perceived through their body language. On two separate occasions, when an E-learning coordinator at the faculty entered the room in which we were conducting the interviews, the academics became silent, wondering perhaps if the E-learning coordinator was overhearing what they were saying. In addition, academics were seen looking over their shoulders to check who was coming in or out of the common room. After realising this, alternatives were established to minimise the lack of comfort for the interviewee; for example, meeting after office hours or at alternative locations. This proved to be a positive change, as academics were confident that no one overheard or observed them while being interviewed. Furthermore, recordings that were made at this time were much clearer and easier to transcribe.

Conclusion

The main aim of this Chapter was to discuss how technology was used within the university visited. Three ways in which academics used technology (for communication, accessing resources and following research) were presented. The Chapter also reported that the university has paid considerable attention to its ICT development. Training academics has attracted the attention of the university's policy makers and, as a result, academics have taken part in ICT training and trainers provided different kinds of ICT training. Academics were also introduced to different software programs that proved to be useful to them. More importantly, a reasonable ICT infrastructure was in place, particularly in the faculty where the researcher was based.

Having established this background information, we will now turn to the remaining research questions. Academics' views of how technology could impact on African higher education is the question which the next Chapter will address.

CHAPTER SIX: THE IMPACT ON AFRICA OF IMPORTING ICT FROM DEVELOPED COUNTRIES

Introduction

The aim of this Chapter is to investigate the impact that importing ICT from developed countries has had on Africa. As mentioned in Chapter three, one of the research questions addressed in this study is whether importing ICT from developed countries into African environments would have any cultural impact. Transcribed interviews as well as open-ended questionnaires were used to discover the answer to this question. After cross checking this data, it became clear that the participants and respondents' answers involved three themes, namely, efficiency, cost and culture.

The participants thought that importing ICT from developed countries would have a significant impact on Africa. The main areas that were seen as experiencing a lasting impact were those of efficiency, cost and culture. Thus, the results are presented here using these three areas to structure reporting. Another important theme that emerged from this Chapter concerned approaches to acquiring technology from developed countries. Participants have suggested three ways of acquiring technology, and they are discussed in this Chapter. The final section draws conclusions about the extent to which the Chapter has achieved its aims.

Efficiency impact

Technology has been perceived as a way of "improving" the efficiency of the work that academics perform. Academics have pointed out that technology can enhance communications with students. They argued that, with technology, they could reach their students in a faster and more efficient manner than would have been possible without ICT. Additionally, academics suggested that the efficiency technology could offer goes well beyond the student-lecturer context, as it can contribute to the quality of research that academics carry out. This is because accessing the internet would enable academics to update their knowledge and expertise in their subjects. More importantly, academics suggested that the "efficiency" of ICT does not stop within the student's and lecturer's environment, but also has an impact on the wider society. If people could maintain close communication with each other, it was proposed, it would lead to them maintaining their cultural norms and traditions. The following section discusses these different aspects of "efficiency" that technology could bring into society as reported by the participants of the study.

Communication efficiency

Academics who took part in the study reported that technology "enhanced" communication, as they were able to contact their students more easily than before. There was more *"contact with students"*, pointed out one respondent, who went on to explain that students *"can now ask questions online after reading notes, and receive feed back as soon as possible"*, which makes them feel as if "**they are close whenever they log in**". Putting learning materials online allows students to read the materials in their own time and to communicate with their lecturers if any ambiguity should arise with the materials. So, with technology, there would be greater contact

between lecturers and students. Questions could be submitted and feedback received online. So contact between lecturers and students would not only take place during class hours, but also outside normal class hours too. As a result of technology, many students were forwarding questions to their lecturers: *"I have many students normally contact me, and they have like questions"* (a male participant). Not all students will have had time to ask questions during the classroom sessions, or they chose not to do so *"because they are shy; some don't want to ask in class"*. However, if technology is useful to some students, like the "shy" ones, it could also be disadvantageous to other students who may have negative attitudes towards ICT or have access problems. Indeed, this lecturer acknowledged that not every student in his class was contacting him online.

With the use of technology, students could also make contact with their lecturers if the topics being studied were not clear. However, this would mean more work for the academics. As students could more easily contact their lecturers at any time, lecturers would spend more time dealing with students' questions. This suggests that the time that academics might have spent doing research and writing publications might instead be spent responding to students' enquiries.

Classroom efficiency

In addition to the communication efficiency discussed above, technology has been seen as a way of delivering learning concepts in a more organised manner: *"Concepts have been demonstrated. Better delivery of materials"* (an academic). Putting learning materials on the web arguably would allow students to access these materials as many times as they wanted which, to some extent, could contribute to the students' better understanding of the concepts being studied.

A male academic contrasted using ICT development with his class with a period when there was no such facility:

> *In those days we gave students lecture notes using handouts.... Seminars now are projected using power points, text, etc.*

The efficiency that this academic seemed to be referring to is that lecturers, unlike in the "old" days, no longer have to worry about printing study materials for students. Ideally, this would mean saving academics' time, but as discussed above, this has yet to be seen.

Research efficiency

Research efficiency is another issue discussed by participants. Technology has been viewed as a way of improving the "efficiency" of research that academics perform. *"**Research has improved due to computers using internet facilities**"*, suggested a male respondent. The internet allows academics to access online journal articles and identify potential publishers that they can target for publishing their work.

This respondent viewed technology as having the potential to improve both students' and academics' work and further concluded, *"**Everything is good**"*. It is not, however, entirely clear whether this academic was talking about the potential improvement that ICT could bring or an actual experience in his university's setting. This echoes some of the claims reported in Chapter two, as a great deal of literature has highlighted the enormous benefits or efficiency that comes with ICT.

It would be difficult, however, not to challenge this academics' view if he was specifically referring to the actual situation at his university. As we will discuss in the next Chapter, the staff developers who were in charge of ICT issues for the

university have repeatedly cited the failure of academics to adopt ICT as a reason for the university's lack of institutionalisation of "e-content". It is likely then, that this academic's enthusiasm about ICT efficiency was based on the potential benefits that ICT could offer, and not the current situation at the university.

Efficiency to a wider society

Academics also suggested that the "efficiency" of ICT goes beyond the contexts of classroom and research and has been viewed as way of improving "local initiatives". *"It will improve local initiatives if it is possible to adapt to good practices"*, suggested a male academic. The words "local" and "adapt" suggest that this academic was referring to the issue of "importing" ICT from developed countries as a way of improving local ideas, but with the condition of bringing what he called "good practice". Even though the respondent has not spelled out what he meant by "good practice", nevertheless, his mention of improving local initiatives suggests that this can be considered his criteria for judging whether a program is worth adapting or not.

It is not only this academic who thought that technological efficiency could have an impact on wider society. Another academic went further and highlighted how technology could maintain peoples' norms and culture:

> *The enhanced communication by use of ICT helps people to*
> *be on all the time, hence maintaining their cultural norms.*

This argument suggests that ICT would enhance communications among people who share culture and perhaps live in different locations. It is not clear, though, how this kind of communication would help maintain people's cultural norms.

Due to the "efficiency" that these academics perceived, they argued for the importance of importing and expanding ICT development, as this would help minimise the digital divide that exists between developed and developing countries: *"ICT from developed countries will help bridge the digital divide in our country"*, suggested a male academic.

However, what needs to be mentioned here is that the digital divide can be considered both as being between developed and developing countries and also within a country (Sukkar, 2002). It is surprising to note that, while a lot of attention was given to the digital divide between nations by participants, especially between developed and developing countries, the other aspect of the digital divide did not lead to similar interest. Cities and rural areas in large parts of Africa are not developing equally. Unlike urban areas, rural communities seem to be left out when it comes to technological infrastructure and facilities. Arguably the rural parts of African countries can be said to be lacking a basic ICT infrastructure.

Finally, what needs to be pointed out in this discussion of technological efficiency is that academics who took part in this study talked enthusiastically about the importance of importing ICT, as this would help them to increase the efficiency of the work they do. It would also provide benefits that students and society at large could gain from. However, as we will see in the next Chapter, when it came down to a practical level, and in terms of taking part in training, academics were reluctant to

attend training courses that would have provided them with the skills to use ICT effectively.

Nevertheless, different efficiencies that are found here seem to be consistent with literature in the field that continues to highlight benefits that can come with technology. McCann et al., (1998), for instance, have mentioned flexibility of learning, reducing barriers of time and place of study as part of the benefits that come with technology. They also considered communication efficiency between tutors and students and the potential to enhance the quality of teaching and research as additional benefits that technology will bring to higher education.

Acquiring approaches for ICT

As suggested in the efficiency themes, technology can bring enormous benefits to any society, such as communication efficiency, classroom efficiency and research efficiency. In order to achieve these perceived benefits, academics suggested different ways in which technology can be imported. These approaches are discussed below.

Adapting approach

These academics viewed technology as a way of improving the efficiency of their work and also that of society at large. Understandably, these academics welcomed the idea of not only importing ICT from developed countries who have "successfully done ICT projects", but also inviting people to bring their expertise into developing countries and to spend some time with local people in order to "expose them" to this knowledge. It was thought that this would make local people more knowledgeable.

"We will get more knowledge, exposure, we will get new ideas on how we do things", argued a female staff member.

Another female participant expressed similar views, as she believed that if experts from developed countries visited, it would make them as competent as the experts themselves: *"I believe they would help us to become competent in the same way that they are experts"*. She further expressed her admiration of the level of efficiency that developed countries have achieved:

> *... even as we use their software; you look at this thing, the ways it does certain things; and you get excited and say; how is it done!*

In other words, these individuals suggested that, in order to benefit from ICT, they should invite people who have been using it "longer than we have", and have already developed programs for ICT, in order to transfer their knowledge. Arguably, however, while interacting with individuals who have proven experience in the field would be a useful experience, it does not mean that these individuals, or programs designed in other parts of the world, would directly address the needs of these particular academics.

The method that these academics seem to be suggesting for acquiring ICT from developed countries is what we might call an "adapting" approach. This approach involves interacting with experts from developed countries and "adapting" their ways of doing things, as well as their programs, rather than just copying them. The approach of "adapting" does not mention whether this involves selecting programs that experts have developed based on their local needs.

"Borrowing" approach

Another approach identified by academics as a way of importing ICT from developed countries was "borrowing". The idea of "borrowing" is an interesting one, and totally different from the "adapting" approach. With "borrowing", the technological developments of developed countries would be selected, based on local needs. The "borrowing" idea also investigates how certain programs became successful and why others failed:

> *It is also good to basically borrow some ideas from where things have been done. And see where they have failed ...and find out why they have not succeed, and in which circumstances.* (Male academic member)

An important aspect of the "borrowing" notion is to understand local needs and the local environment before anything is imported.

> *I think... we should study our environment, understand our environment .... Because if we borrow something from the other environment which people here don't know then I think it will be a problem.* (male participant)

The literal meaning for "borrowing" suggests receiving a physical artefact and then retuning it after it is used, but academics did not mean this when they talked about "borrowing". What they seem to be referring to was getting ideas and inspiration about ICT use from developed countries and using these to develop local practices.

So, as it is stands, the concept of "borrowing" as way of importing ICT programs from developed countries can be useful and can positively contribute to ICT development on the continent. This is because the concept strikes a balance between ICT development and being considerate of local culture.

The findings identified here are similar to what Woherem (1993) called "technology transplant", understood as an alternative to the continuation of importing technology. He was highlighting the importance of African countries being technology sufficient by developing technology locally rather than relying entirely on imported technology.

Adopting approach

"Adopting" ICT programs that were developed in other countries, rather than attempting to "re-invent the wheel" when ICT issues arose (as one academic put it), was also suggested as an approach to acquiring ICT. *"When it comes to E-learning, I don't want to re-invent the wheel"* because *"Many countries have already done this, and have done it so well"*, suggested a senior staff member. The phrase to "re-invent" the wheel, was used to describe abandoning current practices in order to "adopt" programs and not worrying about modifying or changing them. A trainer of trainers in the department advocated this approach: *"We don't have to go back and reinvent the wheel. Software development from scratch is very expensive and tedious"*. It is clear that what this participant is suggesting is that it is better not to invest resources in developing new software from "scratch". He suggested that his preference was for doing things locally but used the lack of resources as a reason for not doing this.

> *We can do it locally if we have people to do it. We can build the Kewl[1] but not starting from scratch, it does not solve our problems and we do not have those peculiarities that it has to address in an African way unless you want to go back to the Stone Age.*

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[1] Knowledge Environment for Web Learning: The Next Generation (Kewl.Next.Gen) is a piece of software that the university has recently adopted as Virtual Learning Environment, we will discuss this software in more detail and compare it to the Blackboard.

The point which this academic seems to be making is that although it would be good if programs were developed locally, since there are no human resources to do this, the only option is "adopting" programs that were developed elsewhere. So according to this view, the option of "adopting" is put forward not because it is the best one, but rather because it is the only option open to African countries, as they cannot afford to develop their own software. Additionally, given that "we do not have those peculiarities", that "going back to the stone age" is not an option, and since it is impossible for African countries to design their own programs, then there is nothing wrong in using an "adopting" approach to solve current ICT problems. Another important point that this participant has highlighted concerns going back to African culture. As pointed out in Chapter two, postcolonial thinkers argue for the "reclaiming" of culture that has been lost as a result of colonisation. However, the extent to which Africa can go back to its past culture is questioned by this participant.

The acquiring approaches discussed here are echoed within the literature but often with different terms used. "Technology transfer" is the term widely used among researchers to refer to the process of importing technology from developed countries. Udo and Edoho (2000), Odedra (1990, 1992, 1994a, 1994b), Woherem (1993) and Al-Ali (1995) are some of the researchers who took particular interest in the mechanism of technology transfer from developed countries. Odedra (1990), for example, identified five channels of technology transfer to Africa, namely, "acquisition of equipment, technical assistance, education and training, direct foreign investment and licensing". These findings were focusing on ways technology arrives in Africa. This is quite different from the findings of this study, which suggest a greater focus on how technology ought to be engaged with. Similarly, the findings

here are also different from the "direct" and "indirect" channels of technology transfer that Al-Ali (1995) discussed.

The main reason why the findings of this study appear to be not in line with the above studies could largely be because of the different focuses of the studies. These studies seemed to be investigating "channels" by which technology was transferred to developing countries, whereas the current study focuses on how technology should be engaged with. Differences in time between when this study took place compared to previous studies could also be a contributing factor. The previous literature took place in the nineties and it can be argued that the focus at that time was on gaining technology, whereas the findings of this study suggest a shift of attention to how technology ought to be used.

Cost impact

Cost is another kind of impact that academics have identified. Academics who took part in this study argued that there are cost issues involved in importing ICT from developed countries. There are two ways that importing ICT from developed countries would have financial implications for Africa. Thus, the following sections discuss the different ways in which ICT has cost implications.

Cost of hardware and software

Although participants have argued that ICT would increase the efficiency of the work they do, they also pointed out that importing ICT and getting expertise from developed countries will have financial implications. ICT hardware and experts were identified as being too expensive. Thus, in order to deal with this problem, academics

suggested ways in which developing countries could cut the costs associated with importing ICT. For example, they argued that using local people instead of external experts would significantly reduce the financial burden. Additionally, at a practical level, the university has started using locally developed software instead of imported ones.

A male participant, for instance, reported that importing ICT hardware will cost a fortune at all levels of education:

> *I can see* (that*) the cost of the hardware is quite high so most of our universities and colleges, and even other schools, especially tertiary institutions cannot afford to buy... sufficient machines as required.* (a male academic)

The high cost of ICT hardware could deter an institution from getting "sufficient" ICT facilities if the institution has no means to buy them. ICT hardware costs a considerable amount of money as all ICT hardware is produced by business-oriented companies whose main concern is making a profit from its products. In developing countries, however, and particularly in Africa, due to economic disadvantage, spending money on ICT will negatively impact sustaining or developing other sections of the economy. For instance, at the University visited for this study, the amount of money spent on the Blackboard license fee annually was equivalent to two to three lecturers' basic salary for a year. In other words paying for Blackboard led the university to forgo recruiting at least two new academics. This alone could be a sufficient justification for the university to seek alternative and possibly cheaper sources of ICT resource.

Cost of experts

In addition to the hardware and software costs, academics also pointed out that inviting experts from developed countries to provide training costs the university a lot of money.

> *These expatriates eventually charge a lot of money in terms of salary wages, when we value their skills they will charge us a lot of money. In most companies if they get a consultant, they charge a lot of money.* (a female staff member)

The academic pointed out that there are two ways in which experts charge money, namely the cost of delivering training and also the cost of seeking their expert views. The female academic also pointed out that the experts must be paid well as they are away from home. The findings on different cost aspects reported here support what Schmidtlein and Taylor (2000) have reported before. In their study, they highlighted different cost impacts involved with technology in higher education and importantly pointed out that the cost issues of technology in higher education have not been adequately researched. Murphy et al., (2003) however, considered cost as an aspect that will continue to have major bearing in developments in online education in Asia. McCann et al., (1998) also reported that ICT development in higher education requires a significant investment in the establishment and maintenance of technology to support teaching and research. In an African context, Mays (2005) reported cost as an important thing that impacts on Sub-Saharan Africa's distance education projects.

Reducing the cost

As a result of the financial costs associated with importing ICT from developed countries, academics suggested two approaches that would allow the financial impact to be reduced. One was relying on local human resources and the other was using locally developed programs.

Relying on local people

Academics have proposed various ways in which this problem of cost can be tackled. As mentioned above, relying on local people to provide training instead of inviting experts from developed countries was suggested.

> *There is a need to concentrate on local people training these people on how to do the things themselves rather than having to import -them- 'cause it will cost us in the long run.* (A female academic)

Arguably, local expertise is much cheaper than external expertise, but it is likely that the trend of importing experts will continue as there was a sense among academics that external experts are better than locals. The feeling among academics that local people, no matter how competent they are, are less able than their external counterparts was found to be widespread. However, the university appeared to be challenging this view and it has placed local people in charge of training academics. However, it has not completely stopped using external experts. As a senior academic member put it, the point of using external experts is to train local people who would be in a position to pass this training on to academics locally.

> *The experts come for short periods so as to train local staff who become experts themselves, and are also given several*

refresher courses. Out of the local staff we are going to have people who we can then call experts. Then those ones who are on the ground can conduct IT-training-over the period.

Despite this being the policy of the university for quite some time, and in spite of a good number of local academics being trained, this has not led to a complete reliance on local experts. External experts were still considered vital when it comes to ICT staff development. As such, there is nothing to suggest that the use of external experts has in any way been reduced. This means that the idea of using locals in order to reduce the current cost of using outside experts is unlikely to be achieved.

Using locally developed programs

In an effort to use local experts and reduce costs, the university has been attempting to stop using Blackboard and instead use software called Kewl.Next.Gen, which was free of charge. Academics were therefore no longer trained to use Blackboard but rather they are trained to use Kewl.Next.Gen. Additionally, the university, along with several other African universities, was part of the developers for Kewl software, which can be seen as using local skills and experts. However, the university has continued to pay for Blackboard despite having locally developed free software. A senior member for the university has even insisted on paying for the licensing of Blackboard, even if the university stops supporting this officially.

I am one person if the university stops funding for Blackboard, I'll continue paying money to make sure that the two systems run parallel.

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This suggests that there is a feeling that this system (Kewl), which is locally developed, cannot be relied on (in the next Chapter, we will present academics' views towards Blackboard and Kewl.Next.Gen). This again raises the question of the practicality of relying on local software so as to reduce the cost of external software.

The above discussion suggests that, even though the two suggestions made by the participants would theoretically reduce the cost of ICT, at a practical level this has not been the case. Despite training local people to carry out training instead of importing external scholars, experts were still costing money and there was no suggestion that this would be reduced. The same happens with using locally developed software rather than Blackboard, as this also costs a considerable amount of money. The university has been planning to stop using Blackboard and, instead, move to Kewl.next.gen. But the researcher observed that some academics were sceptical about the ability of locally developed software and insisted on continuing to use Blackboard even if it means relying on the faculty's budget to pay for the licensing fee. So this suggests that the notion of using a locally developed program instead of an imported one may take some time before it can become a reality. The principal obstacle to realising this idea seems to be attitude problems more than anything else. Academics and even a senior member of the university would need to be convinced about the effectiveness of locally developed programs as they do seem to have questions and reservations about this. Contrary to this sceptical view towards Kewl, academic developers and even staff members who used this software believe that Kewl has more features and is more user-friendly than Blackboard. So what all these conflicting views towards the locally developed program show is that this approach cannot be relied on as a means of reducing the cost of importing ICT.

These discussions suggest that the university has a mechanism and means of reducing the cost, but that ths is never fully utilised. Thus, the conclusion that can be drawn here is that, unless the suggested means of reducing cost are implemented, ICT programs and experts will continue to cost the university financially.

The approaches of reducing cost of hardware and software found here are different from what Oshikoya and Hussain (1998) suggested in their study. Oshikoya and Hussain suggested two approaches of identifying the cost of technology. 'Bulk-purchasing' which means purchasing a large quantity of technology when buying computers from developed countries and also using 'Out-of-trend' computers that companies and organisations in developed countries get rid of when they obtain new computers, are two suggestions identified by them so as to reduce the cost of technology. Moyo (2003) reports cost as a major constraint that is facing the continent in terms of ICT development. And to deal with this problem he called for establishing partnerships among universities as a way to implement distance education programmes on the continent. Such partnerships appear to be taking place now. For instance, the university visited along with other African universities has developed a virtual learning environment program in order to use it instead of commercially available programs. Knight (2000) too has taken interest in cost aspects and called for the setting up of a trust fund to deal with these problems. What theis shows is that cost elements of technology and attempts to propose solutions to these difficulties have long attracted the attention of the researchers.

The cost impacts of technology reported here are interesting findings. This is because, as Alexander (2001) argued, and also reported in Chapter two, technology has been positioned as potentially reducing the cost of education. As such, any suggestion of increasing cost as a result of technology would cause great anxiety

among policy makers. However, what needs to be mentioned here is that setting up an infrastructure for technology would have financial implications anywhere, even if cost reduction is arguably something that technology could offer in the long term. In other words the cost reduction benefits that are promised to come with technology are not likely to come in the early stages.

Cultural impact

Importing ICT from developed countries in the form of ICT programs or experts can be said to have a negative impact on local culture. Academics who took part in the study thought that importing ICT from developed countries into an African environment could "spoil" or "wipe out" local culture; they also suggested that training could "brainwash" local people if they are trained in developed countries. As a result of these potential cultural problems, participants have called for using strategies such as checking what is "applicable" and "relevant" to local environments when considering importing ICT from developed countries. Academics also called for training people "locally" so as to avoid any danger of "brainwashing".

ICT as potentially spoiling local culture

A female respondent highlighted the potential benefits that ICT can bring to society, but equally voiced her concerns about the possible negative influence that might come with importing ICT from developed countries.

> *I think it may influence some of (the) initiatives and culture*
> *as some may take it as a way of improving their work*

> *conditions, but in some local initiatives and cultures they may*
> *take it (as) a way of spoiling their way of life and cultural*
> *views.*

This respondent has not, however, made it clear how technology would "spoil" culture or peoples' way of life. She has not, for example, illustrated how technology could negatively change local culture and perhaps replace it with a different one. She has only talked in a general manner about the negatives that might come with ICT. According to this view, the negative impact has not yet taken place but some academics fear that it might in the future.

Similarly, a male respondent warned about possible cultural negatives that might be associated with ICT if bad practices are adopted.

> *I suppose it will improve local initiatives ...However, It may*
> *also have a negative effect on local culture if bad practices*
> *from other countries are adopted.*

The suggestion this academic is making is that any negative impact from ICT could be avoided if people discriminate between the things they could adopt. The academic further suggests that local culture is to be used as a guide to judge whether a program has an element of "bad practice" or not. For instance, if a program contradicts the local culture, then it should be regarded as having "bad practice" that could have a negative impact. In other words, culture is a core reference point that needs to be considered when it comes to the issue of importing ICT; culture should be given priority.

Nevertheless, this idea of using culture as a checklist or as a gatekeeper for importing ICT programs is arguably rather vague. This is because culture is a constantly changing thing. What is considered as acceptable today culturally might not have been considered acceptable ten years earlier. So it is unclear how to reflect cultural assumptions given a constantly changing society. In addition, society

contains different sub-cultures, so the question of which "culture" is also relevant. In other words, which culture should be used as a framework when evaluating proposals for importing ICT from developed countries? More importantly, as reported in the "Acquiring approaches" section of this Chapter, how far can people go back to their 'authentic' culture in order to use this as a guide to adopting new developments from elsewhere is obviously a matter of debate.

Nevertheless, the fear of negative impact that comes with technology found in this study does appear to support a previous claim made by Sy (2001). Sy's article focused on Filipino's virtual communities and social interaction mediated by information technology. Sy (2001) argued that technology imported from developed countries would damage local culture as it could lead to an "inferior lifestyle". He argued that "feeding on the information-age hype, some advertisements exaggerate the usefulness of these media and erode the well-being of Filipinos by depicting that non-consumption of technological projects produces an inferior lifestyle" (p. 304). Sy further argues that importing technology from advanced countries would not only have financial implication but rather "extends to the lifeworld of Filipinos, the realm of their everyday communicative life." Sy further added that "information technology may also help spawn new forms of social engagement. Certain uses of the telephone, the chatroom, the mailings list, the internet cafés are contenders of focality."

In a much earlier previous study, McPhail (1987) too argued that new electronic communication would have a negative impact on society and thus came out with the term "electronic colonialism" to describe the extent to which the negative impact of technology can influence societies. Similarly, Hall (1999) claimed the existence of what he called "virtual colonization", drawing similarities between

"old" colonisation that began in the 15th century and the current internet revolution. Ya'u (2004) is yet another commentator who argued that technology represents a new form of imperialism in Africa.

What this clearly demonstrates is that the technological fear reported in this Chapter is reflected in the literature. For two decades or so, researchers have been taking keen interest in the cultural impact technology might have. This study confirms the existence of such fear in people's beliefs more widely.

There are, nevertheless, two important points that are worth mentioning here; firstly, despite discussing the negative impact that might come with technology, the participants continuously highlighted examples of positive impact that technology brings to society, and particularly to education. So, in spite of everything else, the participants of the study did not view technology as only being associated with harmful things. As a matter of fact, they talked enthusiastically about how technology has changed their teaching and learning activities before talking about any possible negative associations of technology. Secondly, even though the participants have discussed their fear of possible negative impact they did not actually spell out how technology would "spoil" culture. Additionally, the participants did not explain clearly whether such "spoiling" was happening currently. This appears to suggest that participants viewed technology as being alien to their society (Odedra, 1992), and therefore were fearful of the negative influences that might come with it.

ICT leads to cultural changes

In contrast to this view, one male academic argued that the influence of ICT on culture is a reality, as it has already been felt.

> *Their influence is already felt on the ground and already*
> *many of us have changed [our] cultures in line with ICT.*

The cultural change that this academic refers to does not imply a negative view of ICT; indeed, many feel their teaching has improved. For instance, lecturers no longer teach the way they had been teaching. A male academic, for example, described **"use of [a] laptop to demonstrate to the students concepts they have always imagined... it more rewarding since seeing is believing to many people."** A lecturer may not need to prepare handouts and distribute them to students but can instead put the learning material online so students can access them whenever they need to. Also the library is no longer the only place where research materials can be found because the internet becomes another source. In other words, technology has introduced a new culture, which people have already adjusted to.

One lecturer suggested that ICT will "wipe out" the morals of locals if ICT is imported from former colonial rulers.

> *Culture, well, I think we have an experience even before they*
> *bring in religion. They had an impact on us... If our moral*
> *values are wiped out then it will cause fear in us.*

The reference to the the history that Africans have experienced is perhaps a good justification for this academic to be anxious about what comes from former colonial rulers. This academic is suggesting that experience has shown that relying on ICT from developed countries has cultural implications. However, although this academic was worried about the cultural consequences that might come with ICT, it seemed that they were not bother enough to act. Lack of actions despite acknowledging

possible negatives impacts cannot be easily explained. It may, however, be an example of "dehumanisation", resulting in passive acceptance.

Away from the issue of cultural impact, yet related to the issue of importing ICT experts from developed countries, a participant revealed that academics have worries about their jobs being taken over by experts. *"So I have learnt [that] most of us [see it as a] threat, people are going to lose their jobs and these people [are] never going to leave"*, reported a female academic. Even though academics have pointed out the financial cost of inviting externals even for a short period of time, they are still anxious about losing their positions to these outside experts. It is hard to see the justification for this fear, since no academic has lost their position to an external scholar. However, it reveals a different perspective on the relationship between the external experts and local academics that could have a negative impact on training due to mistrust.

Dealing with the cultural impacts of ICT

Due to fear about the possible cultural impact that imported ICT projects could have on Africa, participants and respondents have mentioned strategies on how to deal with such a situation. Checking compatibility of the ICT programs with local cultures, exercising control and training local people are all identified as strategies that can be used to deal with this problem.

Ensuring the compatibility of ICT programs with local culture

The first approach to handle the cultural implications of importing ICT from developed countries is to check the applicability of these programs to local culture. This is important because, as a senior administrator pointed out, *"Some of the things*

they are doing [do] not apply to Africa." Therefore, it is fundamental to have this in mind before any program is imported: *"we have to look at what is applicable to us and what is not,"* he argues. Words such as "applicability", "us" and "they", established a boundary or division between two groups. What this academic seemed to be suggesting is that there are "boundaries" and cultural differences that exist between developed and developing countries. To him the best way to deal with such "differences", in order to protect the local community from external influences, is to check programs and decide if they are "applicable" or compatible with the local culture before they are imported.

Deciding what is applicable and what is not might not be an easy thing to do for decision makers in the African higher education sector. As mentioned, there are generally two ways in which African higher education gets its ICT infrastructure and programs (software or staff development packages), namely paying for industrially-developed resources or receiving it as a form of donation from either governments or non-governmental organisations from developed countries. While in the first position a university can choose the programs it wants to pay for, such a choice may not be possible in the second situation. It is almost inconceivable for a university in Africa to reject a staff development programme, for example, or an expert who is not costing any money. Indeed, as Odedra (1990) reported, donations from international organisations form one of the most important channels through which Africa receives technology. In mid 1980s, for instance, half of Africa's computer infrastructure consisted of aid donated equipment, and in 1989 over 80 per cent of the computers in the Zimbabwean government were donated. This clearly casts doubts on the workability of rejecting free resources if they seem inappropriate. So this suggests

that this strategy would not work at all times and therefore cannot be relied upon as a method to protect local culture from the external influences that come with ICT.

Ensuring the compatibility of technology, however, is an important suggestion. This is because, as Leinonen et al. (2000), noted tools that have been developed one country might not necessarily suit the needs of another country due to cultural variations. In the context of designing distance education programmes, Collis (1999) argued that World Wide Web courses that are meant for international audiences should be designed in a way that can be adapted to reflect cultural differences. Collis further proposed detailed guidelines that would accommodate cultural differences. This validates the relevance of participants' observations about "ensuring compatibility".

Controlling content of imported programs

If the above approach seems unrealistic to achieve, the next approach, "exercising control", is even more radical. In order to minimise the effect of importing ICT from developed countries, academics have called for control over the content of ICT software before it is adopted. *"If it is in the lower schools, I feel there should be control over the content"* (a male academic).

Although the focus in this example is on the lower school, the fact that the academic called for "control" to be exercised when importing ICT projects suggests how concerned this academic was about the cultural influence that ICT could have. However, it is unclear how African countries would be able to control software that is imported from developed countries. As was pointed out, software can come in the form of donations and it unlikely that any editing of content at this stage would be possible.

The third and last approach identified by the lecturers is training local people instead of importing external experts to perform training. For instance, a female academic argued that "*training our own people*" would solve this problem. Her justifications were that, "*I don't know, when they go they will be biased, they will be brain washed.*" The point this academic seems to be making is that training academics locally would help them maintain their culture and avoid any possible "brainwashing". This strongly suggests a fear of the cultural implications of ICT.

The practicality of this method could be questioned. If Africa is technology "sufficient" and has got "enough" human recourses, then obviously this strategy would be viable. However, this is not the case in most of Africa, making it unlikely this approach will work. What is interesting is that this academic was aware of the "impracticality" of this method, and spelled out her expectations for trainers who were trained outside country when delivering training to local people:

> *It should be local, be relevant they should use relevant examples from our local environments. Pick examples from the local environment; customise everything to our local environments.* (Female academic)

Words such as "relevant", "local examples" and "customise" clear reflect concerns about the cultural implications for ICT. The participants identified further techniques that could be used to reduce any negative impact of ICT. However, some of these techniques seem to be more "effective" than others. Techniques such as "customising" and making things "relevant" to local people are more powerful than using "local examples". This is because, in the previous two techniques, there is room for making changes to a program so as to make it relevant to local needs, whereas using local examples could result in purely superficial changes.

Training local people is yet another important suggestion. Local people would be in a better position to identify appropriate programs that are suited to local needs.

Rejecting the notion of cultural impact

Not everyone agreed with the view that there are cultural implications from adopting ICT. A female lecturer, for instance, completely dismissed this fear and could only see that technology would make positive contributions to society. She further sought to "break" the cultural beliefs that seem to be hindering ICT development and argued that technology is a universal thing that should be accessed by everyone regardless of race or culture. She proposed that culture should not be an issue when it comes to ICT advancement.

> *With this technology, with this ah... advanced learning I think*
> *those aah cultures we should just break, break the ... the, this*
> *bond that is of culture and concentrate on what we can do to*
> *enrich, to enrich. Me I believe if there is something good,*
> *then its aaah, everyone should access it regardless of race,*
> *regardless of culture.* (Female academic)

Furthermore, the participant saw no possible negative impact which importing ICT could cause, be it from former colonial rulers or not. On the contrary she argued that it was a lack of knowledge that would make Africa vulnerable to colonisers.

> *Knowledge is power, if you are; if you are not knowledgeable*
> *in anything then you're bound to be behind. You're left; you*
> *don't really want to know how fast the world has gone, so by*

keeping backward actually that is how you will be colonized.
(Female academic)

As illustrated above, this academic completely dismissed the possibility of technology negatively impacting on local culture and actively called for importing ICT rather than searching for negative implications. Nevertheless, if we contrast this view with the potential negative impacts that other participants have associated with ICT, one could argue that it does not look at the issue in a balanced manner.

The arguments of this group involved assertions that technology has already positively impacted on them, improving their teaching and communication with their students. From this, it can be seen that the cultural change that this group has focused on is classroom culture. As Collis (1999, p. 204-205) noted, however, there are different cultural levels: "societal, personal, organizational and disciplinary. There is the general culture of the society as whole, which in turn relates to language, ethnic group. Religion, and history, and is reflected in a complex number of norms, mores and acceptable behaviors." What this means is that this group appeared to be focusing only on the impact technology would have on classroom culture.

This group also argued for the "neutrality" of technology. The irony here is that participants have highlighted the importance of localising imported "knowledge and skills" from developed countries; however, they explicitly position the ICT field as an exception to this rule, in which localisation would not be necessary. This is because technology has been viewed as a universal thing that can be applicable to all people regardless of their cultural backgrounds. This position contradicts the growing literature that highlights the subjective ways in which ICT programs and technology reflect the views and perceptions of their creators (Arger, 1987; Odedra, 1992; Woherem, 1993; Bates, 1999; Irwin, 2000; Lelliott et al., 2000; Sy 2001; Chambers

2003; Ya'u 2004; Albirini, 2006). Chambers (2003), for instance, dismissed the assumption of technology being neutral, arguing that "technologies are not culturally or morally neutral" (p. 161).

With particular reference to the African context, Odedra (1992) argued that technology imported from developed countries is "not always suitable for the different culture (the way of life of a particular society or group of people, including patterns of thought, beliefs, behaviour, customs, traditions, rituals, dress and language) and infrastructure in Africa." (p. 141). Additionally, a growing literature has also argued the importance of cultural considerations when designing technology-based education (Henderson, 1996; Rooves, 1997; Bates, 1999; Chen et al., 1999; Collis, 1999; McLoughlin, 1999). Bates (1999), for instance, highlighted the importance of giving due consideration to local cultures and the difficulties that would consequently face distance education programmes "The problem is that providing distance education courses in a foreign language is not just a technical issue. As well as the actual language, such courses come with alien social and cultural contexts. Examples are drawn from another culture, idioms often do not transfer between cultures, and even the style of writing may be alien." (p. 7)

It is not entirely clear why the views of some sections of the participants were in conflict with the literature. But it is fair to say that there is also literature that positions ICT programs as a universal thing applicable to all society. Wangusa (2005), for instance, reports on the importance of E-learning being culturally sensitive and being adapted to fit with indigenous values. He further reports that, currently, developed countries appear to "export E-learning as one-size fits all" and as a "culturally generic thing".

The contrasting views of the two groups on this issue do suggest that the first group at looked the matter in a more balanced and broad manner. The potential positive impact that technology could bring to their teaching and learning were recognised by the group before highlighting any potential negatives that might also arise. On the other hand, the second group has solidly focused on the potential benefits that technology would bring to the teaching and learning context and, as a result, ruled out any negative impact that technology might have on the wider society. This makes the argument of those arguing for the potential negative impact of technology even stronger.

Conclusion

This Chapter aimed to investigate whether importing ICT from developed countries would have a cultural impact on Africa. As discussed in Chapter two, the literature suggested potential negative impacts that might come with importing ICT from industrial countries. This issue was, therefore, investigated empirically.

The Chapter has firstly identified benefits believed to come with ICT development. Different forms of efficiency such as communication efficiency, classroom efficiency and research efficiency were suggested by participants in the study. As a result of these perceived benefits, it was not surprising to find academics strongly arguing for the benefits of importing of ICT from developed countries. Approaches such as borrowing, adopting and adapting were reported as effective and preferred ways of importing ICT. However, academics felt that there is a price that African countries are likely to pay if they are to continue importing ICT from developed countries.

Cost was the first impact that academics identified; they also proposed steps that could be followed if these are to be reduced or eliminated. Cultural impact was another impact that academics identified as a likely outcome of importing ICT from developed countries. Academics have expressed their fear of ICT "spoiling" local culture. As result of these fears, academics have also suggested practical ways in which these problems can be handled.

This takes us back to the research question, which concerned whether importing ICT from developed countries would have cultural implications. The results that were presented in this Chapter suggested that there can be cultural impact associated with importing ICT from developed countries, but that strategies exist which can help to manage this.

We will now turn our attention to a slightly different, yet related issue: that of staff development. The next Chapter investigates the nature of staff development approaches that exist in the context where the study took place. Questions such as whether African higher education institutions have appropriate ICT staff development policies or approaches will be investigated, as will their effectiveness.

CHAPTER SEVEN: ICT STAFF DEVELOPMENT POLICY AND ITS EFFECTIVENESS

Introduction

After discussing different ways in which importing ICT from the developed countries would impact on Africa, we now focus on a very specific issue: staff development. Thus, the aim of the Chapter is to address the research question that focused on whether African higher education institutions have effective ICT staff development policies. The Chapter will first address general ICT policies that existed within the university visited and will point out that the university has developed policies that explicitly spell out the university decision makers' desire to have successful ICT development. Training academics and non-academic staff, as well as developing the ICT infrastructure, were strongly advocated by the university. As part of the university's ICT staff development policy, five faculties were identified by the university's decision makers whose academics receive training for ICT development. In addition to providing training to academics in these faculties, the university's ICT policies have proposed the formation of E-learning coordinators posts in the five faculties. All these developments will be discussed further in this Chapter. In particular, the role of the E-learning coordinator at the faculty visited will be discussed.

The nature of training provided to the academics and content covered in the training are also among the topics that will be discussed in the Chapter.

More importantly, the Chapter provides an evaluation of the extent to which academics have used the skills they gained from the training. The Chapter points out

that, although academics were trained, they failed to apply the skills they learnt in the training. Thus, the Chapter attempts to unveil reasons behind academics' lack of implementation based on the training.

The university's written policy for E-learning staff development

The university has considered its ICT development in two policy documents drafted in recent years. These policy documents explained in detail every aspect of ICT development: from setting-up an infrastructure to the preferred form of ICT program for training. The vision of the university, for instance, reads:

> ....*university-wide access to, and utilisation of information and communication technology to enhance the position of [the university] as a centre of academic excellence, and its contribution to the sustainable development of society.*

The university's ICT policy can be found in two comprehensive master plans. The first ICT master plan for the university was developed in 2000 and it was meant for a four-year period. The second ICT master plan was meant to cover another four years that began when the first master plan ended.

> ...*when you start looking at the different documents we have, you realize that there was a master plan .... It sets out actually [a] plan how ICT was going to be introduced to the university. Both office automation services like buying computers and training people, how to use office supplies and stuff like that, setting up infrastructure and eventually introducing value added services including E-learning, information systems like student records, library catalogues, and all those kind of things.* (Senior academic)

The university's gradual process of implementing ICT is one of the interesting things that this academic developer pointed out. This process started from setting up the

ICT infrastructure and ended with training people on how to use these facilities. By so doing, the university seemed to have adopted a policy to gradually develop ICT. This suggests that the issue of E-learning, including training academics, was intended to come at a late stage in the process.

> *We first of all had an ICT policy then later on we had an E-learning policy which was incorporating issues to do with E-learning.* (a senior academic)

The senior staff member differentiated between two policy levels, namely, general ICT policy and the policy of staff development. General ICT policy addresses issues such as planning, infrastructure, cost, and training of administrators, as well as students, for using basic ICT facilities.

Having an ICT policy at an institutional level has been recognised as an important step towards developing ICT projects. Jenkins el al. (2001), Smith (2002), and Stiles (2003) have all identified lack of "institutional learning technology strategies" as an obstacle to ICT development in higher education. As a result, Stiles and Yorke (2004, p. 2) reported that, especially in the UK, "many, if not most, institutions have either Learning and Teaching strategies which include E-Learning, or direct E-Learning strategies." Thus developments in this context echo this wider trend within the field.

Staff development policy

The policy documents highlight the importance of preparing academics for ICT utilisation. The documents not only explain in detail how academics who are already in the university should be trained, but also clearly set out basic ICT skills as a requirement for new recruits.

> *Before appointment to Assistant Lecturer, academic staff are required to demonstrate the prescribed level of competence in technology enhanced interactive learning techniques.* (The Policy documents)

Even though the focus here seems to be on new recruits, different parts of the document also set deadlines for existing academics to reach the "prescribed" level of ICT competency. However, the policy documents do not explain what the "prescribed" level referred to here is, leaving the door wide open for speculation

Furthermore, the documents highlight the importance of providing continuous training to academics as well as students on the virtual learning environment.

> *Ensure and require that all students and academic staff are trained on a continuing basis to equip them with the requisite skills to fully exploit the Digital Learning Environment (DLE) in their different disciplines.* (The Policy documents)

It is clear that the above statement refers particularly to a virtual learning context, which, perhaps, is a more advanced stage than the "prescribed" level referred above. The above statement also makes clear the importance of training not only academics but also students. The documents further recommend the establishment of a suitable DLE infrastructure based on academics' needs:

> *Establish the appropriate common DLE infrastructure and software responsive to academic needs.* (The Policy documents)

The above discussion demonstrates that the university has recognised the importance of training its academics for ICT usage. Clear policies meant for academic development were drawn up. As reported in Chapter two, training academics for ICT usage is an important issue; as Littlejohn (2002, p. 166) noted, "many academics have limited experience in ICT for teaching and learning and lack familiarity with current thinking in educational technology." Thus academics' lack of understanding

of how technology is used pedagogically is likely to have an impact on students' learning. The university has acknowledged the significance of this matter within its policies.

Setting up an ICT support unit

The two master plans provided the university's direction towards ICT development and discussed staff development. Another important development that the master plans have highlighted is the establishment of a central unit to be in charge of ICT support for the whole university, with particular reference to technical issues.

> *One centrally organised, service oriented, unit (not necessarily geographically concentrated) will be formed. This unit will be formalized immediately. The primary tasks of this unit/department are management and maintenance of common ICT systems and End-user support. ...all necessary functions/skills for day-to-day management of all ICT resources and users support services will be gradually developed during the four years starting 1 January 2001.*
> (The Policy documents)

Thus a centre was established in 2001- just a year after the first master plan came into effect. The initial aim for this centre was to provide technical help such as a network and infrastructure for the whole university whenever it is required.

> *..a central unit which is in charge of ICT support, management and advisory roles to the entire university. We coordinate all initiatives.... regarding ICT services in the university, so there are a lot of projects which we've actually been directly handling: there's that project of the network backbone and all those kind of things. We did all that at (this unit). So (unit's) role is basically ICT support services.* (Staff developer)

According to this participant, the role of the centre was multifaceted and, to some extent, flexible. It could be involved in any aspect of ICT, be it technical or otherwise. The policy document further stated:

> *The primary tasks of this unit/department are management and maintenance of common ICT system and End-users support.* (The Policy documents)

It added that:

> *...because of the cross nature of the duties of [this department] affecting all academic and administrative units of the university, the head of this unit, will report to the Vice Chancellor.* (The Policy documents)

Management and maintenance are the two tasks that the centre was mandated to undertake. It is not clear from the policy documents whether staff development comes under "management". However, preparing academics for ICT usage soon became part of the centre's responsibilities. The centre took charge of delivering and organising training for academic and non-academic staff alike. This new role was not been welcomed by one senior staff member at the university who insisted that, by providing training to academics and handling pedagogical aspects of the technology, the ICT central unit is doing more than it has been mandated to.

> *When talking [about] their role it was supposed to be the support unit; you have your computer with a problem they service it; you have this that's what basically they were suppose to do. To make sure the network is up [and running]. Do I want to access my email? Yes, is the network on? That's how [this unit] was supposed to be in the beginning, but they are trying to move into managing E-learning and the other thing they are not suppose to engage in academic activities, that's the role of the faculty. So in some cases even with this faculty they tend to find they're interfering with us you know, but generally their-role-is to provide service. So when it*

comes to academic [matters] like in the area of e- learning
supposed to be done by us and the School of Education
(Senior academic)

It is not known how these contradicting views about the centre's role have impacted its work. One reason for these contrasting views, however, could be that the centre is newly established. As pointed out, the centre was still in its early stages of development. The disagreement of this senior staff member could be argued to focus more on organisational aspects rather than the whole issue of academic development. The senior member is not in any way objecting to training academics for ICT utilisation. He has, nevertheless, different views about who should be in charge of implementing these policies. This can also be understood as questioning the competency of the department in handling both training and technical support. His views are that this department should only do technical work and leave the pedagogical aspects to different faculties.

Putting aside different views about the centre's role, the creation of any unit to support usage of ICT by academics is evidence of the great importance the university places on preparing academics for ICT utilisation. Once again, this is in line with recommendations emerging from current literature more broadly (e.g. Roberts *et al.*, 2002; Littejohn, 2002; Irani &Telg, 2002; McNaught, 2003a, 2003b).

Putting the ICT staff development policy into practice

In addition to setting up an ICT support unit that deals with issues relating to ICT projects at the university, the policy documents also identified a number of packages that can be used as a virtual learning environment. Blackboard, ETUDE (the university never actually used this program), Kewl and WebCT were among packages that the policy documents recommended to be used for training as well as

for virtual learning packages. It is worth mentioning here that the Knowledge Environment for Web Learning: The Next Generation (Kewl.Next.Gen) program was developed by the university, which suggests that there was the potential for training to focus on locally developed programs that reflect local academics' needs. (We will discuss at a later stage the extent to which the training that academics took part in was based on their needs.)

As reported in Chapter five, Blackboard and Kewl were the tools used in the training. As the university's policies clearly favoured Kewl as a virtual learning environment, almost all the academics I talked to had been trained on how to use this, although some had been previously trained with Blackboard.

At the training sessions, academics were first introduced to general teaching principles: how to prepare a lesson, how to deliver and present, and brief discussions on educational psychology. This brief discussion about teaching methods was particularly well received among academics who had backgrounds other than education and had not had such opportunities to think about their learning and teaching before. Kewl was then explored in a very detailed manner. Topics such as how to upload materials on the web, how to communicate with students and how to take an online assessment using this tool were covered.

> *To upload our files there to provide functionality for students*
> *to communicate with lecturers that is through e-mail and*
> *through other things like uploading files by students make the*
> *assessments.* (Female academic)

A female participant added, "***You can play around with all those tools,***" referring to the different functionality such as emailing, discussions boards, etc. that the Kewl tool had.

One academic provided a detailed account of what she was taught in the training.

They taught us how to design courses, and how to interact
with the students, chatting through the chat-rooms, students
can query your notes if they don't understand, how to design
quizzes for them, how they can take the quizzes, so a teacher
can always excess the student's even not physically in class,
but in chat rooms, they can always umm, get any help
through the chat rooms. So the tutors, basically they covered
everything that we needed for... for our courses. (Female
academic)

However, despite gaining quite substantial skills, this academic later acknowledged

that she had not applied these.

Another participant also described what they taught him in the training and how the

process of uploading the materials on the net worked.

It would allow the lecturer to register the students in his
class, send the mails to the students, okay, after registering
them, uploading some notes on the Internet. (Male academic)

One of the interesting things that this academic pointed out is that registering

students was part of the work of the academic; hence, academics were expected to

also do administrative tasks. It is not clear why academics were expected to register

their students when, in fact, academic developers had also trained administrators to

do this work. Giving the role of registering students to the academics could lead them

to view technology as something that would further increase their workloads. This

reason alone could be sufficient justification for academics to be reluctant to apply

the skills they gained from the training.

It is also obvious that uploading learning materials on the web was an

important task that academics were expected to perform. However, it seems that the

reasons for uploading content on the internet were not been explained adequately to

the academics. As we will see in the next section, academics preferred to use different technology when communicating with their students and have not applied these new skills at all. Thus, if the reason why academics were taught how to upload learning materials was to equip them with new skills that they would use when communicating with their students and enable the students to access learning materials, this has not been successful. Academics kept communicating with their students in the same ways they had before they took part in the training. This obviously raises the question of whether there was a need for training in the first place. This is, however, not to question the need for academics to be trained for ICT usage. On the contrary, the need for training was obvious and academics constantly argued for the importance of having such training, but it appeared that the current training regime for the university was very narrow. Equipping academics with the skills to upload materials seemed to be considered the most important thing for academics to master. Perhaps this narrow focus led academics to be unenthusiastic in using the skills they learnt.

In an effort that can be seen as a gradual implementation of ICT staff development, the university identified five "priority faculties", whose staff members received specific ICT training. It is not entirely clear why only these faculties were targeted, nor why the number has to be precisely five, nor how long these faculties would be a "priority", but almost all academics from these faculties were given training for ICT academic development, even though some faculties participated more than others.

Additionally, all five faculties were required to have an ICT policy that was in line with the university's wider ICT policies, and to create an ICT committee that deals with ICT staff development issues. This committee had to appoint an E-

learning coordinator whose role was to coordinate between the central ICT support unit for the university and their respective faculties. These E-learning coordinators are the contact points for the ICT support unit if they want to organise training for academics. Also, if lecturers have any particular problems about ICT and its pedagogical use they could approach their E-learning coordinators who would take their concern to the ICT support unit.

Furthermore, the ICT support unit assigned a person to deal with academics' enquires, if they choose to contact this department directly rather than wanting to go through their respective E-learning coordinators. However, none of the academics who took part in this study had ever made contacted the assigned person. This does not mean that academics did not require help, but that for some reason, academics preferred talking to academic friends instead of contacting the centre for support.

> *"Mostly I talk to my friends, especially those that have had...*
>
> *that have participated that have applied the skills they*
>
> *studied they learned" (Female academic).*
>
> *"Normally the first people I would contact are my*
>
> *colleagues." (Male academic)*

This suggests that academics viewed learning from each other as more important than contacting the ICT unit for support. Academics welcomed the idea of having regular meetings among themselves in order to learn from each other through reflecting on their own experiences and practice. However, the ICT support unit has not explored this as a form of training academics for ICT utilisation.

The E-learning coordinator's role

As noted, as part of the current developments, the university has created E-learning coordinators posts in the five priority faculties. It is not clear how the need for an E-learning coordinator was identified, but supporting academics for ICT usage was one major tasks assigned to the E-learning coordinators. An E-learning coordinator who took part of this study, for instance, viewed his role primarily as supporting academics in their ICT usage. Thus E-learning coordinators were one of the important channels that academics could use if they needed support. However, as pointed out earlier, academics who took part in this study never made contact with the E-learning coordinators or the ICT support unit for support; instead they relied on their academic friends.

Facilitating was another role which E-learning coordinators were expected to perform. Unlike the previous role, this was visible within the study. The ICT support unit would normally contact the E-learning coordinators whenever they needed to deliver training. They would ask the coordinators to contact academics and inform them about the training. This was the most visible role that the E-learning coordinators carried out as academics constantly referred to this during the interviews.

"Gate keeping" was also a role the E-learning coordinators undertook. Academics appeared to view E-learning coordinators as people with authority who play a crucial role when it comes to training academics. This was clearly seen when the E-learning coordinator at the faculty where the research was based entered a hall where interviews were in progress. Academics looked uncomfortable when the E-learning coordinators entered the hall. It was clear that they did not want the E-

learning coordinator to see them being interviewed. This suggests that academics regarded E-learning coordinators more as "gatekeepers" than supporters.

The above discussions illustrate that the university has a policy for ICT staff development and has, in fact, made attempts to translate these policies into practice by providing training to academics. There are no records of the form of ICT training that was in place before the university developed these policies. But it is clear that since these policies have come out, enormous resources have been invested in training academics for ICT usage. Academics from the five priority faculties had participated in training workshops. But does having a policy and training academics mean that, as envisaged, academics have used the skills they gained from these training sessions and adopted ICT? Does training academics guarantee the use of skills?

The changing practices of academics

This study uses "uploading" of materials onto the net as one indication of whether academics have used the skills or not. This does not necessarily mean this criterion was the most appropriate one in such situations, but since the main aim of the training was to equip academics with "uploading" skills, it was reasonable to use academic developers' own criteria to judge the extent to which they had realised their set target. All the academics that the researcher talked to, or who responded to the open-ended questionnaires, said they had taken part in at least one training cycle. None has attended more than two training cycles, which should not be too surprising, given the fact that the whole training scheme was only introduced recently. Training cycles varied from three days to a whole week and covered a whole range of issues.

The fact that training varies from three days to a week does not suggest that the ICT support unit had taken into account academics' different levels and ICT needs and therefore based their training on that. This was not the case, as academics had little involvement in planning the training. The reason why training had different lengths was mainly due to circumstances such as the availability of the trainers and the number of academics who were available for training.

Training was mainly carried out during semester breaks, and academics had mixed views about whether the timing of the training was appropriate. Some academics believed that the holiday period was an ideal time for training as academics would not be busy teaching their students. Other academics, on the other hand, disagreed about the holiday being a suitable time for training, as they viewed the holiday period as time they should be spending with their families. However, the timing of training has been identified as an important factor, as Fitzgibbon and Jones (2004) reported in the context of providing staff development opportunities in a blended learning environment. Additionally, whilst training was delivered in an intensive block of three days to a week, academics expressed their wishes for the training to be spread over the whole semester. A senior academic at the university agreed with the logic of spreading the training over the semester, but highlighted the difficulties of doing so.

> *Yeah, that one we have it in plan and we are going to do it that way. But for the beginning when we are getting experts you cannot get an expert from the UK to come and be here for one semester, you get it, and you cannot give this person four tickets or so. So the experts come for a shorter period so up to when the experts have trained some of the local staff and given them several refresher courses.* (Senior academic)

After attending training, academics were expected to register themselves in Kewl and start uploading learning materials. This was, perhaps, as explained previously in this Chapter, the most important role that academics were expected to perform. Putting learning materials online would allow students to access the material and most importantly made academics put into practice the skills they gained.

Also since Kewl was newly developed software, lecturers were expected to provide feedback about the tool. It is unlikely, however, that an academic would to provide feedback if he or she has never tried using the tool, which was the case for the majority of academics as we will see later in this Chapter. In relation to whether academics changed their practices and implemented the skills after taking part in training, all the academics to whom I talked to or who responded to the questionnaires enthusiastically discussed the skills they gained from these training workshops and what they got out of the training sessions they attended. These were meant to improve lectures' communication skills with their students and make them more effective communicators. Furthermore, these training sessions equipped academics with useful skills, as stated by one who remarked: "*I'm able to upload and download courses. Create online courses*". Several other academics also commented positively about the skills they gained from the training they attended. These academics highlighted benefits such as efficient communication. Thus ICT benefits identified by these academics are similar to the ones reported in Chapter six.

Reluctant voices

Not everyone felt that they had gained skills or changed their work as a result of the training they attended, however. A female respondent, for instance, pointed out

without elaboration that she had not learnt that much and therefore no changes had resulted in her teaching practice.

It seems as though academics gained useful skills from the training they attended, but the question here is whether they ever used these skills for their teaching. A male lecturer, for instance, pointed out that he has not used the skills he has acquired.

> *I have not; I haven't used much E-learning in my teaching this semester. I haven't used much, because I've told you I haven't even uploaded the notes on the E-learning software. So I haven't used it much.* (Male academic)

Even though this academic was not using the skills he gained from training, he was, however, using different skills or perhaps his "own" way of doing things rather than the approach in which he had been trained.

> *I communicate with my students through ah, through, ah... groups like these ah, mail groups, like on Yahoo groups, like that. So we communicate in that way, everybody joins the groups .. when I send a message on notes, ... I use the group's acc... Eh the mail groups than uploading them in the software... They didn't teach me that (*using Yahoo group*). That one I taught myself.* (Male academic)

Despite attending training and presumably gaining "useful" skills, this academic has not changed his way of doing things. He did not intend to apply the skills he gained from the training any time soon either, as he seemed to be, along with his students, "comfortable" communicating through Yahoo groups. This was a clear indication that academics were not necessarily against technology as such, even if they chose not to use one specific, mandated instance of technology.

It is not, however, only this academic who used different skills to those in which he had been trained. A female staff member also pointed out that she was not using the skills gained from the training but instead was "*using other skills*". Another female academic confirmed that she has not applied the skills gained at all, as the course she taught that semester was already online and does not require her to create any new materials.

> *Because the course I teach and is an online… it's Cisco and Cisco is online so the curriculum of Cisco is online already on another Cisco website, so I do not now need to go to NextGen except if I find information that is not offered in the Cisco curriculum that students need and is in another curriculum. But I have not found one as yet. But I hope I can in future use it.* (Female academic)

Other academics too suggested that they had not used the skills as the courses they taught were already online and there was no need for them to put learning materials online. This raises the question of whether ICT academic developers really considered academics' training needs as criteria when planning training.

Reasons for not applying skills

As pointed out, academics had not put the training they attended into practice. Different issues were found to contribute tot this situation. One academic, for instance, argued that academics were reluctant to apply the skills because a reward scheme was not in place.

> *Lack of motivation… as like, if someone knows that much as I go there to train, I'm not going to be paid for that … for my allowances, maybe like I would spend like two weeks there seated.* (Male academic)

What this academic seems to suggest is that financial rewards to academics for the period they are away for the training would motivate them. However, the faculty where this study took place provided substantial financial rewards to any academic who put his/her study materials online. Apparently, this did not seem to work either. *"So the carrot did not work, the stick did,"* said a trainer of trainers, referring to the ineffectiveness of the reward policy and the effectiveness of the "harsh" policy that the university now followed, and which will be examined at a later stage. The issue of rewarding academics, not necessarily financially, in order to engage with ICT development has also been referred to by other researchers (e.g. Govindasamy, 2001).

One academic blamed management's lack of a "strong" position as the reason why academics have not applied the skills.

> *Failure by the management to apply [the] rule. ... if a rule*
> *was set then it would be, I think then people would go on and*
> *follow the rule.* (Male academic)

He further suggested that the management should consider taking a strong position against academics who are not taking part in the training.

This was precisely what the university management had been doing, as will be explained more in the next Chapter. This was an ineffective policy too. Academics were, time and again, informed of the importance of attending training and were told that they would lose their jobs if they did not attend. However, that "strong" policy did not go beyond making academics attend training and was not effective at all when it came to applying the skills.

Academics' lack of implementation of the skills gained from training was "an open secret" that even staff developers were aware of and had their explanations for. Staff developers believed that about seventy percent of the people they trained have

not used the skills and did not put any courses online. A staff developer attributed this to two main factors. First was the lack of "institutionalised use of e-content" at the university level which resulted in lecturers perceiving putting materials an online as an extra load. The second was "lack of access", in other words lack of computer facilities. But these two reasons cannot pass unchallenged. The lack of "institutionalised use of e-content" is a rather a weak justification. As pointed out, the university has had clear ICT policies that have constantly been reviewed and has set up a department that was in charge of ICT support and management. Some academics might always be difficult to persuade to change, but to find the overwhelming majority of academics to be reluctant to apply skills cannot be blamed on "fear" of workloads.

At a practical level, a "reasonable" ICT infrastructure was in place, at least in the priority faculties, adequate for academic use. The researcher observed that the university, especially at the faculty visited, has no problems with availability of PCs or access. The faculty has computer labs that academics could use. This does not in any way suggest that computers were "sufficient" for all academics, but it rather means that there was no shortage of access that caused academics' lack of implementation of the training.

This level of availability of computers was not unique to the faculty where the researcher was based; other faculties also have computer labs set up by the department of ICT support, as another staff developer pointed out. *"Within each priority faculty we have set up a lab, a computer lab specifically for E-learning with 50 PCs each."* This suggests that problems of accessing computers were not the main cause for participants not applying new skills. Instead, examining the two reasons given by the staff developer for academics' lack of skill use, it seems that the

staff developer was laying the blame on either university decision makers or academics themselves. There was no suggestion that they should take part of the blame even though they were the department that was in charge of ICT within the university. They never, for example, questioned whether their policies towards academics might be a reason for academics not using the skills.

This shows different reasons were identified by academics and academic developers for the lack of skill use amongst academics. However, all of these suggestions can be seen merely as contributing facts rather than the prime causes of the academics' apathy towards applying the skills. Possible causes are considered in the section that follows.

Training and academic needs

The search for reasons why academics did not apply the skills raises the question of relevance, and specifically, whether the training addressed the needs of academics. As pointed out earlier, some academics suggested that the reason they did not put learning materials online or apply the skills they were introduced to was because their courses were already online and there was no need for them to create online materials. This demonstrates that academic developers delivered training that ignored whether academics needed the skills or not. However, academics also admitted they have not attempted to influence the training that academic developers arranged for them; for example, *"this is because I wasn't asked to contribute to the workshop content by organisers"*.

Other academics argued that the content of the training was already set and there was no room for him to contribute. "*At the training you find pre-arranged programmes (and instructors) which you cannot change to suit your needs*" (male participant).

Such views were common amongst academics whether or not they had attended the training. For example, one male respondent said, *"the aims guided objectives of the workshop were predetermined"*, even though he had not attended a single training session for ICT staff development.

However, despite such sentiments, and in spite of the low use of skills introduced in the workshop, all the academics whom the researcher talked to insisted that the course addressed their needs and covered "what they needed". A female staff member even argued that it was so well designed, the only disappointment she had was that she *"hoped it (training) would have been longer period"*. Nevertheless, she did not put into practice what she studied.

It is not only this female staff member who insisted that the training was useful and yet did not put what was learnt into practice. A male member of staff asserted that the training addressed his needs but accepted that there were other problems with the whole ICT and E-learning staff development issue.

> *It* (the contents of the training) *was what we needed. But on the other hand, many people still did not take a further step to do what we were taught after the training.* (Male academic)

This suggests that there is a gap between the *desire* to use technology for pedagogical application and its actual utilisation. This supports Butland's *et al.*, (2000, p. 12) argument that there can be a "disparity between willingness to use technology and actually putting technology to use for the purpose of teaching."

Although academics insisted that the contents of the training addressed their needs, there was evidence that they felt excluded from planning and discussing the training. Is it possible that academics felt "dehumanised" and not consulted at all

about training? This question brings us to our next topic, which will be considered in the chapter that follows: Are the policies and delivery of staff development consistent with Freirian recommendations?

Conclusion

This Chapter investigated whether African higher education institutions have ICT staff development policies. The Chapter demonstrates that general ICT policies, as well as specific ICT policies for academic development, were in place at the university chosen as a case study.

Attempts were also made by the university decision makers to put ICT staff development policies into practice. This can be seen from the five faculties where academics received training for ICT development and where E-learning coordinator posts had been created. More importantly, the Chapter reported that academics at the five priority faculties received training on how to use technology pedagogically. This demonstrates that the university has policies that deal with ICT staff development and was active in putting these into practice.

However, the Chapter revealed the ineffectiveness of the training that the university provided. Generally, academics were reluctant to participate, and even when they attended training they were even less enthusiastic about putting the skills they gained into practice.

This clearly demonstrates that developing ICT policies and attempting to put these into action have not guaranteed the success of ICT development at university level. However, involving academics seems to be an important element that decision makers appeared to have neglected. Thus, the next Chapter presents further analyses of the involvement of academics in training and will examine, among other things,

the extent to which academics were involved in the training. This will be done by

using the Freirian concepts discussed in **Chapter two.**

CHAPTER EIGHT: THE RELATIONSHIP BETWEEN THE FINDINGS AND FREIRIAN CONCEPTS

Introduction

The aim of this Chapter is to explore the relationship between the results discussed in Chapters six and seven and Freire's recommendations. As discussed in Chapter two, the study employs five Freirian concepts, namely: dehumanisation, internalisation, humanisation, the banking style of education and problem-posing. Findings and discussions that are related to these five concepts are presented in this Chapter.

The discussions in this Chapter were organised under five major themes: efficiency, acquiring ICT, cost, culture and training. The relationship between each of these themes and the five Freirian concepts was investigated, leading to a judgement about whether the findings within a particular theme illustrated or contradicted Freirian concepts.

After organising the results according to the five concepts, an overall assessment is made of the extent to which activities within the institution are related to Freire's work.

Although the major focus of the Chapter involves assessing the extent to which the five themes are related to Freire's concepts, some additional data are also presented, where these were relevant and had not been presented in previous chapters.

Dehumanisation

Dehumanisation and efficiency

As seen in Chapter five, participants identified a number of ways in which importing ICT from developed countries would improve their work. Communication efficiency,

classroom efficiency, research efficiency and societal efficiency were suggested benefits of adopting technology. The participants appeared to have internalised the idea of the technological superiority of developed countries. This can be argued as having the potential to open the door for dehumanisation to take place. This is because when individuals internalise the "perfection" of others, this can result in devaluing their own activities. However, there was no evidence to suggest that technology itself resulted in dehumanisation in this regard. Thus, it is safe to conclude that even though the efficiency gains could potentially have dehumanising effects, no direct links between dehumanisation and efficiency were observed.

Dehumanisation and acquiring

"Adopting" and "adapting", as defined in Chapter six, can be argued to support dehumanisation. Under these two approaches, academics would receive pre-specified programmes. The goals of "adopting" and "adapting" are similar: neither emphasises local contributions to programs that were developed elsewhere.

Within these two approaches, there is no indication that academics would contribute to the programs. Instead they would only "adopt" and "adapt" programs designed elsewhere. In other words, the expected role of academics is to "fit" into existing programs, not to contribute to them. This can be argued to lead to dehumanisation.

However, the "borrowing" approach is different. It does not seem to support dehumanisation, as it requires the modification of programmes based on academics' local needs.

Dehumanisation and cost

As reported in Chapter six, participants noted two ways in which importing ICT from developed countries would create financial burdens for Africa, namely, the cost of hardware/software and the cost of using experts from developed countries. However, it appears that the cost of importing ICT would not lead to dehumanisation directly, because financial expenses do not necessarily involve either humanisation or dehumanisation. The important thing to note here, however, is that the approaches suggested by the participants who wished to reduce cost would have humanising outcomes, as they emphasise empowering local people by putting them in control of their own development.

Dehumanisation and culture

As seen in Chapter six, participants suggested that importing ICT from developed countries could be harmful to local cultures. The participants argued that technology could "spoil" existing culture or lead to cultural "changes". The previous history of colonisation could be the cause of these fears. The potential cultural impact identified by participants has strong links with dehumanisation. If culture was "spoilt" or unwanted cultural changes became reality, this would then lead to a loss of identity. This is because local culture would be replaced by a new culture associated with the technology. However, as it stands, these were only fears. No participant clearly spelled out how technology would "spoil" local culture. As pointed out, the history of colonisation could be the source of these sentiments. Thus potential links between dehumanisation and culture were found, but no evidence of this in practice.

Dehumanisation and training

Dehumanising practices around staff development and training for ICT were widespread. Academics had no choice over the type of training that was being offered. They were all expected to attend, however, and if a staff member did not take part in the training his or her job at the University was threatened:

> *Then we moved and came up with a policy that if you don't*
> *take this training you won't be promoted or if you are at the*
> *lower rank you can actually be dismissed at some point. So*
> *members of staff came because of that, but in the process they*
> *appreciated it and they now think it is the best thing for them.*
> (Senior academic)

The University took such a strong stand about forcing academics to take part in the training because, they argued, they did not want students to "suffer" as a consequence of academics' reluctance to take part in the training being offered.

> *If you're going to be so soft with them they are not going to*
> *acquire those skills as soon as possible. The students will*
> *suffer in the long term. So we're doing it because we want*
> *them to acquire the skills now and teach the current students.*
> (Senior academic)

While there was a concern for the suffering of the students, there was no similar concern about academics' welfare. They could not refuse the training. Ironically, the senior staff member pointed out this strong policy had not been used with senior staff members; it was mainly applied to junior staff. According to him this was because higher ranking academics will soon leave the University due to retirement or other reasons, while junior or younger academics are likely to stay at the University for years to come.

The study also found that academics were not involved in any consultation about the kind of training being offered, in terms of timing, content or format.

We were just asked to go for training; they did not like say: can staff say what they want. But I think what they thought we wanted was to learn so many thing. ...All we wait for is there.. an e-leaning session and if we are called we attend. (Female academic)

Following the problem-posing technique for data generation, academic developers were challenged about their policy of not consulting with academics. This revealed a further dehumanising explanation in their policy:

There were those lecturers who didn't know anything about IT anyway, so there is no way they are going to make a choice of what they didn't know. (Academic developer)

A belief that some section of academics might not know about computers and therefore there was no need to consult them is an obvious instance of a dehumanising approach. It is true that some academics might lack basic computer skills, but they could still give their opinions about the timing and delivery of the training based on their needs, as well as indicating the practices that they believed technology might support. The academic developers simply ignored the importance of talking to academics about the training before planning it.

In a spite of defending these dehumanising approaches, academic developers believed that their policy was ineffective. As reported in the previous Chapter, they believed that even though they trained many academics, few of them were using the skills they gained. Implicitly, it seems, they recognised that their dehumanising approach was not solving the problems, although they persisted with it nevertheless.

You have to involve the Dean and the Dean has to write a strong letter and the people come. And yet our focus is not necessarily actual training. Uh.... we want at the end of the training ...these lecturers to be able to develop courses. Ok. And yet when we go to the dean and say we are going to train, that is also that is the message that goes across. And a lecturer when (comes with preconception mind and say to his/her self) *let me anyway* (go and attend the training) *since it's only three days, let me go and see that after three days I'm done.* (Academic developer)

This academic developer's point makes clear the ineffectiveness of the dehumanising approach that staff developers employed. It shows that academics attended the training simply to respond to strong letters that deans wrote to them. In other words, the academics never inteded to apply the skills gained from the training. The questions that arise from this situation are, why were academic developers still using approaches that had failed to produce a positive impact? And why did they not consider using alternative approaches? This situation could be a result of the fact that the developers themselves were under the direction of senior managers. It is unlikely that the academic developers would make major changes in approaches without their senior managers' approval. As pointed out, the senior manager who took part in this study still believed in effectiveness of their policy for academic development even though his staff did not.

The above discussion shows how dehumanisation was practiced within the university. ICT academic developers as well as senior staff not only acknowledged the existence of dehumanising practises but also appeared to defend them. However, as discussed in Chapter two, based on the broad definition that Freire provided for dehumanisation, the concept can be divided into three different levels, namely high,

medium and low. A medium level of dehumanisation was found in this study. This is because academics were denied the freedom to choose the courses and training, since such choice was never made available to them in the first place. The opinions of junior academics appeared not to be valued and their ability to contribute to the training was not recognised. Instead academic developers and senior academics took decisions for them. Furthermore, if junior academics did not take part in training, they risked losing their jobs or chances for promotion, a clear example of "subjugation". Finally, "injustice" existed since junior and senior academics were treated differently.

Nevertheless, the dehumanisation practices found here could not be extended to the higher level since evidence of "exploitation", which is also part of the dehumanisation concept, did not exist.

Table 10 recaps the relationships between the concept of dehumanisation and the themes discussed here.

Table 10: Summary of findings in relation to dehumanisation

Dehumanisation and efficiency	• No direct links between dehumanisation and efficiency theme was found; • Potential link between the two was identified.
Dehumanisation and acquiring ICT	• Two approaches of acquiring approached were found to support dehumanisation; • Adopting and adapting approaches had a strong relationship with the concept of dehumanisation; • However, no relationship was found with the "borrowing" approach.
Dehumanisation and cost	• No relationship between cost and dehumanisation was found.
Dehumanisation and culture	• A potential relationship cultural impact and dehumanisation was noted;
Dehumanisation and training	• Strong relationship between training and dehumanisation was found.

Internalisation

Internalisation and efficiency

As shown in Chapter six, academics expressed deep admiration for the technological efficiency that developed countries have achieved and, for that reason, argued for the importance of adopting these programmes locally. While it is an undeniable fact that developed countries have achieved higher levels of technological advancement, expressions of "deep admiration", "over-excitement" and a desire for "copying" can be considered to be internalisation.

Internalisation can lead to blindly following whatever developed countries have achieved, as a female academic reported.

> *These people out there have good stuff that is true and in*
> *developing countries we are just learning we are just copying*
> *them.* (Female academic)

It surprisingly to discover the level of internalisation that academics expressed towards the developed countries' technological achievements. These participants had a strong belief that technological development was essential for social and economic development, and forcefully argued for the importance of importing ICT from wherever was necessary. The researcher's expectation was that, due to the colonial history of this case setting, academics would express cautious or even hostile opinions about the idea of importing ICT facilities from developed countries, particularly from former colonial rulers. Such a view did in fact exist, as a male trainer of the trainers pointed out: ***"they are still being haunted by colonialism, and they are saying that getting things from outside is bad."*** However, some participants only spoke positively about importing technology.

Caution about importing external approaches can be seen in the demands of people calling for "localisation" and the rejection of the "influence" of developed

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countries. Among different groups who took part in the study, academic staff members were found to be the most "fearful" group about colonisation, which they also described as "re-colonisation", while senior staff members and academic developers seemed less worried about this matter. It is not, however, clear why academics appeared more anxious than other groups.

Academics consistently welcomed the idea of using locally developed programs, and repeatedly called for the localisation of knowledge imported from developed countries. However, although they felt this way in relation to subject materials and training, they viewed technology as a natural thing that did not need to be localised.

> *When I look at an expert for example, or a professor in computer science, you know that is science, so maybe it's the person how he presents himself but the content really is the same.* (Senior academic)

This is yet another example of internalisation. Viewing technology as neutral reflects the assumptions of developed countries, which the participants appeared to have internalised. Despite arguing for the universality of technology, the same participants highlighted the subjectivity of technology use.

> *I've had the opportunity to be almost in every country in this world, you know because of my position and role. And what I can tell you is that everywhere I go I find people doing things differently. If you train in a Scandinavian country, the way the professor works with you, the way that person and so the kind of skills you get is different from the US different from UK and so on, and what I think is a good thing, and that's why I've told my staff that inbreeding is not the way forward. We need to train from different parts of the world.* (Senior academic)

Arguably this seems to reflect an inner conflict for participants. It is not clear why some participants appeared to hold conflicting views.

Internalisation and acquiring approaches to ICT

It seems highly possible that internalisation would take place if "adopting" or "adapting" approaches are employed. These two approaches are the product of an "internalisation" process that has been going on for some time. This is because, as pointed out in the internalisation and efficiency section, participants have internalised the neutrality of technology presented to them from developed countries. These two approaches both appear to endorse a "one-size fits all" position, which is at the heart of the argument for the universality of technology.

This is not, however, true for approaches described as "borrowing". As pointed out, the aim of borrowing is to create knowledge by learning from other countries through contrasting experiences and knowledge.

> *I look at something here I try to compare with that and then ask myself you know building knowledge comes from scenes like comparing and asking yourself why is this one happening this way and why is this one happening this side. So you find that you are building a lot knowledge from that so I think yes we should study our environment understands our environment and then we shall be able to teach.* (Academic staff)

What this suggests is that the "borrowing" approach allows new knowledge to be created by comparing and contrasting others' experiences to existing local knowledge.

Internalisation and cost

Even though "cost" would not necessarily cause internalisation, these discussions showed the effects of internalisation. Some academics, including the senior academic who took part in the study, were sceptical about the effectiveness of Kewl, the locally developed software. This led to the continued use of Blackboard which was costing a considerable amount of money to the university.

By contrast, staff developers and academics who used this programme argued that it is more user friendly than Blackboard. The lack of confidence in locally developed approaches suggests that some academics have internalised external values and at the same time become less confident about locally developed programs. What this suggests is that there is a relationship between internalisation and cost, albeit an indirect one.

Internalisation and culture

As highlighted in Chapter six, participants expressed strong concerns about the possible negative impact of importing ICT from developed countries. Technology was viewed as potentially "spoiling" and even "wiping out" local culture. These academics went on to identify detailed steps that can be followed to deal with the potential cultural impact of technology.

Even though academics expressed strong negative sentiments, they did not clearly demonstrate how technology would change their culture. It is therefore fair to conclude that only *potential* links between internalisation and culture were found here. This is because if local peoples' culture is "spoiled", for example, they would have been able to offer examples of this, but this was not found to be the case.

Academics appeared to justify the dehumanising approaches that were in place. For instance, an academic had suggested that there was no need to consult with academics in terms of the timing of training, let alone its content. This is because, according to him, academics would not agree on a time that suited them all.

> *Because I don't see this kind of need because, you see we work on different schedules and basically if you were to be consulted, all of us were to be consulted we would not come up with a specific time which would be suitable for all of us.*
> (Male academic)

It is interesting to find here an academic suggesting the impossibility of academics agreeing on a time for their training, even though this had never been tried. Thus, the most likely explanation is that he had internalised the dehumanising perspectives that academic developers employed. As such he appeared to blame academics rather than academic developers, senior managers for that matter, for the lack of consultation. Although this academic's view had dehumanising elements, it was not the same as saying that academics had nothing to offer and therefore are not worth consulting. Nevertheless, this can still be considered an example of academics having internalised the views that academic developers and senior managers held about them.

Some academics also seemed to approve of the "harsh" policy that the university had advocated against academics who fail to attend training.

> *As like maybe the management says like whoever doesn't ah, train, will not going to teach, or will not be paid or even if he's paid some fraction's going to be taken as a fine in his salary. I think there people would come.* (Male academic)

This is a "classic" example of internalisation. It is clear that this academic was only reflecting the policy that was already in place.

On the other hand, a different form of internalisation was found among staff developers. Staff developers were translating the University's policy that required academics to be forced into training. Therefore, staff developers internalised the "images" held by senior staff members of treating academics in a dehumanising way. This might suggest that the "dehumanised" staff developers were passing on their "dehumanising" experiences to academic staff. This can clearly be seen from the case of a female staff developer who took part the training when she was a lecturer before she was moved to the staff development department:

> *When it comes to KEWL lecturers want to do their work. And Blackboard makes lecturers lazy. Because what a lecturer is going to do is just post notes finished. That's what they do.... They are being lazy; really that's why they opt for Blackboard; just post notes, and a student is supposed to read.* (Academic developer)

It is obvious the academic developer was laying the blame on academics for their reluctant use of Kewl in spite of the fact that she had been in exactly the same position when she had been an academic. This academic developer's failure to acknowledge the lack of involvement of academics in the process and planning of training, suggests that academic developers simply expected academics to "adopt" a programme developed by them. Thus when academics attempted to use different programmes other than those they were trained in, they were accused of being "lazy" and lack of their the implantation of the training was blamed on them. This again makes clear that academic developers simply expected academics to rigidly follow a training system that they had no involvement in creating. Thus academics were treated as adoptable and manageable beings (Freire, 1970). Furthermore, this

academic developer's views illustrate how academic developers failed to recognise positive aspects of academics' responses to training.

The above discussion illustrates that internalisation, which was mainly due to dehumanisation, did exist (Table 11). Some academics seemed to approve of the dehumanising techniques that senior managers advocated which suggests that they had internalised this position. Academic developers internalised the image that senior managers projected about academics, as being reluctant to adopt technological change. These illustrate how various forms of internalisation existed within the university.

Table 11: Summary table of Internalisation concept

Internalisation and efficiency	• A relation between internalisation and efficiency was found; • Participants reported that developing countries are simply copying anything which developed countries do; • Participants argued for the neutrality of technology, a view that they appeared to have internalised from developed countries.
Internalisation and acquiring ICT	• Adopting and adapting approaches were found relating to internalisation; • However, the borrowing approach appears not to support internalisation.
Internalisation and cost	• No direct relationship between cost and internalisation was found; • However, continuation of using Blackboard and questioning the effectiveness of using Kewl can be argued to illustrate an indirect relation with internalisation.
Internalisation and culture	• A link between culture, as identified by participants, and internalisation was found.
Internalisation and training	• A relationship between training and internalisation was found; • Different forms of internalisation were noted amongst different groups.

Humanisation

Humanisation and efficiency

Four efficiency-related effects of importing ICT from developed countries were identified by the participants in the study. Communication efficiency, classroom efficiency, researcher efficiency and efficiency in the wider society were identified as potential benefits by participants. Thus, the process of importing ICT from developing countries, following the "improving efficiency" argument, can be seen as having a "humanistic" element: it could empower local people. This is because people would be free to access materials over the internet and make choices not only about who to discuss things with, but also about what issues should be accessed and discussed. The process of accessing materials on the internet can be argued as potentially inculcating the concept of choice and deciding one's own destiny, instead of relying on others to decide for him/her. Women and other disadvantaged groups within the community may, therefore, be the biggest beneficiaries of the efficiency that ICT can bring. In the context of staff development, academics would be able to access wider ranges of learning materials and not be restricted to what ICT staff developers want them to learn. Moreover, by accessing different research sites, academics would be able to improve their knowledge and skills in their chosen fields.

As for the students, since technology would enable them to access learning materials in their own time, this could inculcate the concept of "choice" in the students' minds. This is because students would be able to determine the most convenient time for them to access teaching materials. Thus communication efficiency, classroom efficiency and research efficiency appear to support humanisation. However, "efficiency to a wide society" appears to be the only theme that does not directly support the humanisation argument as it opens the door to importing cultural norms from other countries. Nevertheless, an academic has

suggested the possibility of minimising the negative impact that might come with technology if it is used in a selective manner. *"I think ICT depends on what you are trying to use it for that's what matters most"* (Male academic). In other words, technology would not automatically be harmful to the local culture. Instead it is how society employs technology that would make it helpful or harmful to culture. This view suggests that technology can result in both humanisation and dehumanisation. However, this does seem similar to presenting technology as holding a neutral position which, as discussed, is clearly not the case. Technology reflects the views of its creators. This means that "efficiency to a wide society" does not necessarily support humanisation.

Humanisation and approaches to acquiring ICT

The three approaches to acquiring ICT identified by participants are adapting, borrowing and adopting, as described in Chapter six. Among the three approaches, only "borrowing" appears to support the concept of humanisation. This is because "borrowing" allows programmes to be localised and modified, based on local needs. In "borrowing", people would not simply take ready-made programmes that were developed elsewhere, but critically examine them and take what is suitable for their needs.

> *If we borrow something from the other environment which people here don't know then I think it will be a problem because you will not understand the concept we are trying to teach. but if I could as a matter of fact explain the situation here and just tell them what is happening elsewhere I think it will broaden the way they think and that is what I might call education I mean someone to learn here.* (Male academic)

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A female academic appeared to justify "borrowing" approaches by putting this in the context of learning. *"Since the first systems have been developed by them we can actually learn from them"* (Female academic).

By using "borrowing" techniques local developers would not only be able to design programmes for their own use, but, some academics predicted, would also be able to market locally developed programmes in the developed countries' market. *"We can also make a system and market there. We can also make a system and market here, I think it is supposed to be a two way* (process)*"* (Female academic). While it is highly feasible for developing countries to use programmes modified to reflect their own needs, to suggest the possibility of marketing these programmes in developed countries is highly problematic, if not an impossible thing to realise. This is because it is not clear how programmes developed in third world countries can be applicable to developed countries' needs. Also developing countries like Africa would need to address technological shortages that exist in their own context before thinking of exporting modified programmes back to developed countries.

There is clearly the capacity to develop programmes locally and it seems that the "borrowing" technique would help in achieving this. It also appears the "borrowing" approach of acquiring technology is already in place. As pointed out in Chapter six, the university was using Kewl as a virtual learning tool. This programme, as a staff developer noted, was developed in collaboration with other African universities.

> *The entire tool is used in seven other universities in Africa. So it's like a consortium of African universities that are coming together under an umbrella called African Virtual Open Resources and Initiative to build solutions which work for higher institutions. .. so we are committed to contributing to that initiative because as a university we know that, one*

> *with a local capacity to control what we use; we can add*
> *value to the end user.* (Staff developer)

These African universities have not created this programme from scratch, but rather built on a programme that was already available in an open source form. The fact that these universities decided to build such a programme indicates that the will to develop programmes locally did exists among African developers. Thus it seems that the "borrowing" method was successful in helping them achieve that. This is because "borrowing" allows people to make decisions about the kind of programmes that need to be used instead of simply relying on others. For that reason, the "borrowing" technique supports humanisation.

The remaining two approaches, "adopting" and "adapting", however, do not support humanisation. These two approaches instead appear to maintain the status quo since they encourage importing "blindly" from experts and "adopting" programmes developed elsewhere with little consideration of local needs.

Humanisation and cost

There is no indication that the costs associated with ICT, as discussed in Chapter six, either support or contradict the concept of humanisation. However, the suggestion of using local people to train academics and developing programmes locally supports the concept of humanisation. This is because using programmes developed locally, for instance, could address the needs of academics and students. Furthermore, developing programmes locally would increase academics' sense of confidence in local developers' ability to design. This would have humanising effects.

A female academic did discuss specific cases where experts should be employed, suggesting that if they were employed in the areas where there is a great

need, this could reduce the costs. *"**It depends on how you are going to employ these experts.***"*

A male academic was even more specific in highlighting the areas where there is a shortage.

> *If we talk about manpower on programming and the rest, I think we are building up capacity. To write programmes and you know like these tools are being developed by people here in Africa* (he is referring here to KEWL). *And is one of the powerful tools I have seen. So for manpower I think we can we are building up capacity but then with hardware and these computers and the rest of the technology the hardware part I mean, we are not yet there.* (Male academic)

These examples suggest that being selective when it comes to importing programmes and using experts could reduce the cost and subsequently have a humanising effect. What this suggests is an indirect relationship between cost and humanisation.

Humanisation and culture

The cultural influence attributed to ICT as identified by academics in this study does not support humanisation. This is because, as seen in Chapter six, technology was viewed as having the potential to spoil local culture. However, the steps identified by academics in order to minimise or eradicate the cultural impact of ICT can be argued to produce humanisation. As discussed in Chapter six, academics have suggested using three approaches in order to deal with cultural implications, namely: checking the applicability of the programme to the local environment, controlling the contents of the programmes and preparing academics locally. These three suggestions work in different ways. Checking the applicability mainly means due consideration should be

given to the applicability of the programmes to the local culture before they are chosen, while exercising control of content means consistently monitoring existing programs. Finally, preparing academics would mean training academics locally for fear of being exposed to a new culture if they were to be trained outside the country. Even though we have questioned the practicality of these approaches they appear to support humanisation, if they are implemented successfully. This is because people would be in control of their own actions and would give due consideration to their cultural and social needs while at the same time benefiting from ICT.

Humanisation and training

Although there was evidence of dehumanisation, humanisation also took place in this institution. Academics wanted to be consulted and be involved with the planning: "**Consulting people is good because they can plan for that thing,**" argued a female staff member. Not only that, but some academics highlighted the importance of being consulted before developers decide to train them so that academics could be given the training they require. *"We need to actually be given the software we need that is why I said it is also better to if they first contact us* (and ask us question such us) *What kind of software would we need?"* (Male academic)

Other academics attributed their failure in applying skills to their lack of involvement in the planning of the training programmes.

> *I feel that they would have come with something like questionnaires. What would you expect in an online course? How would you want to view an online course and how would you want an online course? What should it have and what shouldn't it have. And how of course, basing on the knowledge of other E-learning courses how you would want it to be different from them or better or similar in some way.*

> *If they had given us such a provision then may be they could have used those tools that are familiar with some students and some of the lecturers.* (Female academic)

Even though the E-learning training that the University offered to academics was compulsory for junior staff members, the academics who took part in this study made it clear that if it were voluntary they would still attend because they value it. *"If I was given an option of coming or not, I think I would go there."* This suggests that the dehumanising approach to training was based on prejudice, not evidence of staff attitudes. By the end of the problem-posing interviews, academic developers started to say that their dehumanising methods were not successful and began thinking about trying humanising approaches, such as giving academics more freedom and say in terms of the training.

> *Maybe we have just fifteen people from the faculties, we sit down together with them, then we say O.K. you want to convert your courses, What does it involve? So we sit together and draw up a work plan.* (Academic developer)

This would target academics who had a genuine interest, helping them to convert courses. This staff developer further mentioned that they had wanted to send training programmes, including the training contents of the programme, to academics so they *"Can identify the slots that can fit them, but we were unable to implement that because we had a power problem"*. (It should be remembered that the power problem to which this participant was referring concerns the supply of electricity which, at the time of the study, was constantly going off.)

This is a pretty thin excuse for not using a "humanising" approach, and most likely is a case of passing the blame to someone else. The building in which the E-

learning staff development department was based had a twenty-four hour backup power supply and well equipped rooms that could be used for training sessions. Thus, when the staff developer was challenged about why he was not using this building, he said that they *"are thinking now (of) using this building for training,"* but offered no explanation of why it had not been used before.

However, as pointed out, a form of humanisation was already in use. Negotiating and humanising techniques were used with the higher ranking academic staff. These had produced positive results as the majority of those targeted attended the training and seemed to use the skills gained.

> *We're saying this is compulsory for all staff at this level but it is optional for the other group (senior). And you find that it's actually 75% of them (senior) came and attended. But if I state its compulsory then you may find that even the percentage has been lowered, they're simply not coming, you know? So but say to them this is good for all junior staff, we think it is also good for you. But for you it's not compulsory, please come and attend.* (Senior staff member)

What this suggests is that by giving options, such as whether to attend training or not, and by using explanation and persuasion, higher ranking academics' attendance at the training had improved. In other words, using humanisation with higher-ranking academics led to contrasting experiences to those of their junior academic counterparts. However, even though higher-ranking academics had attended the training as a result of the humanising approaches the university employs with them, it remains unclear whether all of them are applying these skills.

It is clear from the above discussion that humanisation was practised by staff developers but only to higher-ranking academics (Table 12). As such, this was only "partial" humanisation. Furthermore, the reason given by the senior academic for not extending the humanisation techniques to the junior staff was "fear" of losing higher-ranking academics. The senior staff who participated in the study believed that using "harsh" policy towards the higher-ranking academics could force them to leave the university altogether. As such, the university had no choice but to handle higher-ranking academics in a soft manner.

Table 12: Summary table humanisation concept

Humanisation and efficiency	- A potential relationship between efficiency and humanisation was found; - It was found that technology could help disadvantage members of the community as they would be able to access the information they want; - Students too were found to be able to benefit from the efficiency that technology would bring.
Humanisation and acquiring ICT	- Among the three approaches to acquiring ICT, only borrowing seems to support humanisation; - Through borrowing, people would be able to modify or develop programmes based on their needs, which can lead to humanisation; - Adopting and adapting appear to maintain the status-quo.
Humanisation and cost	- No direct links between humanisation and cost were found; - However, approaches used to deal with costs were found to support the concept of humanisation.
Humanisation and culture	- Just like cost impact, no direct relationship between humanisation and culture was found; - Nevertheless approaches such as checking applicability of the programmes before they are imported, controlling content and training academic developers locally were found to have humanising aspects.
Humanisation and training	- Academics wanted to be treated in a humanised manner; - Partial humanisation practices did exist in the training.

The Banking Style of Education

Banking style and efficiency

There was no evidence of a relationship between efficiency and the banking style of education.

Banking style and approaches to acquiring ICT

Approaches such as "adapting" and "adopting" seem to support the concept of the banking style of education. However, the extent to which they do so varies. For instance, in the "adopting" approach, the banking style is obvious as academics indicated that all they wanted was to "adopt" imported programmes and not make any attempt to "reinvent" them, with no input in the design. The "adapting" method, which involves importing experts from developed countries to deliver selected training, potentially supports a banking style as the external experts were asked to deliver programmes that were not designed based on any consultation with local people. This suggests that a banking style of education is likely in situations were people follow these two approaches.

For the "borrowing" approach, outcomes resembling the 'problem-posing' approach were identified instead. Unlike the previous approaches, this approach gives local developers the opportunity to develop and modify their own programmes rather than using ready made ones. However, there was no evidence to suggest that local developers had actually sought academics' involvement. Therefore, it is fair to conclude that in principle, "adapting" and "adopting" approaches are closely aligned to the banking style of education while "borrowing" resembles problem-posing approaches. However, in this particular case, "borrowing" was not used effectively by academic developers.

Banking style and cost

There was no obvious relationship between cost and the Banking style of education.

Banking style and culture

No relationship between "cultural" impact and the banking style of education was found. This is because in this case, the findings concerning cultural impact were focused importing ICT rather than on programmes of training.

Banking style and training

The findings of the study revealed that the E-learning staff development was planned and delivered using the banking style of pedagogy. As mentioned earlier, academics were expected to attend training and implement the skills afterwards. Academics who took part in this study felt that the training they undertook did address their needs, but that they had not used the new skills they gained. As pointed out in Chapter seven, despite attending training, academics kept communicating with students in the same ways that they did before. This shows that academic developers pre-selected the contents of the training based not on what academics needed, but rather on what they wanted to deliver. Furthermore academics had no influence on the content delivered to them.

Academic developers planned the content of the training without involving academics and decided what academics should learn instead.

> *So even on the Kewl NextGen. We were focusing on very few aspects, what we wanted to show them the communication tools so that they can communicate, they can use it in their*

classroom for generating discussion forums, e-learn - email
communications, chat and stuff like that. (Staff developer)

Academics were not involved in the development of the training, and their views were never sought, as a male academic pointed out when asked whether he had attempted to influence the content of the training to suit his needs *"No. Because at the training you find pre-arranged programmes (and instructors) which you cannot change to suit your needs."* Another male participant made a similar point: *"No. because I wasn't asked to contribute to workshop content by the organisers."* After the training was developed, the academic developers then sent these training programmes to the academics so they might choose the training times that suit them. *"So we were sending out the training programmes so that the lecturers can identify the slots that can fit them."* (Staff developer) While this clearly shows that academic developers pre-selected programmes, it also implies that academic developers gave the academics some latitude by allowing the academics the freedom to choose the timing of the training. However, as reported in the dehumanisation and humanisation sections of this Chapter, such choices were not available equally to all academics, many of whom were instead "told" to attending training (particularly the junior staff). So it is likely that this academic developer was referring to the E-learning coordinators in the five faculties with whom they were in contact whenever they want to organise training, rather than to academics more generally. So it is possible that the flexibility of timing benefited only the E-learning coordinators who then made the decision as to which training "slots" academics in their respective faculties should attend.

This training also followed the banking style of education and not a problem-posing approach. Academics met in training rooms and listened to staff developers' talks.

> (In the training) *They taught us using the tool and then they gave us some background about E-learning; what E-learning means, what other synonyms that exist of E-learning.*

The academic further added that:

> *It was mainly lectured based, were there are over three instructors or four they would come in one for a sessions each one per a session, they talked, show slides and demonstrations and the case study was KEWL.NextGen, so they demonstrated that they were teaching us. All of us had software installed in our machines and would practice with them at the lecture.*

This academic makes clear that they received pre-planned training as academic developers passed them content that they had planned ahead of the session. The fact that academics had "software machines" and that they "would practice with them at the lecture" does not imply in any way that problem-posing was used. Academics only practised the content that was delivered to them. This is because, as seen in the internalisation section, academics were not encouraged to go beyond what they were told. This indicates that academic developers delivered their training in the banking style rather than the problem-posing way (Table 13). There was no evidence that dialogue and discussion were involved in the training. On the contrary, the delivery was primarily rote-learning, where staff developers aimed to provide maximum information to the academics so the academics would fully "memorise" and "master" the techniques delivered to them.

Table 13: Summary table of Banking style of education

Banking and efficiency	• No relationship between the banking style of education and efficiency was found.
Banking and acquiring ICT	• Adopting and adapting approaches seem to support the banking style of education.
Banking and cost	• No relation between cost and banking was noted.
Banking and culture	• Again no relation between culture and the banking style of teaching was noted.
Banking and training	• Training was found to be based on the banking style of education; • The aim of the training was to give the maximum information to academics; • The training was pre-planned without academics' involvement; • And delivery of the training has characteristics of the banking style of education.

Problem-Posing

It seems almost none of the themes discussed in this Chapter support the problem-posing approach. Only the "borrowing" technique, described in the section on approaches to acquiring ICT, appeared to support this concept. This is because the "borrowing" technique would allow people to examine imported programmes critically before they were adopted. Additionally, "borrowing" empowers people as it allows them to create programmes based on their needs. Apart from "borrowing", however, there was no evidence of problem-posing approaches to development.

Overall Evaluation

Although the concepts of Freirian theory used here were helpful in understanding the themes of this study, some were more relevant than others (Table 14). For instance, humanisation was found to be relevant to almost all the themes discussed. Directly or indirectly, humanisation issues were found in relation to each theme. For example in our discussion of "cost impact", no direct relationship between cost and humanisation was found. However, approaches suggested by the participants to deal with issues of costing were found to have humanising elements. Internalisation was directly related to four of the five themes discussed and was indirectly related to the remaining one. It was found that internalisation has direct links to efficiency, acquiring, culture and training, while it was found to be indirectly related to issues of cost. This could be because internalisation is often seen as a result of "colonisation". Since the continent has had a long experience of colonial history, it was not surprising to find that participants have consciously or unconsciously internalised a "perfectionist" view of others. What needs to be pointed out here is that in some

instances, participants were in denial or could not see the link between colonisation and the internalising views they expressed. Freire particularly predicted this kind of "denial" or "blindness", which is why he advocated challenging current assumptions. As mentioned in Chapter three, the problem-posing technique was used as a data collection method; the more participants were challenged, the more issues such as internalisation became obvious. However, if we exclude the "borrowing" approach none of the five themes appeared to support problem-posing.

Dehumanisation was found to be related to three themes; namely, training, acquiring and culture. All these themes were also found to have links to internalisation. This indicates a strong relationship between dehumanisation and internalisation. It is safe to say that, typically, when dehumanisation occurs, internalisation follows. This is what was found in this study. All the themes that were argued to have direct dehumanising aspects were found to raise issues of internalisation.

The banking style of education was found to relate to just two of the themes discussed. Banking was linked with the "acquiring" approach to importing ICT and the ways in which training was planned and delivered. This is because, as discussed in Chapter two, the banking style focuses on the aim, planning, design and delivery of a programme. Since the majority of the concepts discussed do not have any of these components, it was, therefore, absent from efficiency, cost and cultural concerns as they are not related to the planning or delivery of programmes. Withint this study, where the design and delivery of programmes was involved, the link with a banking style was usually found. As such this study supports an argument which Leinonen et al., (2000) made, which suggests that the current trend of technology

adoption supports the notion of a banking style of education rather than problem-posing.

Limitations of Freirian theory became apparent in the Chapter when the findings did not match any aspect of the Freirian concepts being used. As discussed, sometimes no relationship was found between Freirian concepts and the themes discussed, while in some instances, the relationship was only indirect. This indirect link is particular interesting as it is contradicts Facundo (1984) and Ohlinger's (n.d.) criticism of Freirain theory as too "simplistic" in the sense that things are "either black or white, oppressed or oppressors".

The complexity of applying Freirian concepts was further discovered when some of participants expressed conflicting views based on the theory. For instance, the same participants who highlighted the "neutrality" of technology also argued for the importance of localisation, and thus indicated the subjectivity of technological practices. Additionally, academics who acknowledge that they had been "handled" in a dehumanising manner pointed out there was no need for them to be consulted (In line with a humanising approach) as academics might never agree on a time that would suit them all, for example. It should be noted that participants mainly expressed such contradicting views after being challenged. Thus, the contradicting views of some of the participants should be looked into in the context of participants' being in denial of dehumanisation. This is what Freire (1970) predicted. He argued that it is a normal phenomenon for dehumanised individuals to be in denial of the existence of dehumanisation. This is exactly why Freire suggested the importance of using a challenging approach to reveal the existence of dehumanisation. And this is precisely what this study has found. This suggests that, despite any shortcomings, the

approach was also a powerful tool for discovering the underlying dehumanisation and internalisation processes about which participants appeared to be in denial.

It is also worth touching on the relationship among Freirian concepts, as well as the relationships between these concepts and the themes of the study. This is because some concepts were much more tightly inter-related than others. For instance, as mentioned above, whenever internalisation was found, dehumanisation was also visible. This indicates that strong links exist between the two concepts in this setting. Here, internalisation was the result that dehumanisation typically produced. The banking style of education also arises in the context of dehumanisation but as a tool for dehumanising objectives. Overall, Humanisation and dehumanisation are the most distinctive parts of Frerian theory visibly in this study.

Table 14: Summary table of the relationship between the concepts and the themes

Concepts	Relation to the themes
Dehumanisation	• Potential links between culture and dehumanisation were found; • Direct relationships between dehumanisation and training were noted; • Two approaches to acquiring ICT were strongly linked to dehumanisation; • No relationship between cost and dehumanisation was revealed.
Internalisation	• Relationship between training, culture and internalisation was discussed; • The adopting and adapting approaches to acquiring ICT support internalisation; • No direct link between cost and internalisation was found.
Humanisation	• Direct relationships between efficiency, training and humanisation were found; • Indirect relationships were identified between the "acquiring" approaches to ICT and cost, culture and humanisation.
Banking style of education	• No relationship between efficiency, cost, culture and the banking style of education was found; • Adapting and adopting approaches to acquiring ICT were related to the banking style of education; • Training was seen to follow the banking style of education.
Problem-posing	• No relation between efficiency, cost, culture, training and problem-posing was found; • Only "borrowing", under approaches to acquiring ICT, has potential links with problem-posing education.

Conclusion

The aim of this Chapter was to investigate the relationship between the findings discussed in Chapters six and seven and Freirian concepts. In most cases, strong relationships between the concepts and themes were found. However, Freirian theory appeared to be more relevant to the themes that had human aspects, such as the theme that discussed training. When a theme was technical, only indirect relationships with the Freirian concepts were found. It is not clear why Freirian concepts were not helpful in the themes that had technical aspects, but this may be because the aim of Frerian theory is to humanise dehumanised individuals.

While the Chapter appeared to have achieved its aim by exploring the relationship between the findings and Freirian approaches, it also revealed the complexity of applying Freirian concepts in such situations. Applying Freirian theory was found to be much more complicated than the "black and white", "oppressors and oppressed" classification some commentators have suggested.

After discussing the main findings in Chapters six and seven and discussing the relationship between the results and Freirian concepts in this Chapter, we now move to draw conclusions based on these findings. The next Chapter summarises the major issues presented in the previous eight Chapters.

CHAPTER NINE: CONCLUSION, REFLECTIONS AND RECOMMENDATIONS

Introduction

The aim of this Chapter is to summarise the issues discussed in the previous eight Chapters and draw conclusions based on these. All of the research questions will be revisited in this Chapter, highlighting the extent to which they were answered by the research.

This Chapter also identifies the limitations that this study encountered, which need to be take into consideration. Theoretical, methodological, and analytical aspects are all considered. The Chapter then identifies six ways in which this research contributes to existing knowledge in the field, and further, identifies areas that are worth focusing on for future studies.

Finally, recommendations to policy makers that arise from this work are reported.

The aims of the study

As reported in the introductory Chapter, this research was undertaken in order to examine African higher education institutions' efforts in integrating ICT into the curriculum. African universities have been actively engaged in developing ICT projects. ICT use has arguably dominated the debate amongst policy makers in African higher education institutions. Thus considerable attention has been given and investment made in the development of ICT projects in the continent. However, despite the resources spent on this, problems and challenges remain.

The broad aim of this study was to investigate the extent to which African higher education institutions have benefited from ICT development. This involved reviewing the literature on obstacles that have hindered African higher education institutions' efforts towards ICT development. However, there were several areas that were not adequately explored in the literature. This made it necessary to conduct new empirical work in order to document the ways in which African academics are using ICT and to explore staff development approaches. These issues and the extent to which policy makers considered preparing academics for ICT utilisation, were explored through a case study of a single African higher education institution.

The research questions that guided the study are discussed here and have been categorised into three sections: questions that were answered through the literature review, methodological questions, and questions investigated through fieldwork.

Questions Addressed By the Literature Review

This section addresses two major questions and two subsidiary questions. (An additional subsidiary question as identified at the start of this thesis was investigated empirically and therefore will be dealt with it in the "fieldwork questions" section.)

How have African higher education institutions integrated ICT into the curriculum?

As reported in Chapter two, literature highlighted the social, educational, and economic benefits associated with technological development. This suggested that introducing successful ICT projects into higher education in Africa would reduce the problems that African higher education institutions are currently facing. As a specific example, one of the contributions that ICT would bring is the widening of access to

higher education (Donte, 2001; Littlejohn & Pegler, 2007). By introducing ICT into higher education, many students who are currently unable to go to university would have opportunities to further their studies. This is because access to a university is one of the major problems facing school leavers in the continent. As reported in Chapter two, in Africa, not every qualified school leaver obtains a place in a university because many universities are unable to accommodate all of the qualified applicants (Donte, 2001). Additionally, private universities are too expensive for many students to afford. Open education with economies of scale should help this situation, according to the literature.

Chapter two also reported that technology brings other benefits to higher education, such as flexibility in learning, reduction in the cost of higher education, and an opportunity for students to access wider ranges of learning materials worldwide (Hanna & Latchem, 2002; Littlejohn & Pegler, 2007; Uys et al., 2004). Arguably, achieving these benefits would enable African higher education institutions to overcome some of the most pressing problems that they face. However, such investment in ICT projects is not always successful.

As reported in Chapter two, the African continent, including the Sub-Saharan region but excluding South Africa, continues to face difficulties with ICT development (Adam, 2003; Adam & Wood, 1999). African universities have actively engaged in ICT development. For example, a university called the African Virtual University, involving ICT development funded by the World Bank, is now operating in over eighteen countries. However, as reported in Chapter two, few of these initiatives are achieving their desired goals. ICT development in African higher education is, therefore, reported to be struggling.

What are the obstacles facing African higher education institutions with regard to ICT development?

African higher education institutions still face obstacles with the use of ICT. It was, therefore, imperative to explore why this was the case. As reported in Chapter two, these problems can be divided into two main categories: internal and external. It was found that Africa is facing internal problems that are affecting its technological development. Poverty, lower levels of literacy, and African culture are some of these internal obstacles. Africa is poor and it is getting poorer. International bodies have voiced their concerns about the worsening poverty levels in Sub-Saharan Africa (Commission For Africa, 2005). The extreme poverty level of the population led governments in the continent to be more concerned with immediate problems, such as feeding their own citizens, rather than developing ICT (Lelliott et al., 2000; Udo & Edoho, 2000).

In addition to poverty, a lower literacy rate among Africans is an important obstacle facing the continent. It has been noted fairly recently that nearly half of adults in Africa are illiterate (Polikanov & Abramova, 2003).

In addition to these two internal problems, African culture is also reported to be contributing to the lack of technological advancement. Although Africans are not a homogeneous society, as there are many cultural variations, similar issues are visible across all cultures in Africa, such as being an oral society. This oral background led Africans to value degrees that are obtained through conventional face-to-face approaches over degrees obtained through distance education, which has hindered the expansion of distance education provisions in the continent.

External factors that are hindering technological advancement include policies of international financial institutions, globalisation, and policies of

developed countries toward Africa. It has been suggested that certain policies of international financial institutions, such as the Structural Adjustment Programme, have badly affected society (Gibson 2004) as well as higher education institutions (Adam, 2003). Globalisation is also reported to be affecting Africa's technological advancement, for example, through the "brain drain" (Meyer et al., 2000; Huynen et al., 2005). As a result of the globalisation, the continent is losing its human resources to developed countries and this trend continues.

Certain policies of developed countries towards Africa were also found to have a negative impact on ICT development. Implementing policies from developed countries, especially in technology, comes with attached consequences, which appear to be hindering technological advancement.

Theoretical Frameworks

What theories and concepts can be used to understand these issues?

As discussed in Chapter two, two problems were identified. The first concerned the process of development. Different approaches to developing staff might either free staff to act in more useful ways or force them to conform to pre-specified patterns of behaviour. The second issue was that the process of importing technology from developed countries might lead to two major problems: cultural influence and dependency on the developed world. In light of these consequences, technology was presented as a new form of "colonisation." To understand this situation better, Freirian and postcolonial theories were adopted as the theoretical basis of this study.

Postcolonial theory highlights the impact of colonisation on developing countries and simultaneously emphasises the importance of local identity and local

knowledge. As such, this theory helped place the participants' views in their historical context.

On the other hand, Freirian theory focuses on revealing oppressions that might exist; it is also used to empower dehumanised people. Thus, this theory was a useful tool for challenging participants and comprehending the data.

It was obvious that Freirian and postcolonial theories have a great deal of commonality; they both address issues such as identity and oppression, which were important to this study. Despite the similarities of the two theories, however, I found the Freirian theory to be more useful than the postcolonial theory when analysing data. Freirian concepts were found to be more structured than the postcolonial theory ideas, which made them easier to apply as analytic tools.

Nevertheless, within Freire's concepts, some were more effective than others. Problem-posing, for instance, proved to be a valuable tool for interviewing participants. Through this approach, the views expressed by the participants could be categorised as having humanising, dehumanising, internalising, or banking elements. Thus the problem-posing approach appeared to be the most practical Freirian concept. However, examples of participants working in a problem-posing way were absent from the data.

Additionally, dehumanisation was found to be a problematic term; using it in its absolute sense was not possible as this would have led to almost all practices of senior staff and academic developers being described as dehumanising. To deal with this problem, the concept was scaled into three levels. This proved sufficient in order to make the term useful for analysis.

Methodological questions

How can this topic be studied?

As examined in Chapter three, researchers in the field employ diverse methods when studying the use of ICT in higher education and particularly when exploring staff development. Some researchers have employed qualitative methods, others used quantitative approaches, while others combined qualitative and quantitative research methods.

Qualitative research methods were the most appropriate for this study because, as stated in Chapter three, the researcher did not want to predetermine the participants' answers, but rather wanted to explore how participants viewed the matters that were under investigation.

More importantly, qualitative research methods are consistent with the values proposed in the postcolonial and Freirian theories that this study used as a theoretical foundation. As highlighted in Chapter two, importing technology from developed countries was positioned as a potential cause of inequality between Africa and developed countries. Thus, the study aimed to reveal and explore the potential negative impacts of technology by working with participants through a problem-posing approach. This was also intended to stimulate change and empowerment with participants. This approach challenged information that the participants provided rather than taking their views at face value.

A case study design was used to shed light on the matters under investigation. A single university in Uganda was chosen to be the site of the fieldwork. Interviews, document analyses, observations, and field notes were used to generate data.

Ethical steps, such as briefing participants about the study, clarification of rights for withdrawal and assurance of anonymity, were followed throughout this

study, and any potential issues arising from the problem-posing techniques were monitored by the supervisor. The ethical steps enabled the researcher to collect data in a troubled environment despite using challenging techniques.

Testing the methods: Pilot Study

Although qualitative research methods were identified as being most suitable for this study, it was important to test them before they were used in the main study. Thus, a pilot was implemented in a department similar to the one used for the main study.

The pilot study provided useful information that influenced how the theoretical foundations were subsequently used; it also identified which concepts would be most relevant to the main study. Because the university where the pilot study took place was not a postcolonial one, postcolonial concepts were not able to be used in the pilot study. Other shortcomings of the pilot study included the small number of participants and focus on training for the use of Blackboard as an example of staff development, which, at the time of the pilot study, was being supported on pilot basis. The pilot study, however, confirmed the suitability of the planned research techniques for the main study.

Questions addressed by fieldwork data

Will importing ICT from developed countries have cultural implications for Africa?

Participants in this study identified range of implications that technology would have. Efficiency, cost, and culture were three areas in which importing technology from developed countries would change African higher education. Efficiency is how technology would improve what academics do. The academics, who took part in this

study, identified four ways that technology will bring efficiency: communication efficiency, classroom efficiency, research efficiency, and efficiency for the wider society. As reported in Chapter six, academics suggested that technology will improve the quality of communications with students. With new technology, they argued that they could communicate effectively and efficiently with their students. Additionally, participants suggested that technology would help academics improve their teaching methods because they will be able to demonstrate concepts easier to their students through technology. Research efficiency, where academics will be able to access online journals, is another positive aspect that academics identified. Finally, the participants argued that technological efficiency goes beyond academia, implying that a wider section of society can also benefit from technological improvement.

As a result of these perceived benefits, this study found three ways in which academics suggested they could acquire technology: using adapting, borrowing, and adopting approaches. These are unique findings, although researchers, such as Odedra and Woherem have touched upon related ideas. Odedra (1990), for instance, talked about "five major channels" through which technology is transferred to Africa. But as discussed in Chapter six, these were ways technology is transferred rather than how technology was engaged with. Thus, there are distinctive differences between what Odedra (1990) identified and what the participants of this study suggested.

Among the three approaches, "borrowing" is very important and positively contributes to ICT advancement in Africa. This is because, unlike the other two approaches, "borrowing" allows imported technological programmes to be modified based on local needs. The "borrowing" approach found in this study is similar to the technological "transplant" that Woherem (1993) proposed.

The costs of hardware, software, and experts are three areas of cost impact found in this study. These are important findings because spending on ICT in developing countries is likely to have a negative impact on the development of other areas. For instance, and as reported in Chapter six, within the institution visited, the cost of an annual Blackboard licence fee was equivalent to the salaries of at least two academics. This suggests that paying for Blackboard was eliminating the recruitment of two academics yearly. This study, however, argues that these costs can be reduced if approaches, such as relying on local people and using locally developed programs, are used.

Culture is the third and final area affected when importing ICT from other countries. Mixed views about the cultural impact of technology were found. As reported in Chapter six, some academics expressed a deep fear about how technology could spoil their culture. Others suggested that technology would change the culture in a positive way and dismissed any suggestion of negative impacts that might come with advanced technology. However, comparing the two views suggests that those who feared a negative impact were more persuasive as their views were more balanced. They recognised the possibility of positive benefits too, whereas positive respondents dismissed negative possibilities. Thus, the study argues that technology could have an impact on African culture. As reported in Chapter six, negative cultural influences that might come with the advancement of technology have also been reported by other researchers (Arger, 1987; Odedra 1992; Woherem 1993; Lelliott et al, 2000; Leinonen et al., 2000; Sy 2001; Ya'u 2004; Albirini, 2006). Finally, techniques, such as checking the applicability of the programs, exercising control, and training academics locally, are identified as ways to deal with any

negative cultural impacts that might come with importing technology from developed countries.

How technology is used in the curriculum within the university

The literature review detailed potential benefits that African higher education institutions could gain from technology; however, the exact picture of how technology has been used within the Sub-Saharan African higher education institutions, excluding South Africa, appeared to have been missing. Thus, the answer to this question was investigated empirically.

Three ways in which academics used technology were found in this study. As pointed out in Chapter five academics used technology for communicating, accessing online materials, and researching.

Using technology for communication was the most common practice. Academics communicated with their students on issues relating to their courses by emailing, participating in chat rooms and using online forums. Accessing online materials was another way in which academics used technology. Some academics were teaching courses that were already available online and which were developed mainly in America (particularly by MIT). As a result, students as well as academics were accessing these learning materials for teaching purposes. Similarly, academics were retrieving externally produced online materials to provide more examples to their students about the courses they were teaching face to face.

The third and final way in which academics used technology was for research. This was less frequent than the previous two uses. Some academics were accessing online journals in order to remain up-to-date in their fields.

What kind of staff development policy, if any, do African Higher Education institutions have to support the integration of ICT into the curriculum?

The literature suggested that African higher education institutions have not given due consideration to ICT staff development. No research that deals with ICT staff development in Sub-Saharan Africa, excluding South Africa, was found. As mentioned in Chapter two, universities in Africa appeared to have given much consideration to the macro level of providing an ICT infrastructure, but ignored the micro level issues, such as training people. However, an absence of this matter from the literature does not mean that policies and practices of staff development are not in fact in place. Furthermore, literature has not dealt with issues of how academics apply technology for pedagogical proposes. For that reason, it was important to investigate this matter empirically.

As discussed in Chapter seven, it was clear that the university has policies of ICT development, including a policy for preparing academics for ICT utilisation. Polices existed within the University on how to train academics and on the virtual learning environments that should be used. Additionally, a specialist unit that only deals with ICT staff development was established. Thus the study contributes to the field in reporting the existence of such policies and their implementation.

Practically, in a move that can be interpreted as a gradual implementation of ICT staff development, the university selected five faculties and named them as priority faculties. Academics from these areas were trained first and ICT staff development infrastructures were established in each.

However, this study found that these policies appeared to be ineffective. As reported in Chapter seven, academics who participated in the training did not bother applying the skills they gained. They continued doing their work on their own way.

What this suggests is that the policies and development practices that were in place did not lead to changing teaching practices. As mentioned in Chapter seven, these policies did not go beyond making academics attend training sessions. Thus, it is argued that although an ICT policy existed in the university, it was ineffective.

Are the practices of staff development enacted in African higher education institutions in line with Freire's theoretical recommendations?

Freire's theoretical recommendations in reference to the practices of staff development in African higher education institutions were addressed in Chapter eight. The Chapter provided an evaluation of whether the findings discussed in Chapters six and seven, including the nature of the training, followed Freirian theory. As reported in Chapters two and three, five of Freire's concepts were used. Dehumanisation, internalisation, humanisation, the banking style of education, and problem-posing were employed for this study to make sense of the data collected.

The ways in which training was conducted in this case study were dehumanising. Academics were forced to attend the training. Any academic who did not attend risked dismissal or lack of promotion. Academics simply attended the training with no plan to implement what they learned. However, as discussed in Chapter eight and also summarised in Table 15, the kind of dehumanising practices found in this study were mainly of a medium level of dehumanisation.

Internalisation was also found in this study. As a result of these dehumanising practices, some sections of academics internalised the views which senior management held of them, which resulted in them advocating the dehumanising practices that were already in place. In addition to this internalisation among academics, this study also found two further examples of internalisation. Academic

developers were found to have internalised the images held by senior managers by treating academics in a dehumanising way. Academic developers blamed academics for not applying the skills gained from the training instead of taking into account the fact that academics were not involved in dialogue about the training in the first place. The third and final example of internalisation found in this study was that some academics argued for the "neutrality" of technology, a view that they appeared to have internalised from developed countries.

As demonstrated in Chapter eight, the university used "partial" humanisation with senior academics by giving them the flexibility to decide for themselves whether or not to attend the training. When humanising techniques were used, attendance was higher. This is because higher ranking academics felt valued and not forced into attending training.

Furthermore, this study reported that the banking style of education was common practice in training, as seen in the aims, planning, and delivery of the sessions. This has contributed to the lack of effectiveness. Arguably a more effective alternative would involve adopting humanising and problem-posing approaches to development. Handling academics in a humanising way would make them feel valued, give them a sense of ownership of the programmes and allow the training to be based on their needs.

Chapter eight also assessed the extent to which other findings were related to Freirian concepts. Efficiency, acquiring technology, cost, culture, and training were all examined against dehumanisation, internalisation, humanisation, the banking style of education, and problem-posing. This investigation revealed that some concepts were closely aligned to Freirian concepts while others were not.

Table 15: Summary table of dehumanisation levels found in the study

Dehumanisation practices	Level of dehumanisation
• Academics, especially junior ones, were forced to take part in the training	Medium level
• Neither junior nor senior academics have been consulted about the content or format of the training they took part in	lower level
• If academics failed to take part their work was at risk	Medium level

Contributions

To summarise the preceding sections, there are six ways in which this study contributes to existing knowledge in the field. First, this study identified obstacles that are hindering the development of ICT in Africa. Although previous studies have discussed obstacles, they have not combined both internal and external barriers in a single study. By considering internal and external obstacles together, this study approached this matter in a distinctive way. Additionally, identifying internal and external obstacles in a single study can be a useful guide for policy makers and future researchers about ICT development in Africa.

Second, the case study extensively investigated the issue of staff development. This enabled the researcher to highlight the problems existing in staff development and subsequently point out how these can be overcome. This is also an important

contribution because staff development has not attracted a great deal of interest among researchers in the continent. Thus my study develops an area that previous researchers, especially in Sub-Saharan African excluding South Africa, have hardly researched. Furthermore, my study has proposed staff development frameworks that might have an important impact on staff developers' work.

Third, this study provided a clear picture of how technology is used within the curriculum. As stated in Chapter five and in this Chapter, there are three ways in which academics have used technology. Again this is a valuable contribution, which previous researchers within Sub-Saharan Africa have not touched on.

Fourth, this study makes methodological contributions. It demonstrated how Frerian concepts can be used as data collection and analysis tools. Previous commentators who have taken an interest in Freire's work have mainly focused on pedagogical and philosophical aspects. However, as discussed in Chapter three, researchers have started adopting Freirian theory to guide empirical methods, and this study contributes to that tradition. Thus, the methodological contributions made in this study could be relevant to researchers in Africa and beyond.

Fifth, Freirian and postcolonial theories were combined and used in the context of ICT staff development. This research demonstrated how the two theories can complement each other and minimise shortcomings that would have arisen from applying just one of theories. For instance, postcolonial theory helped generate questions for interviewees while the Freirian concept of problem-posing was used as a questioning technique. The theoretical contributions made here are clearly relevant to academic developers in the continent.

The final contribution concerns Freire's concept of dehumanisation. My study found that it was difficult to use the absolute definition of dehumanisation

provided by Friere. While some experiences had dehumanising elements, they did not, however, warrant the absolute use of the term. Thus, scaling the concept into different levels became imperative. This was not what other researchers have done or even what Freire recommended. However, looking closely into the broader definition that Freire provided, the term suggests the possibility of such levelling and this proved to be a helpful development.

Limitations

Like any other research of this scale, this work has limitations that need to be kept in mind. Limitations can be seen in three areas: theoretical, methodological and analytical.

Limitations in the theories

Imbalanced use of the two theoretical frameworks was an obvious theoretical limitation. As reported in Chapters two and three, Freirian and postcolonial theories were adopted as theoretical foundations for this research. However, the study used Freirian theory heavily, especially in the analysis, whilst postcolonial concepts were not used on the same scale.

The reasons for this were that Freirian approaches appeared to be more systematic than postcolonial theory. It was possible, for instance, to use Freirian concepts to guide data collection, whereas the postcolonial theory offered only a general guide for interview questions. This resulted in the Freirian theory being employed not only as a theoretical foundation but also as a technique for data collection.

Limitations in the methodology and analysis

Methodological limitations were also encountered in this study. The first methodological limitation was in the sample of participants interviewed for this study. Academics were mainly drawn from a single faculty at the university visited. Academics from different faculties responded only to the open-ended questionnaires, which E-learning coordinators in their respective faculties administered. Interviewing academics from different faculties could affect the findings of the study and may reveal different experiences. This was an obvious limitation. However, this was primarily due to fact that the researcher was hosted by one of the five priority faculties, and interviewing academics from the other faculties was not straightforward.

Focusing on a single institution can also be considered as a methodological limitation for this study. Investigating more than one institution could provide more comprehensive data relevant to the issue under study. However, the limited time and resources available for this study necessitated the narrow focus.

Another methodological limitation concerns the observation technique. Due to the timing of the fieldwork, observation in the main study did not include actual training sessions.

The final methodological shortcoming for this study concerns neglecting students' views. The ultimate aim for ICT development in higher education is to improve teaching and learning, to which students are central. This means that an important part of ICT development was not included in this study. This study has not underestimated the importance of students' views about ICT development. However, the decision was taken to focus on staff development as this topic has been neglected

by previous researchers. This leaves the topic of students' experiences to be explored in future studies.

In addition to the theoretical and methodological limitations discussed above, a further limitation was found in the analysis. For one interview, only partial transcription was possible. This is because conditions at the time of making the recording meant that sections of the interview were inaudible; attempts to re-schedule the interview failed. This happened only once, but this was during the E-learning coordinator's case, which is arguably an important one for this study. This meant only partial analysis could be completed in this case.

Areas for Further Study

This study explored the obstacles facing African higher education institutions in relation to ICT development. The research focused on the idea of staff development as a key to overcoming the obstacles that hinder ICT development in African universities. However, there were secondary issues that arose in the outcomes of the research which could be regarded as being significant enough to form the basis of further research.

This research was narrowly focused on a single institution, though it shed light on the matter under investigation based on the empirical evidence. It cannot, however, claim that the evidence found here and recommendations made would be identical in different institutions. Thus, this study acknowledges the importance of doing similar research in different institutions, preferably across several countries within Africa. Such studies would give a broader account of ICT development in the continent, focusing specifically on staff development issues. Additionally, such investigations could report students' experiences.

Pedagogically, designing learning tools that reflect existing cultures is another topic for future research. This research demonstrated how technology is not value-free but rather value-laden. As discussed in Chapter six, participants expressed fear of the negative cultural impact that technology might have on Africa and highlighted the importance of "localising" imported technology. However, this research did not focus on the issue of designing educational programmes based on local culture. The focus remained on the more general cultural implications of technology. The idea of how the design can accommodate local culture and the extent to which the current technological design complements local culture is worth investigating.

Further work is also needed on interpreting the theoretical aspects of the data, especially in using Freirian concepts. Although there were clear examples of oppression and dehumanisation, there were also examples of liberating approaches. These contrary tendencies were, in some cases, expressed by the same individuals. This suggests that the theoretical concepts used in the analysis here may need to be re-examined; rather than using them in a simplistic way to classify people or situations as oppressive or liberating, colonising or resisting, they seem to reveal the dynamics of the 'contact zone' (Pratt, 1992), which may or may not generate a positive and productive encounter between different cultures. This is an issue that could be explored in future work.

Recommendations

This research investigated the obstacles facing African higher education's progress towards ICT development. It explored internal and external problems that are thought to be the major issues hindering ICT development in the continent. The

research investigated current staff development and considered this matter as the key to having successful ICT projects in the continent. This research addressed both the micro and macro development of ICT. The issues discussed would be of particular interest to policy makers both inside and outside of Africa.

This study argues for the importance of addressing of the problems that are facing the African continent with regard to ICT development. A collective approach between developed countries and Africa is one way forward. This is particularly important as some of obstacles that African is facing towards ICT development arose as a result of the policies of international financial institutions.

My study calls for policy makers in higher education to take into consideration the potential negative cultural impact that might come with the advancement of technology. As reported in the literature and backed up by empirical evidence, technology can bring enormous benefits. Equally, however, negative impact is a possibility. This study acknowledges that Africa does not have sufficient technology from within and it will continue to relay on technology imported from developed countries in the years ahead. However, steps such as training academics locally and developing responsive training programmes would reduce the potential negative cultural impact of technology. Establishing partnerships between institutions in developed countries and Africa could also be effective. Such links would allow institutions from Africa, for instance, to provide their perspectives on the suitability of potential programmes to their cultural needs. Thus, the role of African institutions would change from being receivers of technology to contributors to the development of technological programs. Bates (1999) made similar recommendation and suggested the importance of a partnership between institutions

in developed and developing countries in order to provide distance education programmes that are suitable for the culture of developing countries.

Training academics alone would not guarantee the success of ICT staff development. Humanising staff development approaches are vital if staff development is to be successful. As discussed, existing staff development approaches were ineffective and led to unintended outcomes. Humanisation, which involves negotiation and dialogue, would produce a better result; academics would feel valued and contribute to the training relevant to their needs. This study suggests that "action learning" approaches would be a constructive a way for academics to enhance and update their skills and knowledge. This is because, as reported in Chapter seven, academics already approach each other for assistance instead of seeking help from staff developers, but they are not supported in doing this.

Finally, given the costs involved with importing ICT from developed countries, using open-source virtual learning environments would reduce licensing fees and contribute to developing local expertise. Using open-source tools might have initial cost issues because building and developing programmes requires spending. However, once the programmes are built for local use, there would be an overall reduction of costs. Additionally, using open-source tools could further allow local developers to design programmes based on local needs.

Conclusion

This thesis was undertaken for personal motivations to explore and understand the nature of obstacles facing African higher education institutions. This research enabled the researcher to have a better understanding of why higher education institutions in Africa may struggle to benefit from ICT development. Combinations

of internal and external obstacles, such as poverty, the low literacy rate, policies of international financial institutions, globalisation, and the policies of developed countries towards Africa, were identified as reasons for African's lack of ICT development. Moreover, staff development was identified as an important issue in understanding the process of ICT adoption. This study used Freirian and postcolonial concepts, which revealed that even where staff development took place, it could be ineffective.

Although the main impediment to ICT development in African higher education institutions is the lack of effectively preparing academics for ICT utilisation, this could be addressed using humanising approaches to development.

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APPENDICES

Appendix A

Consent

This is to confirm that I'm willingly to participate in this research, carried out by Abdullahi Hussein, a doctoral student at the Institute of Education, University of London.

I also confirm that I was informed about my rights to withdraw at any stage of the research, if I wish to do so. Furthermore, my confidentiality and anonymity were also guaranteed.

Finally, for the propose of this research, I permit my voice to be recorded during the interviews.

(Delete any statement that do not apply to you)

Print name:

Date:

Signature

Print name: Abdullahi Hussein

Date:

Signature:

Appendix B

Exploring the achievements and obstacles for the integration of information
and communications technologies into the curriculum in developing nations

This study is attempting to examine the main obstacles and achievements for African higher institutions for ICT development. Particularly, the study would shed light on how academic staffs are prepared to use ICT for teaching and learning. Different staff development approaches that are in place are to be investigated. As an intervention to the obstacles facing the continent, this research is aiming to propose a humanistic staff development model that suits African needs.

Methodologically, this study uses mainly interview techniques in which both academics and staff developers are to be interviewed. Thus, these interviews will be transcribed and analysed. This study is committed to the anonymity of the all participants and the data collected will be strictly used for this study only. Additionally, the techniques that the study is using have received approval of Institute of Education's research ethical committee and the study will strictly followed the ethical guidelines provided by British Educational Research Association (2004).

You participation for the interview is critical for the success of this study. And the information you provide will be solidly used for this study only.
Thank you very much for participating in this research

Abdullahi Husssein
Institute of Education
University of London
ahussein@ioe.ac.uk

Questionnaire

Introduction

The main aim of this questionnaire is to explore approaches to staff development for ICT usage. I'm particularly interested academics' views about the staff development training they have had.

This questionnaire is part of wider research that is investigating how far African higher education institutions have benefited from ICT and what the main obstacles are that are preventing the continent from fully benefiting from ICT. This study is specifically looking into how academics are prepared to use technologies in their teaching and research.

You participation in this questionnaire is critical for the success of this study.

Your name is not required and the information you provide will be strictly used for this study only.

Thank you very much for participating this research

Abdullahi Husssein
Institute of Education
University of London
ahussein@ioe.ac.uk

Questions

Please give detail answers when appropriate

1. What is your gender?   Male   ☐   male   ☐

2. Which faculty are you part of? ---------------------------------

3. How many years you have been teaching at this University?

1-3 years ☐   4-5 years ☐   6-8 years ☐   9 yrs and over ☐

4	Have you attended training on the use of technology for teaching? (Please √ as appropriate) Yes ☐ No ☐
5	How many ICT staff development workshops you have attended so far? (Please √ as appropriate) 1-5 ☐ 6-10 ☐ 7-15 ☐ 16-20 ☐ 22 & over ☐
6	If you have attended workshop/training was that something you chose to do or were you asked by the head of your department or some other person in authority? -- -- -- -- ---
7	Have you ever tried to influence the topics of the training to suit you needs, if not why not? If you have tried, please tell me about how successful you were? -- -- -- -- -- -- --

	-- -- -- -- ------------------------------
8	Do you feel that the staff development you are offered was designed to address problems you experience in your work? -- -- -- -- -- -- -- ---
8.1	When the agenda for staff development is set what things do you think influence it (staff experience, institutional plans, national or internal policies, etc) -- -- -- -- -- -- ------
9	I am interested in two forms of staff development that you might have experienced, possibly under a different name: (**Staff secondments model** *"This model involves sending staff –for a period of time-from an institution to work on projects agreed with staff development unit.* And **Action learning model** which is *"A process in which a group of people come together more or less regularly to help each other learn from their experience* in order to resolve problems). Have you taken part in any training of this kind? How would you feel about more training being offered in this format instead of as pre-defined workshops? -- -- -- --

10	Can you tell me about a time when you've had to change the way you teach in order to accommodate resources or technologies that have been bought in from some other country? How did you feel about this?

11	Do you think importing ICT from other countries will influence on local initiatives and cultures?

12	What have you managed to achieve after training for e-learning that you weren't able to do before?

13	How have your students benefited from your adaptation of new technology?

Again thank you very for your time,

Abdullahi Hussein

Appendix D

Questions asked to the academic developers

(Themes of the questions asked to academic developers)

Question: Can you briefly describe to me what you do, please?

Question: Administrative hierarchy of the department of academic development?

Question: What is the training package that you are offering to the academics and non-academics at the moment?

Question: When these training sessions usually take place?

Question: Whether the training offered to the academics and non-academics are compulsory or not?

Question: How you persuade your academics to take part of the **training?**

Question: How you deal with them if they-academics-refuse to take part of the training?

Question: Do you have follow-up mechanism?

Question: What is your view about the training you offer, do you think the training has led academics changing their practice?

In addition to these themes, there were also follow up questions that often took place at the end of a training sessions or meetings with course leaders.

Appendix E

Questions asked to academics and non-academic staff

Question: I understand that you attended training for Blackboard, was that something you had chosen on your own or was something which you were imposed on you to do?

Question: Before you take part of Blackboard training here, have you had training for ICT somewhere else?

Question: if you had attended training elsewhere can you contrast between the training approaches?

Question: Was the timing of training convenient to you?

Question: Do you think the content of the training was heavy on your workload or was something you were able to manage?

Questions: When you were informed about the Blackboard training, what was your expectation from these training, have had any particular expectation?

Answer: am I right in saying that your expectations are being materialised through Blackboard training?

Question: Have you applied the skills and knowledge you gained from the Blackboard training since then or are you planning to use the skills in the near future?

Question: I understand that you took part only in basic training for Blackboard training, are you willing to attend advanced training sessions for Blackboard in the near future?

Questions: I have finished, feel free to add anything that you feel is important, plse?

Thank you very much for your time

Appendix F

(Some of the interviews)

Senior male staff member at the university level

Q: To being with, I would like to thank you for giving me this opportunity. Secondly, Can we first talk about the e-learning policy here at this university especially in the context of staff development?

A: Ok, I mean when we talk about the e-learning policy in (*name was provided*)university we first of all had an ICT policy then later on we had an e-learning policy which was incorporating issue to do with e-learning. Now the policy requires every member of academic staff to have basic training in e learning and also use it in teaching the students and so on. But because of lack of equipment especially for staff to go ahead and use like computers, scanners and so on (voice lost) equipments many lecturers have not taken the training and they have not also developed courses. So that in this faculty we have tried to enforce it because we think it is the way forward. It is student-cantered and once students study it a lot on their own and we have used it to another programme like Cisco Systems programme and it is working. So we have been pushing the faculty to make sure every member staff is trained in e-learning. In area of pedagogy we have also given them pedagogical training not necessarily in e-learning but on how to teach.

Q: Ok, so what are main obstacles you can identify that are facing you in terms of this process?

A: You see may be the other thing I have to tell you about, for us we believe in continuous training. So like early next month we are organizing a refresher course which will be conducted by staff from the Netherlands to give them like refresher course. They are now assessing the courses they have developed online, you know after that they have to find what are the weaknesses of each member of staff and then they are going to come with productive refresher course to address this. Like I mentioned earlier, e-learning is not about just putting any content online. You need for example, a multi-medium lab to make sure that whatever they developed is interactive that is lacking and cost a lot of money. Some faculties don't have the computers for the students to access whatever has been put online. Now you can develop a course well-developed you put it on the server so that anybody can access it from anywhere but we have a problem of bandwidth within Uganda. But within the campus we have the problem of access because the computer are there but not enough for the students; I am talking about the whole university. But in this faculty at least our students have access to computers. So one of them (problems) is access.
The second one is change of attitude some people don't change easily people want to be taught in class face to face you know. Some lecturers are not interested in wasting any time to develop their courses and once the courses are developed at the same time they are not willing to go in and put in all those exercises because they think it involves a lot of time and effort. So again what I think is another obstacle maybe we need to make sure that the leaders within the university or institution know there is something good which is pushed by those people. Where they didn't have to put any effort nothing has taken place so far but when you push at them they-academics-think you are pushing them too far but in the end they start, you know, appreciating it.

Like in this faculty last semester, I told members of staff like whoever does not take e-learning training will not be given a course in the undergraduate programme and the condition is if you don't get the course then you wont get paid. So they took it because they wanted the money but after taking it but-they- came back and said we are really missing this kind of stuff!

Now for the postgraduate programmes I have not implemented it because those people are few and they are senior and so if you say do it and if you don't do it you won't get a course but if they don't do it what will you do? So we can't enforce it at the moment. So I think here are some of the obstacles, but I think we are progressing very well.

Q: If you talk about the convincing academics of the importance of ICT and training. This approach you mentioned now; whoever doesn't take part of training his/her courses will be reduced. That is very harsh, isn't? Why not negotiating and reasoning with academics instead of taking this strong stand?

A: You see one other thing you have to understand the people we are dealing with. Most of the people who have good something is you tell them to do it they won't do it, in some cases. Now in some areas we have been successful we have been organizing for example free training here in pedagogical skills, members of staff came and attended. So for the beginning there was a need for those people to do something especially if its new. I will give another example; to be able to do e-learning you need basic skills in ICT. When we started training in ICT skills many people at the rank of lecturer were not willing to come and take it but do not know how to use a computer. Then we move and came up with a policy that if you don't take this training you won't be promoted or if you are at the lower rank you can actual be dismissed at some point. So members of staff came because of that but in the process they appreciated it and they now think it is the best thing for them.

When it came to the members of staff in the faculty some people are busy and want to do so many things: want to do consultancy, they want to do teaching, they want to do this and that! So they may not find time to go ahead and take something new they say: I will continue teaching the way I have been teaching. So they found something to push to that level and with it and after the training everybody is very happy. We were glad that we pushed them.

Q: Academics I talked have pointed out their wishes if the training were spread over semesters instead of three days intensive you offered. Have you thought of giving them continuous training over semesters in this since your policy is continues training?

A Yeah, that one we have it in plan and we are going to do it that way. But for the beginning when we are getting experts you cannot get an expert from the UK to come and be here for whole semester, you get it, and you cannot give this person four tickets or so. So the experts come for a shorter period so up to when the experts have trained some of the local staff and given them several refresher courses. Out of the local staff we are going to have people whom you can call experts. Then those ones who are on the ground can conduct it over the period. But it is not cost effective to get an expert from Netherlands to come be here for one month or two months. So this is like training of trainers. But training the trainers, I mean the ones that are

going to go on and develop the courses that one can spread over the long period. And we are doing that.

Q: Translating university's e-learning policy is seems to me as the faculties are not really much connected to the (*name of was mentioned*) department who is responsible in translating ICT policies into practice

A: No! You see (*name was proved*) when talking to their role it was supposed to be the support unit. You have your computer with a problem they service it; you have this that's what basically they were suppose to do. To make sure the network is up. Do I want to access my email? Yes. Is the network on? That's how (*name was proved*) was supposed to be in the beginning but they are trying to move into managing e-learning. And the other thing they are not suppose to engage in academic activities that's the role of the faculty. So in some cases even with this faculty they tend to find they're interfering with us, you know, but generally theirs is to provide service. So when it comes to academic like in the area of e- learning supposed to be done by us and the School of Education.

But as at faculty we have also been saying that you cannot have successful e-learning programme unless you have access. On-campus access, you know, on-campus access is a prerequisite for on-campus e-learning you know. Off-campus you can be anywhere and any access but here when you are on-campus you must have access. Secondly, since it takes on basic courses in ICT plus you are able to use internet we're able to use these online courses. Imagine you get somebody who has not had any basic training say here is an online course; they will not use it because they don't know. So as a result of that, that is a major limitation. But the faculty as you've seen are now not putting up 12,000 square meters of space 6,000 square meters of space for the lab 6,000 square meters for the lecture theatres. And with the (voice lost) those labs where we expect to accommodate at any one time between 6,000 and 8,000 students in the labs because the labs of size 1,000. 1,000 computers per lab and we have 6 of them, maybe plus other small labs and plus one in this building. We can provide two things. One, training in basic ICT skills for all students and staff in the university. Two you can use the same lab to provide access to the students. So with those two, e-learning become much more feasible at (*name was proved*). But without that, the building is going to be ready early next year. Then after that we'll need to equip it so we have to look at the budget for equipment, computers and so on and that costs a lot of money.

Q Umm...you talked about human resource which is also very crucial and you need human resources who can use these facilities you mentioned and these human resources need to be developed based on the local needs instead of recruiting consultants from abroad, is this also part of your future plan?

A: You see the university recently set up human resource department and part of its function is to provide training, continuous training both to administrative and academic staff. But you see for the beginning there has to be somebody who is an expert and today and the experts are the ones who have already used e-learning. And we are getting some of those from Netherlands. Now when they come and interact with our staff who are good also in training like the ones from the (*name was proved*) who have done pedagogical training and so on and who also have a department of

Higher Education, they are good at that and then we integrate the two, I think at the end of the day we'll get someone who can be called an expert in e-learning and these local experts can train us. Because when these people come they don't use examples from Netherlands, they use examples from Uganda which I think makes it localized in a way. So, I think at the beginning we have to get experts from out to show us what we are good at. What are, what we call good practices or best practices for some people then after that we say how to develop our own capacity and our own expertise. But at least we have to learn it from somebody.

A: We will come back on this issue of localizing, but now; academics I talked to have mentioned to me their wishes to have regular meetings among themselves and learn from each others and their experiences, or if you like it to use Action learning approach. Is that something your faculty had thought about, to encourage academics learnt from each other?

Q: You see that one has been going on for the last two and a half years. We have a programme under Cisco systems. It's called the Cisco Certified Network Associate and the Cisco certified network professional. Now those are online programmes diploma programmes manned by Cisco systems worldwide. So we happen to be a Cisco regional academy and on that program, you'll have like 18 instructors, using the same content online, same presentation everything. So what we are telling those instructors and those programme lecturers is to sit and discuss how they are going to approach those issues with the students. Now the other advantage we've been having is that on our undergraduate programmes we have reasonable a number of students. So those students are divided into smaller groups. They may be 2 they may be 3, they may be 4. Now the lecturer teaching on those programmes or on that very course, the online content is the same. The exercises are the same. What you are going to teach or how you re going to update the content online have to be discussed and agreed among the group. So they have been working in smaller groups and not like all members of staff discussing in one group. But when you are going to teach the same group and you are four people, they definitely discuss. And we think it is something we are going to continue doing because after that semester you change your lecturer teaching that course. So you find someone in another group discussing with other colleagues and so on. So it is something that is going on, but not for everybody at the same time.

Q. *Let us go back to issue of localizing. African countries have importing ICT, from other countries, especially from the West, in many years. And their there are calls now for the African intellectuals to have their own identity in the e-learning context; so do you think its a realistic to have an African approach or model for e-learning here?*

A. the answer is yes and no. I mean it depends on the skill that you are looking at. When I look at an expert for example or a professor in computer science. You know that is science, so maybe its the person how he presents himself but the content really is the same. I've had the opportunity to be almost in every country in this world, you know because of my position and role so by prior training. And what I can tell you is that everywhere I go I find people doing things differently. If you train in a Scandinavian country, the way the professor works with you, the way that person and so the kind of skills you get is different from the US different from UK and so on , and what I think is a good thing, and that's why I've told my staff that inbreeding is

not the way forward. We need to train from different parts of the world. There are systems where students trained tent to think that they over their boss and the student is a slave so whatever he has to say he must do and whatever advice he gives he has to do, no question. I am the professor, in some institutions it works like that, in others the student is a king, you know. You only got your (voce lost) and say I'm working on this idea, how can you advise me and so on, which I think is very good. So when you talk about African identity, you actually realize they are weaknesses in a way. We don't have many experts. Some of the experts we'd have had they migrated to USA, to Western world. So what I think we need is like (voice lost) faculty. We are now organizing an annual international conference here locally. So these experts come and interact with us locally, so they are able to meet our local professors, our local students, and our local staff. They also learn from us as we learn from them. When it comes to e-learning I don't want to re-invent the wheel, many countries have already done this and have done it so well. But some of the things they are doing are not apply to Africa. So we have to look at what is applicable to us and what is not. Now if someone is coming from the Muslim world, may not be used to seeing women without what (headscarf) whatever you call it, yeah. But in the US somebody can use that content with a (voice lost) so it may not be (voice lost) in your place so how can you pick out what is good and what is not and you leave it out? So I think the issue of identity goes with culture that is one component you can incorporate it in, but it wouldn't be good idea to say that this course for example in data Structure and (voice lost) was developed in MIT we can't use it here. We use the same textbooks. Science is science. When it goes to other areas like religion, like maybe something like arts there I agree but in the area of science I wouldn't agree entirely. The thing I could talk about is maybe you need to use local examples. You know kind of you localize the content using local examples but people can understand better.

Q: *KEWL NextGen which this faculty is using now has been developed locally while your are trying to stop Blackboard which is an American product, I was told, is this part of your attempts to use local expertise and do you think there is a need for Africans to own part of the knowledge?*
A: You see, that's why I said yes and no. I'm somebody who believes in open source software for example. We've developed lots of systems for people to use but you see we have to look at the investment. Look at Blackboard: someone has invested in maybe 30 million dollars, you get me, to develop that product. Here you are having the product that has just been developed with 10,000 dollars. It's like comparing yourself with Microsoft has put in one billion dollars in their product. Maybe we're saying our local thing we also put in our time worth 100,000 US Dollars. Definitely the quality of the products is not the same. So if you are trying to change people to say, leave this face-face kind of teaching. Develop courses online and let students interact with the system more than they interact with you, they themselves will be student (voice lost). You don't want to transit to go into a system which you are not sure that it will work. I'll give you an example. Here in the university we migrated to web mail and at one point members of staff were actually backing up their mails in that system, they lost it all. But if it was Eudora or some other developed package, that wouldn't be possible. We even have recovery mechanism, you know. So what I am trying to say is that as much as we want this we should internal system. You only migrate to this so called NextGen, KEWL Next Gen when you are sure that actually it is ok, and as of now this is still a (voice lost) version. So we really have to give these things time.

Imagine that I've encouraged a professor to come and develop a course online and I say here is a stable system, it's called NextGen. Put your course in there and he does that. Two months later the content is lost or students can't access it or he gets problems uploading exams. What do you think? I've told you before, these things can't work. So I'd rather first put you in Blackboard where it is stable 100% 365 days a year and then I say also there is this other system. It is not that user friendly, it is free but distinguish promote it, you know? Because most of these systems developed in Africa are not user friendly. Somebody can switch on a computer and is able to use the Microsoft you know? Like Windows 2000, Windows XP and so on, but you go to Linux, you go to UNIX, you need to know some commands, you know? That kind of thing. So we can't rule out all this. I looked at this KEWL NextGen. It's a good system but for this university we need to run both systems parallel. And I am one person if the university stopped funding for Blackboard, I'll continue paying money to make sure that the two systems run parallel and our staff can easily migrate to KEWL NextGen. Let's not say, let us promote our product and then end up losing it all.

Q: Still on that issue of importing ICT from other countries, if this trend of important ICT from other countries continues, do you not think that would influence local culture and initiatives?

A: You see like I said we are, if for example I'm going to recommend software to bank. And you're handling several transactions of customers, there's a lot of money in the system, you know? You are looking at several issues, that system being down for just one hour might cost you a lot, you know. So I cannot recommend a system that has just been developed locally to do the commercial banking. You get it? Because I want something that has been tested overtime and in Africa in most countries, ICT is just new, its a new thing. We are right now training at Bachelor's level, Master's level, and PhD level. Once you have built have that capacity and seen it has been built and tested over time, you can recommend such a system to a bank. Just imagine we develop this software for treating patients and we took it to (MARACO) and said this is a good software and start using it. But somehow this software has a serious fault, you know? You could kill several patients. So you want to use something that has been tested over time for some of the critical functions. Now where can I recommend such locally made systems? For example if I have primary school here. They have there records, if they lost those records. It wouldn't be big thing they can easily get them. If having small fun doing such business you can give them that cheap software, if you have a small microfinance company you can give them that. So you have to look at where, look at (*name was proved*) university. With 35,000 students every year, then you recommend a software that has been developed locally, has not been tested over time, you use it two years down the road you get a problem, and then you don't have any of that information. Can you imagine that kind of corporate loss or chaos? So we are not like discouraging locally made software but we are saying let us be professional and decide, you know? Where to apply it and where not to apply it and I wouldn't recommend anybody to apply it in capital intensive organizations or systems. First test it from elsewhere after it has been tested, apply it.

Q: *We will go back to an issue be stick to junior academics and not with senior academics staff in terms of attending ICT training, why there is need to use to different approaches?*

A: You see, you have to look at the short term and long term. When I'm looking at long term, the senior people will soon leave the university, either through retirement or death you get it? Because they are old. Now the young ones they are going to serve for several years, so you are to invest in anything you have to focus on those first. And you realize that young people when it comes to change they adapt that change easily. But senior people you have the professors using his notes. It's so hard, and you've seen even in Europe or other place, it's hard for them to change so easily. So the best thing is, first get the lower academic staff or junior staff or new lecturers to make sure that they adopt that change. Then you could get that lecturer, work with a professor to develop his course, maybe be an assistant on that course, you know. So that the professor can come on board gradually. But the idea is not really about completing, we're only organizing training. We're saying this is compulsory for all staff at this level but it is optional for the other group. And if you find that it's actually 75% of them come and attend. But if I state its compulsory then you may find that even the percentage has been lowered, they're simply not coming, you know? So but you say that this is good for all junior staff, we think it is also good for you. But for you it's not compulsory, please come and attend. And personally I also go there and sit. So when I sit there, people turn up because I'm also there. That's what I was talking about people in management have to take something seriously. And you can't take it seriously just talking. People actually have to know that you're going to be there.

Q: *Isn't possible to use this kind of approach which is more or less dialogue base with junior staff, I mean trying to reason with them first?*

A: You see the point is if you're looking at people acquiring skills, people being able to deliver. Now why I am saying that with junior staff we have replacements. Most junior staff have masters' degrees' you know and who have produced enough, locally and from abroad. So if you're going to be so soft with them they are not going to acquire those skills as soon as possible. The students will suffer in the long term. So we're doing it because we want them to acquire the skills now and teach the current students, you get it? But one they can (voice lost) they are going to use e-learning fully. Now if you're going to make it optional, the young staff are also looking for money. Uganda this is a third world country, so we have so many things competing at the same time. You find that you're getting 25 or 30% of attends of staff. Now that won't help you when it comes to the side on the students. So we get too harsh when we say this is compulsory for you but after they take it they come back and thank you and say this was good for me, you know? So the most important thing is how do they feel after the training? You know? So we push them there first, but after the training, they are all happy. If they were unhappy then I should have said wow, I should have handled you softly. But I don't (voice lost)

A: *OIC, I met people from (department for ICT support) and they informed me that they have trained so many people but they are not sure how many of them are putting their course online, do you think there is a need to have a second look into the whole issue of staff development?*

Q: At the university we have a goal (an interruption has occurred in the interview room). At the faculty we have a policy and the university has a policy. And we

derive our policy from the university policies, OK. So the University said that e-learning must be implemented in every faculty. Now to implement it there must be will from the top. For example the dean, the chairperson of the planning committee, must be able to commit funds, at least to start by getting each lecturer a computer in the office. And all faculty lecturers don't have computers. Now tell me how this guy is going to start developing an online course after training, you know. And after that the lecturer thinks that if they put their time into it, they won't be able to use it with their current students in campus because there are no computer labs. You get it? I've invested a lot of time to develop an online training course and I'm saying my students to go and study it online but the students will come and say where are the computer labs, are you expecting us to go to Internet cafe's, you know? So there is that problem, access like I said earlier and also lack of leadership will to make sure their staff put in practice what they have learnt.

Q: It may be true that African countries are not able to develop their own software and virtual learning environment, but do you not think there is a need for Africans to develop their own way of approaches in preparing academics staff for e-learning usage?

A: Definitely. You see when I talk about a B.Sc. in computer science curriculum. I can pull the same curriculum from Harvard, and teach it here. Because basically most of the things are the same. Now if there is a course about ethics I have to understand how the Ugandan people behave, you get it? That can be localized. There is something about peace and conflict resolution. There may be no conflict in the States but there is conflict here. I can understand that. I also have to understand how to interact, for example you may go to some part of the world and find that student's never ask their lecturers questions. In another part of the world, students want to interact more with the lecturers. The lecturer is about students push...you know, asking questions. So basically they have to study the environment and even when you come to (*name was proved*) University, we'll all teach differently and that's why I said you need people to train from different countries. You know? The whole approach is also different. You may even find administrators who can teach this way or teach the other way (Not clear). So there is no uniform kind of applying the policy. It's simply about teaching. When I go to class to teach Ph.D students another person goes in to teach these students they way that person teaches harmonize we don't harmonize it. It depends on the way our student (voice lost) student, how should I teach, how should I package skills to these Ph.d students. Personally I believe that Ph.D student by the time they open should be able to be an expert in this filed. So I'll push you towards doing most of the work yourself as I begin telling you, do this, do this, do that. You know? Some people want to say come and (voice lost) my own discipline (voice lost) and I'll make sure I (voice lost). So I tell you because I want to publish a paper. Can you do this...no no no. you have your Ph.D. But this person after this can't do much. (not clear) so that I'm saying is definitely there is need for a local way of passing on the message...the knowledge because the way professors teach in the States is different from the way professors teach here in a way, but you're passing on the same message. So that has to be incorporated when they draw up the curriculum. But the general issues you can get them from an expert, in UK, in Europe wherever. Now once you've got that you as the person teaching locally, has to find a way of how best can I pass on this message, yeah.

Q: ok, the message then is; let us get ICT facilities from other countries deliver it in our on way?

A: Customizing.

Q: Customize it locally. Realistically do you think that is something that can happen?
A: Yeah. That one, you see, one of the things that is going to happen in (voice lost) in the near future, that I think if people.... one other thing that has been lacking is focused planning. There is no planning mechanism that is focused here in this university. We say we want this, we want that, we want that, maybe there are ten competing items. How do you prioritize (sic), and how do you say A should precede B, you know. So I'll give an example, we.... we were faced in this university with the issue of access to students. An issue of delivering online courses. Let's just look at those two. The question is how to you address them. Now, somebody who was in charge of implementing that policy went ahead and said well we need to first set up (voice lost) all over campus so that students can first play with the commuters send mail and so on. The other school of thought was about ....set up a few computer labs in a few faculties, centralised as many computers in them and students would find those computers labs. People were saying no, students would not go there - we have to take the computers to them. But if you go to town, which is far away from (*name was proved*), most of the customers there - the clients are students from (*name was proved*) University. Which means that if these labs were ...had been centralized, maintenance, management...and could be used for many purpose activities like access, training and so on but that's not the case because we took the labs to the halls residents who have set up small labs with faculties...you know. So that is the whole thing, we need (voice lost) planning that is focused. And once we have that I (voice lost) everything would go well in this university.

Q: I think that is it from me. If you want to add anything on this issue especially how you see future ICT at this university I would be grateful?
A: Now you see. Maybe if I may say more about faculty here. You see our mandate is to provide training in computing and ICT at all levels. So again we have a role to play when it comes to imparting skills already in the working profession, like people in the public service, people upcountry and so on. But we felt we cannot tackle the whole programme at once. Right now we want to make sure that all (*name was proved*) university students are able to access a computer and have enough time on a computer. That we are going to achieve once that training is in place. Right now, we have achieved it with our own students. You would never go to any labs down here or on the outside. (voice lost) and find students...two students on a computer. With students lining outside the computer lab. So that we have achieved...we achieved it for the whole university.
Now once that is done, we want to use our resources to promote the private sector. So one of the strategies we have right now is ...can people in the private sector come here for example at night, hire two labs or one lab put it the employees...these employees could be providing tutoring to online learning...to people let's say...people in Canada, it could be easy to outsource it, you know. Now we also want to make sure that once this (voice lost) is in place and (voice lost) can we provide (voice lost) who have computers in their offices, you know...there are people who have computers in offices in town. We (voice lost) can they do that? We also want to provide (voice lost) learning. If (voice lost) time to come and attend lectures here.

They may not have access in their offices. Can we register them as students? When everything has been put online and they come here and access our labs and study on their own. Then maybe come once a month for face to face, you know - that kind of thing. So we are (voice lost) how do we phase out all these things we want to do? And we want to start, we want to see if it is feasible and then we expand on that. So do I look at these faculties (voice lost) one of the training centres, major training centres in the current continent. And we are hoping that once we put our resources in place, the donors and other development partners are going to come in and fund us. Because there is limit which you can go. For example after I set up that building, it would require about seven thousand computers - one building. Now, that's a lot of money. Seven thousand computers. So, we not only need PCs, these laptops, (voice lost) high end machines like clustered servers and so on. So who is going to give us that money which is in like half a billion dollars, you know. So some of these people will come in and support us. But I think that the issue of e-learning is going to be the (voice lost). First of all universities must focus on ... focus on - on the campus e-learning. Later on the will focus on off-campus, where by access country-wide has really improved. So in Uganda we have a problem with the backbone, and that one is being addressed. We have a problem of people in upcountry centres not having access at all. I hope that will be addressed in the near future. So, if there could be a coordinated...I mean if there could be coordination at the national level and this one is being addressed by the government proposing to set-up a ministry in charge of ICT. Now one you have a ministry in charge of ICT, you have communication technology....communication technology and other areas. (Voice lost) Broadcasting council.

The other area we want to address in this faculty is to address people through TV and radio. So our other plan, maybe three years down the road, we want to set up TV stations that cover the whole country and has some of the training conducted on TV. Now we know that not everybody can have a TV. Later on we want to approach training via radio, where you can explain basics to somebody over radio, you know. And of course with these mobile technologies also coming up, we can also adopt a system where we can develop our own software. Send information notes whatever its to people with their mobile phones...to register with us, you give us your mobile phone number... (Voice lost) always disseminate information to you wherever you are. So we want to exploit all the avenues that are available to us, but we have to look at it from the costs, you know. The cost perspective - can they afford? If they can't afford what can we do. But really, if you come back like two years, three years down the road, we'll have done it.

In the end of e-learning and also providing education for all. I personally believe in life long learning and as you read I just want (voice lost) into politics butt at this time appears to do much more here before I move on....

Q. Nice talking to you, and thank you so much for your time!

A. you are welcome!

Male academic developer from department of ICT support

Q: Could you briefly explain to me what this department does, what it is main role?
A: Ah... *(name of the department was provided)* actually is a central unit which is in charge of ICT support, management and advisory roles to the entire university. We coordinate all initiatives ah.... regarding ICT services in the university, so there are a lot of projects which we've actually been directly handling: there's that project of the network backbone and all those kind of things. We did all that as *(name of the department was provided)* So *(name of the department was provided)* role is basically ICT support services to the university

Q: *Right, I'm also came to know there are e-learning coordinators at faculty levels, what your relationship with (*name of the department was provided)?
A: Oh well ah... that was actually my definition was overall.... was generalized what *(name of the department was provided)* does... so may be its good to bring to perspective or into context how *(name of the department was provided)* is involved in this particular e-learning component. Ah... I believe you've actually looked at the e-learning policy, and e-learning policy explicitly specifies where management of e-learning.... who are the key people who will be in charge of e-learning and also outlines where*(name of the department was provided)* fall. However, the university stakeholders decided that for the pilot phase of e-learning *(name of the department was provided)* should take charge of piloting e-learning. So what we are doing right now we are actually piloting e-learning. Five priority faculties that were identified by again the university stakeholders (names of the five faculties were provided). So we are in charge of piloting e-learning.

Q. Talking about these five priority faculties you mentioned, I'm aware that you have provided training to academic staff at (name of the faculty was mentioned), have you you done similar training in the remaining four faculties?

A Yeah ah... we've already, we've so far actually offered ah about 2 training cycles, completed training cycles. The third one we had started about three weeks ago but that unfortunately coincided with the period when they started (voice lost). So the first training cycle we started in April last year. The objective of that was actually to train trainers. So we wanted to train five people from each of the faculties - each of the priority faculties - who would then take part in training people in their respective faculties, OK? It had some challenges because we ... for example one faculty we never got any representation - that (voice lost). And also at that time, after that training the platform which we were using, that is the Kewl Next Gen; is an open source platform of which we are part of the development. At that time we still had some few bugs. So after that training of March and given the low response and the fact that training was not so smooth so it was not possible to expect that the people who were training March would able to continue training others in their faculties. So we have like an e-learning implementation committee which has representation from each of those five faculties. So a decision was made that you know what we do - let's have a fixed number of ... a fixed set of trainers who would then go around training all these people. So we did a first round of training in August and September, where we moved in each of these priority faculties and had a five day's training and on average we trained about fifteen to twenty people from each faculty - each of the priority faculties. And as expected ... usually after the training - after the training we

expect them to start developing online courses with our support and providing help - desk and all those kind of things. But the challenge has always been that the response on the people who have been trained to go and start developing courses after the training is so.... is not a hundred percent. So out of ... for example a total of ninety people I would say who have been training now - as of now - within the priority faculties -I would say about thirty have started somehow on course development umm about 7 to 8 courses are complete which are good though of course these statistics can be verified. That was about a month ago, those statistics

Q: In your view what do you think are main causes of seventy percept of people you trained are not using the skills they gained from these training, do you think academics have no appetite to this whole e-learning issue?

A; Ah... One... I think to the lecturers. This is my own analysis. They have a feeling that one; it is extra load on them because... why it is extra load or double work is because one the university has not yet institutionalized the use of e-content. Which would mean, if the lecturer developed an online course, it is probably up to the lecturer to see how to subsidize it... how to balance between the classroom teaching and the online courses which they put. So to many lecturers they still have to do double work anyway. They still have to prepare the online courses and also do the particular classroom study material. Ummm two, the lecturers also at times they complain about access. Like medical school, they are saying staff computers are so few. OK. Very few computers...very few staff actually have computers on their desks. And another one which is a big challenge... I think is a big challenge, because people expect to be rewarded for things they do, but that this being the view of the project is that it is helping lecturers do courses which of course they are supposed to do...its actually part of their work so there is no immediate reward for people who do course development. So majority of them underground talk; what are you giving us, this is extra work for us. So they look at it as extra work for them which is not paid to do that.

Q: Is it fair to say then that at this stage talking to academics and explaining to them the importance of ICT are actually more important than delivering the actual training sessions?

A: Ah... the thing is this was a systematic process because uh... when you start looking at the different documents we have you realize that there was a master plan - the first master plan set out - of course there is the first policy and the following - I mean the subsequent master plan which was annexed to that. So it's set out to actually plan how ICT was going to be introduced to the university. Both office automation services like buying computers and training people how to use office supplies and stuff like that, setting up infrastructure and eventually introducing value added services including e - learning, information systems like student records, library catalogues, and all those kind of things. So one of the first activities that were actually done was the end-user training. There have also been a - quite a number of workshops that were conducted. At different levels. The top management were actually briefed a lot about the benefit of ICT. Then the middle management. That is at the level of deans. Faculty deans and faculty deans - and departmental heads. All these. But maybe actually, they were not ready. Unfortunately, at the initial phase of this ICT introduction I wasn't part of this unit, so I cannot comment a lot about the awareness campaign which was done prior to that.

Q: You pointed that senior staffs at the university and heads as well as deans were made aware the importance of ICT as teaching and learning tool, while lecturers have not had similar opportunities and at the end of the day they are the ones who are expected to attend training sessions and implement ICT. Academics are not being treated humanly here; are they?

A: (Laugh) O.K. That...that...that is very interesting because one, there were those lecturers who didn't know anything about IT anyway, so there is no way they are going to make a choice of what they didn't know. So the end-user training for example had already...

Q: But was there any attempt made to consult with academics that you are aware of?
A: I am talking about the tool - let me first put them...the two clearly - there is an initial training programme, which is the end-user training programme, which was focusing on building the skills of every staff members of *(name of the of university was mentioned)* University on how to use ICT, send mail, surf internet, edit word, do excel, do presentations, all those. That is what faculty of computer science did. I think you are aware about that. Then, e-learning. Very interesting. There is a choice between the platform. Again, it's like, for us like introducing something what I would say; advocating for something, we have to be guided by what direction is the university taking. So one of the guiding directions is that the university policy for example on e-learning has got strong bias on open source and says where an open source exists. Then its use - is preferred over that. And also on the long term strategy in terms of how you can customize things. One of the big advantage of open source - OK of the Kewl Next Gen. is that we have the development people. Part of the programming team is here. The gentleman in my office is part of the development team of Kewl NexGen. The entire tool. The entire tool is used in seven other universities in Africa.(names of the universities were provided) there is now another university in Mozambique coming in. So it's like a consortium of African universities that are coming together under an umbrella called African Virtual Open Resources and Initiative to build solutions which work for higher institutions. And we are so committed to contributing to that initiative because as a university we know that, one with a local capacity to control what we use; we can add value to the end user. What does that mean to us - one; if... if a - if the learning management system for example allows people to - allows people to - allows uh...lecturers to mark assignments... test scores of students and enter them on the knowledge managements system, then it should be possible for that assignment or marked to be transferred to the students' system so that they don't have to enter things afresh for the purpose of transcripts and all these kind of things. Likewise the student who is logged into the knowledge...or maybe the e-learning platform should be able to check a few of their services - I want to see what are my grades in other subjects, I want to see my partial transcripts which is coming form the students system. So you have that central view - you now view this as an integrated system, which is part - which is not possible with the proprietary system.

Q: Kewl Next Gen. is an African product, correct?
A: Yes...It's an African product for African universities.

Q: How about Blackboard tool, does your department encouragse academics to use Blackboard along side Kewl Next Gen, or you stopped?
A: We... actually, to tell you the truth, unless of course maybe you get the correct data, but the last time I knew we were still processing license for paying Blackboard so we....we want to encourage first the adoption of e-learning form the university. OK. So we ....we are saying we are not going to abandon Blackboard but our focus, we are going to push for the open source because of the many benefits. So it's much better than ...it is much better to leave the two existing, tell people what they can achieve, with this and what they can achieve with that. And how for example, they would give more services to their students if they were here because our unit is going to be engaged in developing those value added applications and those would be accessible on only those compliant systems. Which would mean a lecturer who is putting courses on Blackboard for example would be depriving students of added services that they can get once logged in to the students system.

Q: Does the difference between Kewl Next Gen and Blackboard due to cost issue or Kewl Next Gen which is an African product does much more than what Blackboard does?

A: Ah... we've actually done uh...progressively I would say, the open source plan is progressively adding more features into that. We did an evaluation with CIT; we are the team that did evaluation with CIT, to look at what Blackboard offers and what is currently existing in Kewl NextGen. Purely from an improvement perspective to help the enhancement or adding more functions within Kewl NextGen...so I would send you the analysis which actually was done with CIT because CIT is a heavy user of Blackboard. The guy who did it (interruption)

Q: Sorry what is CIT stands?

A: Computer Science faculty... They are...they are heavy users of Blackboard. So they knew it they gave an honest assessment which actually did say Blackboard had a lot of advantages over that...but we took that as a challenge and progressively started improving where Kewl had weaknesses. Incidentally some of the lecturers we have been training from up here did say they find Kewl now, actually a much easier tool to learn and use so it's uh...it's that. Maybe, the best people to answer that could be the actual users to answer.

Q: How often your provide training to academics?
A: First the driving principle is to make sure we train everybody from the five priority faculties. So that is a total of about three hundred lecturers from all the three ... priority faculties by September of two zero seven (2007). And, as I told you the chronology: first was training of trainers that did take place, O.K. it did took place but the approach changed. Then we did some other training in September. After that training in September we came up with a comprehensive training programme that starts from... - immediately after the election - well starting from February. Actually, one week before the election, I think from 17th of Feb - and it was spanning up to July. And the focus was that. It is so difficult, from the experience we learn. It is so difficult to go to one faculty like computer science and say give us twenty people and we train for say three days or five days. So our idea was to have rotational training programme ...uh...we could say this week, we are

training up here and we are getting three people from that faculty, three from this, three from this three from this, three from that, three from that and then the next time we do that . So we were sending out the training programme so that the lecturers can identify the slots that can fit them, but now like I think my colleague has told you we were unable to implement that because we had a power problem. Since we started getting this power problem (interruption)

Q: Is there not backup power generator here at this faculty of Computing and IT which you office is base?
A: Probably here you can't know because there is a generator. When power goes off.

Q: So we are talking here other faculties?
A: Yeah

Q: And have though about using this office rooms for training as there is backup power here?
A: No we can now...we are having a meeting . There is a meeting of e-learning coordinators from the five priority faculties on...on Thursday, maybe you want to come and attend at three. That's tomorrow. Form three o'clock. Yeah, here. So we want now to see how we can carry on given this.

Q: Academics I spoke so far had concerns of timing and time of training of being very short and they haven't had time to cover a lot; how do you feel about this?

A: Yeah, that ...that is also very true. Um... we had to. It's good you are going to come and have a meeting here. One of the ...one of um... the underlying principles that made us for example choose training for three days or four days. Every time we train we'll have an assessment form. So we also see people turn over. Somebody comes in the morning then goes away in the afternoon, but increasingly everybody was always complaining about time or being away from their desks for a whole three or four or five days. So we say now how do we do it? One, should you train everything or train something which is maybe sufficient for somebody to start. After all learning doesn't stop. So, even on the Kewl NextGen. We were focusing on very few aspects, one we wanted to show them the communication tools so that they can communicate, they can use it in their classroom for generating discussion forums, e-learn - email communications, chat and stuff like that. And then we introduced them the component of - the course module within the platform. O.K.? How to design courses how to do assignment how to align their things and stuff like that., So our pedagogical component also lies on that, so someone who is coming to talk about the pedagogy is actually talking about how do you put a good content online. Just that. And also from this side, we are coming form maybe the psychology bit. Reinforcement, stuff like that, but centering on the specific tools which they are now introduced to - the communication tools and the course development. So they are very right. We...we actually did a short training programme which is a challenge; we need to sit out to... (Interruption)

Q: Just to add that, academics wanted to be consulted; to have their say about the timing of the training. Perhaps this would made feel they own this things and their views are important, what do you make of this?

A: That's true actually... one of uh....the interesting thing is like here we are not afraid of challenges and every time we do something usually we start when we didn't know anything about it and progressively we keep to getting to know more about that thing, improving and stuff like that. So it's one of the driving principles we have here. One of the things now we are looking at - we had a discussion with my colleagues, we are going to discuss it with these people - uh... the participatory thing we are talking about is the driving force. Because we say now, each time we ask to train people, first it is a big hurdle to get - if we want twenty people, you have ... willingly probably you are not going to get twenty. You have to involve the Dean and the Dean has to write a strong letter and the people come. And yet our focus is not necessarily actual training. Uh.... we want at the end of the training ...these lecturers to be able to develop courses. O.k. And yet when we go to the dean and say we are going to train, that is also that is the message that goes across,. And a lecturer when coming is pre-focus let me anyway since it's only three days, let me go and see that after there days I'm done. But now when they attend the training, something which is secondary to them is communicating with them....That now after this you need to develop courses and they say forget it. So what we are saying now, one of the strategies we want to try, you this is a pilot. We want to get these guys together and say the approach then should be ,...uh... each of these guys get maybe two or three lecturers from their faculties who are interested in converting their courses online. Once we've gotten those three or four and then times three. Maybe we have just fifteen people from the faculties, we sit down together with them, then we say O.K. you want to convert your courses, What does it involve? So we sit together and draw up a work plan. Now the work plan will include training as an activity to achieve the other things.

Q: *That is something you are planning...?*

A: Yeah...yeah, that's something we are planning.

Q: *Is there follow-up mechanism in place after training in order to see if academics are using the skills or require further help?*

A: Whether they are....what....what I would say we do as a follow up is uh... after the training, we ...we ...we have like in the structure - the training structure, we give them about one week after the training to go through the content and do self exploration - explore more about the tools then after that we ask them to register formally those who would want to start content development. Now those who have registered we follow them up we help them those kind of things.

Q: *Is there a specific person that academics they could contact if they require technical help, for instance?*
A: Yeah, we have a dedicated person who does help function for e-learning - he's dedicated to that.

Q: *I have done! Feel free if you want to add or say more about challenges your faced how did you overcome and how do you see the future e-learning project at this university.*

A: Yeah... thanks a lot, it's a very difficult thing to push e-learining. It's quite difficult. One. I've told you about the commitment from staff. Um... they view this as probably extra load on them, so it's so difficult to get active participation from people. You plan a session you get just less people. Increasingly you get less and less lecturers wanting to come and train. Uhh... what other challenge can I think of immediately? Of course, the course development, the lecturers are a bit reluctant to get down and start developing courses. Er...one of the challenges again also we have here is like the staffing. We don't have a fulltime person dedicated to e-learning. I'm a database manager, so uh...I was just helping because the e-learning people are not ob board. The advertisement was made at one point, it was suspended. So its basically administrative problems with our recruitment system, So we are so much understaffed, and yet this actually needs a dedicated person who is giving twenty four seven thinking about the challenges they are meeting and striking a way forward..... It's not an easy thing...not easy

A: *Thank you so much for your time.*

Female -trainer of trainer

Q: Can we just start...I'm sorry I had a technical issue, some problems earlier on. Can we just, can you please say again what you actually do.

A: I'm part of the developing team the developers of the actual source code of the e-learning tool used in *(name of the university)*. We customize it; we customize the source code to fit the university so different universities have customized the same code to fit its university.

Q: And you say, are you... do you come under the department for ICT support?

A: Yeah, I come under (them) but not directly just second there as an intern in training. Because they are trying to improve like software like, that involvement of the females, the females in software development. Because everyone thinks software development is hard. So we are trying to like encourage like...

Q: Right. How many of you are at the faculty? I mean trainer of the trainers?

A: We were two but one of them was just seconded to (the department of ICT support) and then me. I got (the department of ICT support) as an intern. But I work for the faculty still an intern teaching assistant. Still doing ...

Q: Let's talk about the tools...before KEWL NextGen That was Blackboard. What's the major differences between Blackboard and KEWL NextGen.?

A: Between Blackboard and NextGen? NextGen has a ... it's more of a classroom. It has that atmosphere of a classroom. Actually a lecturer can sit somewhere else and a student is somewhere else and still they feel like they are in a classroom. They will communicate as if they were in a classroom. Unlike Blackboard where they can post assignments, but once an assignment is posted, the other person logs in and picks it. While here you can have the different modules that are created on NextGen. They are forums, they are examinations that can be taken on, you can grade, grading can be done and actually on NextGen. So a lecturer and a student may not have to meet at all but still you feel like you have been in class, unlike Blackboard. Because I have used both and I feel, yeah.

Q: You used both and you trained academics?

A: No I didn't train in academics but I used, I used Blackboard as a student. And I've used NextGen as a student and as an administrator and a developer.

Q: Good. Let's talk about the... some people say there is a lot of problems with NextGen with KEWL NextGen. How would you respond?

A: Ummm, one this is freeware. Two, it has, we are really trying to minimize the problems but just like any other software you can't have a hundred percent efficiency. And we are really trying to customize, make it look like human beings. Someone goes to class to study. So we involve all the possible environments that can be there

in a class. So, and since this started in South Africa they had a way of writing their source code which was not common to us. And we had to (voice lost) so we are still going strong, but problems (voice lost) most problems come up because when people are training they don't pay attention. So you find someone coming back up to you and telling you, I don't know how to do this. Even after you explain to them, but because during the training no one was there to monitor what was really going on. They may look at you but they are actually not taking in anything, because they face those problems because they didn't pay attention.

Q: But... umm... some people I've actually talked to them say there is a lot of problems with NextGen and keep using this Blackboard.

A: It's because... still it's the training bit of it. Because that's why we did the training. Because people did not want to use this tool but you know Blackboard came at a time when lecturers would want...when it comes to KEWL lecturers want to do their work. And Blackboard makes lecturers lazy. Because what a lecturer is going to do is just post notes finished. That's what they do. But in KEWL there is a section where you post the notes. And there is a section where you actually explain, you write out your course. And this is what people have failed to do. They are being lazy; really that's why they opt for Blackboard. Just post notes, and a student is supposed to read.

Q: Ok, let's talk about the other issue which is also related. Tell me about how you conduct training. How you do the training instructions.

A: We split it up. And first of all we take this training as a pedagogical training. So people are first enlightened about training. About teaching, the objectives of teaching. And what you gain with the local method of teaching. What problems we've faced with the local method of teaching. Then we start to tell them, like any solution, any other IT solution. That this solution is going to solve this...this...and this. Umm and then we start to teach them how to use the tools. But after training why the tool was built if we first go what it is, how its used, the advantages of it, its drawbacks, its limitations, and we encourage people to join, give us feedback and yeah...that training was really good 'cause we've gotten... we've gotten a lot of feedback, we've been able to merge it in. Still have to do some twisting...

Q: Talking about training. Academics, I have spoken to them said that time was very short and were not able to cover everything.

A: That is not ... Ok, I can't say for them but as part of them, the treatment they were given during the training...

Q: (interrupts) were you... at that time were you were part of the trainers?

A: Yes, I was one of trainers but because I knew the lectures I found it easier to like communicate with them, get their problems, get their interests. They were given a very good, how should I say.... time. They enjoyed the time they were training. They were given, they were treated like delegates. And they really wanted this to go on... and Ok I heard from someone who said... they think after this interview probably you'll communicate to (department for ICT support) and tell them for another

training 'cause of what they enjoyed. Really but still the time wasn't so much because we couldn't offer all the training like for everything. Because for us as developers, as administrators, we took a one month training. But still it's up to one's person, like anything, like weeding. You're not given everything when you are being trained. You're given the basics, and you go out and find the rest. So, as administrator's we went out to find the rest and find it easy. Actually there those that have found it easy because of their interest. They've developed courses, they're halfway.

Q: So you feel lecturers will complain about the time they had?

A: Yeah they...yeah.

Q: And as a trainer how do you feel if someone lacking interest of the training?

A: I've been a student before and you never realize what you are missing until you need it. Yeah. We feel that there's going to be a time... they're so many...the faculty is growing. Number of students is growing. There's going to be a time when it's going to be so demanding on these lecturers and their time will not be enough. So it will be easier to actually collaborate over the Internet. Actually I've seen it happen with the DIT students and those people who have DIT classes. They collaborate, they've taken up KEWL because now it is actually easier to... the fact that you can register yourself and...all the lecturer does is enroll you into a course and then you can take part in the forums. And chats you can (sit) somewhere you're not understanding. And you can send a message to your friend. And ask them to explain something. You don't have to be in the same place.

Q: Yeah. You said, you mean, lecturers were treated like delegates.

A: Really, yeah. .

Q: But were they consulted for the training or they ...uhh only asked to attend?

A: They were ask them to attend

Q: Do you think that's a good thing to happen?

A: Ok, as any administrator it is the authority's responsibility to sensitize people about this training. Sensitization was poor because I was here. Because I do both sides so I see both ends. As a lecturer, I was here as a lecturer, and I was told about the training when it was going to be on the next day. And we were told in the evening, and not everyone was aware because not everyone was there in the evening. So people came in ... in the morning, the training had to start late. And yeah the sensitization was poor on the side of the lec... on the side of the administration.

Q: So do you think...something has to be done with regard to that aspect?

A: Yeah, very a lot.

Q: In which sense I mean....

A: Sensitize these people, they could call...it might not have to be a training it may be like, send out an (AO) tell these people there's going to be a talk on e-learning. Then make sure they know about it, and then they come for that talk. They talk about it then they tell them, there is training for those who are interested. Really, that I think is, if the talk is good, I'm sure that the turn up for the training wouldn't be bad.

Q: Umm...

A: If these people are sensitized and told what it really is, because most of them don't know. Most of them think its all about posting notes to the internet and that's it, which is not the case.

Q: And you think that sensitizing is missing at the moment?

A: Yeah.

Q: And, the other thing which some other people talked about is the need for a weekly meeting between... among academics to discuss and highlight problems they...and learn from each other's experience.

A: Yeah, that's a need but most of them don't, they feel when they get a problem. They always come to me, but that is one advantage to us because I'm part of the developers. So when something comes up I actually report it because not everyone ... (Department for ICT support) has restricted access. Not everyone goes to (Department for ICT support).

Q: Not everyone goes to (department for ICTY support)?
A: Not everyone...

Q: For support...

A: Support you make calls you send mail, but really if you'd feel more support if you can talk to someone in person. So I provide that support. So even a student knows if they have problems they come to me and I help them out. I show them what to do, in case they haven't understood something, and I show them what to do. And then I talk to the lecturer as well, because most of the lectures tell the students, "go register with the system" finished, they don't train them how to use it.

Q: Yes...

A: Which is also a problem...

Q: So you're providing continuous support?
A: Yes.

Q: ...and how often lecturers approached you?
A: At first it was like every hour I'd get like three people to help.

Q: Every hour?

A: Yeah. Just after the training. Now it is like, in a week I can get like two days…yeah, not two people because our student number is still large. So I have to give them a particular date…

Q: I'm talking about lecturers.
A: Lecturer's they could be like two people a week. And because now they seem to be coping up they can sit on it and actually doing something.

Q: And I mean, how did they do it, do they come face to face or they email you?
A: I make it easier. I tell them to come to me because it's easier. They feel …I feel I would impact more if someone talked to me. Someone would feel more comfortable if I told them I explained to them, because these are humans, they are not machines. Yeah, so we really need good communication skills to get our point through to them.

Q: The other point we should talk is tools. Recently you have started KEWL NextGen how long do you think you'll continue with this NextGen, do you think you will go back to Blackboard?
A: I think it has to go on, because someone approached me, a lecturer. He wants to move to another university and this makes it much stronger. So we still call for another training you know, not everyone will be on KEWL next June but we have a maintenance team, and we maintain like, if you get errors we maintain them. We do (CVSs) with South Africa, we implement new modules as wanted and I think with time its going to erode Blackboard.

Q: Will itl?
A: Erode Blackboard. The usage of Blackboard.

Q: So this will substitute Blackboard?
A: Hmm. actually that's the main thing. Because we pay for Blackboard, whereas NextGen is freeware its free source. Anyone can access it, any university.

Q: in this country?
A: Yeah, even abroad because we have universities in South Africa, in Nigeria, Ghana, and Tanzania.

Q: Six universities I was told are involved ?
A: Yeah…

Q: Who gave you the training about the tool?

A: South Africans, the South Africans.

Q: How did they train you?

A: This training was…ok first they still talked to us about …about (voice lost) sensitizing us about e-learning, the drawbacks of the local methods of teaching, and then they said we've come up with this tool. So we (voice lost) the difference between this and Blackboard. So could they give us the different things, because if you sit down to look at the different modules offered, and actually you can modify, because Blackboard even when you are a lecturer, your rights are limited. And as

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human beings we don't like limitations. Yes so they trained us, they told us how to use Blackboard, and so they showed us and said those who are interested can join the developers' team. And that developers team they gave us a module, they gave us a CD it has e-learn, how to use...

Q: (interrupts) , have you had a choice not to attend that training?

A: Yeah.

Q: They gave you a choice?

A: Yeah, it was a choice it's free, it is up to you.

Q: Ok.

A: Yeah but I'm very ambitious.

Q: I can see, yeah I can see! As far as you can remember was there anyone who said no....

A: Anyone would want a break from work, like, most times when they are training they carry you and you leave the country or you go on leave until the training is done. Yeah, no one wouldn't want a break from office, yeah. I don't remember anyone who said they don't want to attend the training; they want to stay at home.

Q: Did all of you go to South Africa to be trained?

A: No, some of us stayed here, I stayed here. Some went to South Africa, like the pioneer developers. (name was provided), I don't know if you've met him? He's a pioneer developer in Uganda, one of our programmers.

Q: Ok in training did you say that they gave you the choice you had a choice to attend or not to attend. They talked to you nicely. Was that what they did?

A: Yeah, everything was good.

Q: Why you don't do the same with the lecturers when you are providing the training, I mean giving them the choice to attend or not?

A: We, the thing is, the sensitization is poor because we as (department for ICT support), now I talk as part of (department for ICT support) all they do is contact us for a service. They come and tell us, come and do a training. So you tell them when do you want us to do the training? They tell us this and this day. So if I can come and tell you please come and paint my house, you'll say fine when do you want me to paint your house? You'll say Monday. You come Monday and I haven't packed up anything, and I expect you to pack up my things you know then you paint when I well knew that you had to prepare, before you actually came to offer those services. Yeah.

Q: So it's like more or less, you, the blame lies on the...

A: The administrators. Because we tried our best…

Q: As trainers?

A: Yeah.

Q: Right, now I think that's all I needed to ask you, if you need to add anything, further information, I'd really appreciate it.

A: Nothing much I really think the tool is nice, good. And I encourage people to actually take part in the development. Really think of things that have not been developed because there's nothing that can't be developed. Ok, there's some but most can, if you put your mind to it.

Q: Thank you.

A: Ok

Q: Very much.

Female academic staff member

Q: Let me asking you about whether you took an E-learning training as part of staff development programme?
A: Yes, we took two. That was one came late last year and one early this year.

Q: What was the major difference between these two that you can remember?
Interviewee: Actually the first one was teaching us how to develop courses; how to develop courses how to design assignments, how to come up in the different instruments in E-learning or online learning. And then the second one was actually teaching us how to now make them online, yeah we are using case study of Kool Next Gen. The one who are using to load courses in detail courses forming that kind of interruptive environment that kind of.

Q: The trainings sessions you took part, were you chosen by yourself, or your were told by your senior staff at the faculty to attend?
A: We are just asked to go for training, they didn't like say that like; can staff say what they want. But I think what they tough we wanted was we learned so many things that we are, we developed like for example some of us are not teachers by profession so we just did our first degrees in other courses and found ourselves, give lot of us give _ ambitions from teaching so we are not exposed to that theme of course development, assignment creations all that but in E-learning we are able to be exposed in such a way. So it was the compulsory course and was told that whoever is teaching on undergraduate programmes and had not offered educations as they first degree it was compulsory for them.

Q: Are we talking here teachers training workshops or for e-learning staff develop sessions?

A: E- learning it was optional and mainly to the junior staff the senior staff those who had time would attain those would don't have time would find of for (voice lost)

Q: And have you have attended both?
A: I attended both.

Q: let us talk know contents of the e-learning training, do you feel that the contents was relevant to you needs?
A: The content was relevant mainly what they were teaching us for us course development, we use that tool of TRO 500 developed by Kool Next Gen. developers, and it had, it would (voice lost) the presents that would use and they gave us materials so that at our own time we read it and understand it, so it had a lot of interesting things to expose us to.

Q: So basically designing was some...
Interviewee: Was good.

Q: Is there anything you feel it would have better been if you could do it differently?
A: Only that development of online assessment. To me that was it would be challenging development of where the assessment is interacting, students answer online. It was one of the challenging things I faced and up to now I'm still struggling

doing it. Because after we develop the courses, we were told to after had gone through the study we are told to develop the course and it would been and they are evaluate it. So when you are evaluated you realize that most of us had just uploaded notice that's all. Who had missed out from they (voice lost) what mix it online-learning the interaction not only notices. So most of us still having that challenge forcing it of us to my colleagues and most of them are known to be (voice lost) their online assessment and collaborations like discussion forums like that.

Q: *Have you tried to approach the department for ICT support or e-learning coordinator at the faculty for solving this problem?*

A: They told us to approach them, but because of that heavy load, some of us are students and lectures as the same time coordinating the two. It is sometime challenging because we have to prepare notes and upload them like first and then think of away of making things interactive because the way they explain it and they way look at it look something that is easy. So most of us we are planning actually to let them know so maybe they organise for us a separate session for only that because it seems like the only had thing ..

Q: Does this not mean that what they had introduced to you in the training sessions were not answering the problems you were facing, in other words the contents of the training were not really that relevant?
A: It answered half of it but because we admiralty if we look at the online learning sites of developed countries, for example, they are really challenging for example, SESCO Mater Card it help online exams students come after the instructor has enable them; they do the exam the system assign the mark all that. If that could be introduced to here in (name of the university was mentioned) where the big numbers are existing you find that marking assignments would be so easy. But we do not have assisting system that are in place only that how our dean was planning to implement it with some group of people who are good in software engineering but instructors has a (voice lost) because some of us are not really programmers (voice lost) programmers yes so (voice lost) just a little of it to but most of us, that people I talked to that had studied that class in of E-learning expressed to their not very comfortable with that area. So who are planning as a group to email the department for ICT support group that trained us to let us be exposed to that area, I mean.

Q: Talking these trainings sessions you attended, how did they deliver to you?
A: It was mainly lectured based, were there are over three instructors or four they would come in one for a sessions each one per a session, they talked ?? slides and demonstrations and the case study was Kewl Next Gen, so they demonstrated that they were teaching us all of us had software installed in are machines and would practice with them at the lecture. Then that was during the morning sessions. Now in the afternoon sessions, they would they would leave us to discuss as into practice on your own consult a, b, c, d like that consult friends within the room. But few people would go there to the lab in the afternoon most of us would do it individually from your computer. Yeah and when you are seated alone there chances of getting in it for sometime else or doing something else or something like that. But mainly it was lecturing, and lectures that I involving practice with lecture then they would, they actually showed us the importance of 14 discussion forums in our courses because they can enable students to learn from each other without actually, all seated in one

room. So how they introduced it was they tell us to introduce topics of discussion in the class as the lecture is teaching, maybe she is the one who introduced that topic, then we will all share ideas and they will tell this would say yes then find away of being such as in your course it will help students. But as I say the initially, most of us are not yet competent in that. Like when we are searching on the net, we meet those kind of software available in the websites and we admire them but how to get there is still a challenge, yeah.

Q: have applied yet the skills that gained from the training sessions?
A: We are using the others skills, like make your course knowing which (voice lost) in order and you look at maybe the course outline and where after looking at maybe the course outline for you to know which chapter to read or what. They are not to logical order, you have to look for something. But they trained us on how to arrange things and I would say like that Kewl Instructors when someone opens your page as it might be operating systems course page, as things logically following each other that's what we are actually trying to do, and I believe I'm progressing me as an individual. At least I'm trying to, I am applying those skills on the E-learning.

Q: How about the timing of the training?
A: it was full day in a weekday. Yeah it was during a holiday though since there were no students. So and I think that was a good timing, but there was marking of exams. So some people would really feel uncomfortable giving it giving a deadline to hand in results. But the second training, the one of early this year, it came after the marking, after we have handed in. so there where amble attention that was suppose to be given by lecturers since now they had all they had was prepare lecture notes. And the course online learning was also about it so I think. So I think turned up compare to the previous one.

A: Do you think there is a need for your lecturers to organize themselves and as a group and discuss with (Department for ICT support) and informed your needs in terms of the contents and timing of the training?
A: I think there is a need.

Q: Have you talked to lecturers about this?
A: Not, we have not yet talked about it. Since they are the once who organise, like our e- learning administrator here and then they talk to him (name of the person is being provided). He is the one who organizes with the group that is going to train us. And I think, I don't know what they based on. But I think they based on times when lectures are available and maybe the these people are available. All we wait for is there an e-leaning session and if we are call we attend.

Q: But do you think there is a need for you to be consulted about the training, like time that is suits you?
A: Maybe, and maybe not because sometimes if someone does (voice lost) that some one someone will (voice lost) until certain date. that is the thing and they and access is that written this was on the consents and say is this really important it is time to wait so I believe this because like lecturers consent if they have to find out because they are over sixty people here (voice lost) I presume if they are to get their consents when they we should optimum decision. So sometime I think it is better the way they

do it. They think when lecturers free them and to now let put it at this time. Maybe only the time of the day that would be-.

Q: But some people also argue that; if you want to design a curriculum or a programme to a particular group of people you should involved those people who the programme how would you respond such an argument?

A: I strongly agree on that. Because people need to budget or get plan for that kind of thing especially people with busy schedules. And then if you have this fulltime employee people like quarter of the group that attended .. half of the group that attended were fulltime so I believe for fulltime staff there is minimum consultation that can be done. But consulting people is good because they can plan for that thing and the can produce at the end or rather than pushing them to eat when they have not planned. So it is about to be would to 75 percent and the other 25 percent sometimes it is better I guess this session because people are busy and keep on postponing ?

Q: Talking about the software you were introduced in the trainings sessions, Kewl Next Gen., I was told that it has been developed in South Africa, and before the Kewl Next Gen, there was Blackboard in place, have you been trained to use Blackboard too?
A: Yeah we have Blackboard. But for blackboard I later then I had not yet become a lecture. I am actually a teaching assistant because I here to be given the lecture assistant lecture than you have masters. So it's remaining three months because I'm working in my research now..

Q: So you can say much about Blackboard?
A: I could only accessed it at a student. Yeah !

Q: Okay.
A: Yeah.

Q: Early on you pointed out how developed countries are well advanced in terms of ICT, do you think that developing countries should continue importing ICTs from these countries?
A: I believe so. Because if these people out there have good stuff that is the true and developing countries things that we are just learning we are just coping up with them. But if you come, for example, you get like the expertise if they come and interact with those of us here in the not developed countries. I believe they expose them to become competitive the way the experts are. And even as use them their software's; you look at this thing, the ways it does certain things and you get excited and say; how is it done, so when you get this impression on how is it done of course you will have to research they are so many search engines someone. But where are they going to let get because they have been actually expose the good things of there. Other then if good things are kept out and we (voice lost) with all local stuff here we will just have it us not bad but just like compromised kind of thing. And it hinders development I think.

Q: Right.
A: Yeah.

Q: If developed countries import ICT will you not think it will have an impact on local culture and initiatives?

A: It could. But at the in the long run it would help. It depends on how you are going to employ these expertise, for example, is this faculty they are bring so many good professors then doctors then lecturers from other countries other universities out there and those people stayed here two years, one year three years like. That by that time they go everyone here doesn't want them to go because they expose thus to these kind of world that would give to me and if this stayed because it is not like they are going to stay for ever, they just coming out of goodwill yes they have to be paid and what have you but what you are going to get out of them is going to stay longer than the amount you are going to pay them (laugh) rather than keeping it there for using people who are not really, let them come let them be coming as for sometime and then to expose because I think technologies about learning certain things we find this person so green and then you would expose them to area and before you know into almost at the some level. So I have learnt most of us look at it under threat it people are going to loose their jobs, and these people never going to leave something like that, but at the end of it you gain. Because you are exposed to great people and they teach you great ways of doing things and before (not clear) you just like them. Yeah me I'm towards this end.

Q: So you are in favour of importing ICT and expertise from other countries, even there that are negative elements of that but your feel positive outweigh the negative?

A: Yeah, in the near or short run you could find that because you are not going to pay very little money, for example, they have to be paid well to get this incentives being out from home. But in the long run you will know it is worth it, at least I have seen it at this faculty who have like some three people who have been here two years back but all of us didn't to go because they are been really resourceful people even the dean himself can testify (laugh).

Q: Lest us talk now about your students. After your took part in training sessions do you think your students are appreciating the changes and benefiting from it?

A: Few. Few students have especially I those whose lecture as I finish that the involvement of that course in Kewl Next Gen. but there was this Blackboard I think blackboard was okay, but just it had just a it had some network problems of going on and off all the time. It was okay and it didn't have so many tools that are in Kool Next Gen. in Kool Next Gen. students have been exposed to it but every few because some lectures have not yet finished developed their courses.?? my course I teach Operating System, I'm computer literacy by that time I finished this second session of e-learning I had finished teaching Computer Literacy course. And then as I am teaching the operating system course now I am just developing and upload the materials and trying to find my way to interactive, assignments discussion forum some like that. So my students have not yet use these. But for other lecturers some lecturers in VIT I are telling me that their students using it, they are appreciating it. Only that they believe if would equip all the tools that we are tought it would be more interesting and will appreciate it more.

Q: thank you so much for your time. I'm finished. If you need to add anything about what talked about I'll really appreciate.

A: Can you can give me your email, so in case I get new things I would just email.
Q: oh yeeah, again, thank you so much for you time!

A: Thanks you!

Male staff member

Q: *I understand that you attended training for e-learning*

A: Yes.

Q: *How many trainings you have had so far?*

A: We had ah… We…we've had two basically, aah, the first one was aah, around the beginning of last… last, ok the beginning of year academic year. It was a bit short and we were just learning how to use some… some software that they had brought. And ah, it was unfortunate that it was not successful and that there was a low turn up, people never ah, they were not, they didn't pick much interest in coming, in turning up for the training. So when that training very few people … yeah…   The first one there was a low turn up. Yes, staff did not come for training. Then later ah…at the beginning of this semester, the beginning of this academic year 2005/2006, beginning of this second semeste, that was in January we had some training, some e-learning and we were learning this some software called Kool. So at least this one there was some improvement in attendance, ah, people came, staff members come, we were taught how to use the software how manage courses on-line, how to create courses, maintain students' assessments, many other things. How to…basically how to manage courses.

Q: *And do you think the contents of the training they have delivered was meant to addressed your needs?*

A: basically, think it was what we needed. But on the other hand, many people still did not take a further step to do what we were taught after the training because like we were thought that we needed to… we needed to… to create courses because we were taught how to do. So as lectures we were told that we need to up-load our notes, work on them, prepare them for students, then so inform students how to join, like that. Then after, they would carry out an evaluation for the courses. But this evaluation hasn't taken place at the moment. Even the staff members are not bothered because, maybe because they are busy, person like me I'm very busy, you can see, am very busy. But then… we haven't uploaded the notes

Q: *sorry you have not what?*
A: We haven't. Some of us haven't uploaded the notes…Yes. Yeah… but we are yet to do.

Q: *Can we say one reason why lecturers are not bothered to attend training and also not using the skills is because these training were not relevant to them at all, what do you think is the main cause of this lack of apathy among academics?*

A: I think it is the cause of… it is caused by two things, I think. One ah the la… lack of motivation…

Q: *Why is there is there lack of motivation?*

A: Lack of motivation… as like, if someone knows that much as I go there to train, I'm not going to be paid for that … for my allowances, maybe like I would spend like two weeks there seated, yet you know people, sometimes they like motivation… motivational issues, eh? Like something to motivate them. So, they can't relax on that. Then another thing could be like failure to, failure by the management to apply rule. So that if the rule was set… if a rule was set then it would be, I think then people would go on and follow the rule as like maybe the management says like whoever doesn't ah, train, will not going to teach, or will not be paid or even if he's paid some fraction's going to be taken as a fine in his salary. I think there people would come.

Q: *That does not sound very hash! I mean just forcing people instead of negotiating and reasoning with them. Will deducting salary from academics motivate them to attend?*

(After so much nosey at the backboard, the recording was stopped for about two minuets long)

A: Actually it is not motivation but sometimes people tend to relax, they tend to undermine issues that come up things that maybe the management bring up. Brings up something and people don't mind. I think there should be steps taken and they take it seriously maybe they would try to convince the people to come next time if they come out of training. Yes

Q: *Are you using the skills you gained from the training your attended?*

A: Yes we have tried some **(voice lost)** a person like now found it hard to convince or to tell a student and the software I told them some how it works I have told them like maybe I put some few things so that why told at the beginning I haven't finished putting my marks there I haven't finished everything. Another thing actually I was forgetting to tell you about why people tend to relax as in they see that even if they don't have this e-learning (aaaahh) components in their teaching. They know the student will follow the face-to-face more to first, but they haven't know maybe the advantage of intergrading the ICT component in teaching maybe to, can I say to (hesitation) to improve on the level of learning. Yes.

Q: *If you look back to when the training was delivered, was the timing of the training convenient to you or you could have preferred different time?*

A: Yeah (clears the throat) the training was carried out 2 weeks, okay in the last 2 weeks of the like the last 2 weeks of the holiday so like many of the people had gone up-country to relax a bit from the hectic work in the semester. So this is why some didn't turn up they were doing their own thing. And another thing that it was carried out during the holidays and during these holidays sometimes people tend to use that time for other businesses that they come, when they come to teach now during the time for teaching there is no time to go and make business. So they tend to use that time in as earning a living in some other way 'cause some are free during that time. Yeah, so I think well (eehhh) to me I think it was good for those who attended, it was good time because I mean it would be still hard to put that training during the semester it would be an inconvenience, so I think I would even encourage it to go on like it goes on (aahh) during the holidays but when maybe either there at the end of the semester, it would be an inconvenience. So I would encourage for it to go on even during the semester, at the end of the semester or in the beginning (hesitation)

or at the end of the holiday or the beginning of the holiday. Yes. Another thing is that we were given 2 weeks and I think 2 weeks was not enough to cover a lot. We'd be taught from morning (aahh) everyday. Morning from 9 up to midday, then we go for lunch after we come at 2 then leave at 5 daily and it seems to me hectic some of us we couldn't like go for lunch and don't turn up so you miss some of the issues discussed. You get. ...... (Mmmhh)

Q: Do you think the contents so heavy to cover within that short time?

A: Yeah, within that short time it wasn't good, well we are not ... we are teachers and I mean we are not slow learners at least

Q: Sorry you are not what, I miss that bit?

A: I am not saying we are slow learners so our minds are capable of learning things, get it, so well still we really need enough time maybe to go through a lot of practice although I am not saying that we are slow learners. Yes

Q: Yeah you are right. Do you think it is necessary for the department of e-learning to consult you about training so they can ask you things like your needs, timing rather than telling only to attend?

A: Yeah. Of course like in any institution you can see like suppose you were going to maybe to make software for some company (mmmhh) you would not just go and discuss with the manager and then you forget the users. So those people to carry out the training discuss with the top people and don't tell us, they first don't discuss with us they convenient time for us. If they ask us convenient time at least they would get the majority the proposed time from the majority of us. And then they fix it with their time 'cause in most cases the top manager does not attend. It is still us the lecturers who attend those e-learning sessions. (Mmmh) Yeah.

Q: And so you think it is important for the e-learning to consult you about this issue?
A: Yes, it's good just like I have said that even if you're introducing a software in a company must conduct the users also they need to know how they work.

Q: Are you currently doing something you have not been doing before you attend training sessions?
A: Apart from maybe (aaahhh) type actually there is nothing much I have done I have not; I haven't used much (aaahhh) e-learning in my teaching this semester. I haven't used much, because I've told you I haven't even uploaded the notes on the e-learning software. So I haven't used it much. Although...however I communicate with my students through ah, through, ah... groups like these ah, mail groups, like on Yahoo! groups, like that. So we communicate in that way, everybody joins the groups then me when I send a message on notes, when I'm sending the notes I use the group's acc... Eh the mail groups than uploading them in the software...

Q: And is this something that you've been trained?
A: They didn't teach me that. That one I taught myself!

Q: So you are using things you taught for yourself and not what they taught you in training?
A: (laugh) I'm using...that is the problem!

Q: Is it because the contents of the training wasn't relevant?
A: It was relevant but I don't know why we are not taking much interest in it, in the software, and software is good.

Q: Which software?
A: Eh... at first we had Blackboard, you know blackboard software, I have here Blackboard file and ah, we just used it to use it, puts notes there but later...... we u... we used to put notes there then students could use. So now later, even Blackboard had a problem. It seems like they are even costly. It was costly. Actually it was even like, was it $10,000 per (**voice lost**) or something like that. It was a bit costly for the University and they said that we need to change. So that's why they changed to Kewl NextGen something like that. You'll come to know about that software... yeah, yeah, ok. So that's the software they are introducing, you know, introducing software sometimes brings problems like how the users how they respond to the, the, the newly introduced software. So I mean, people have not taken much interest in it.

Q: Mmmm... do you mean the latest software ?

A: Even in... Yes, yes..... I've, I've, I've remembered! The first training that failed, the one I told you was about KEWL but people and I told training people were not there. So, and even the, the, the first version had ... had very many bugs and so this... the, the, the one to maintain it... yeah. You had to go through and check and change those bugs then (voice lost) Then with this second session of the (voice lost) is eh, at least that is where the software was good (voice lost)

Q: Still on the issue of relevancy of the training can we say academics are not been given or trained what they needed?
A: Yes basically, we need to actually to be given the software we need that is why I said it is also better to if they first contact us. What kind of software would we need? Then the also go on and make another research kind of some (voice lost) academic institutions maybe where they are be using and evaluate how they have progressed. .

Q: Okay. How about if ...your students...I mean are they comfortable communicating with you this e-group you mentioned before?

A: Very much whenever they have, whenever they have, they like it so much. Themselves they discuss with, just like how we have discussion forums and more in the internet you know people chat and what not other things. So you find that basically they are enjoying that .I have many students normally contact me, and they have like questions but because they don't get time to ask in class maybe, because some are shy... some ...some don't want to ask in class you know students how they can be ...so they'll ask me questions on mail, they send the question then I elaborate.. And I normally encourage them, you have a question and you feel you cannot come just send the mail then I will reply.

Q: But the university or department for ICT support want you to stop using that and use instead KEWL GEN or Blackboard...or may be any other new software that might come in future. How do you feel that?

A: Well, we will have to follow, we have to follow. But I know its going to take time for people to ...to.... to, well to upload notes and know manage courses and what not. However the key condition that (voice lost) that they need to give us certificates, so like don't I have anything to prove that I studied the KEWL. But I have completed the course although I missed some few. some few things like when I'll wasn't around in the afternoon or like that. So they told us that those who ...ah, have create courses, put them up properly, manage them properly and start managing students and everything using the KEWL .., and then they come and evaluate you, yeah, who will gets and they had given us a month but even its two months since I think (laugh). Because it was in January this is March.

Q: Yeah, if you were given a chance, whether you attend these training or not. would you have attended?

A: If I was given an option of coming or not, I think I would go there.

Q: You would go there?

A: Yeah because I mean, much as am using, much as am using like this Yahoo Groups to send...send notes, still we cannot rely on somebody's website. We can't, so I believe it's better if we had our own, so I see it very important, so that's why am saying I would go.

Q: Ok...
A: Yes, I would go for the training.

Q: I see, ahh have finished! Ahh.. if you have anything to add about the things we have, facing challenges, how you've overcome. I mean sum up, any...anything you want to say, please do say!

A: Well, me ahhh may be (voice lost)but that, the whole of staff members, the whole group of staff members, they rather, take courage they should take, they should come up an take part in training sessions, you get it? Because, well ,this is important, this is eeh, this is, this is a new world we are developing day after day so we really need to see an importance of integrating our face to face sessions with aah, this e-learning components, this ICT components, so they can help us to, ahh get to, to use new technology .

Q: Thank you very much.