KNOWLEDGE SHARING PRACTICES AMONGST ACADEMICS AT THE ZIMBABWE OPEN UNIVERSITY

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Dedication

This thesis is dedicated to my wife Ann, our son, Takudzwa and daughter ‘Sisi’ Rutendo, who bore the loneliness and lack of attention as I left them on several occasions to attend studies and consult with my supervisor during the process of carrying out this study. I am forever thankful to my late parents both of whom gave me the foundation of something they had never enjoyed, education.

Declaration

I Albert Nhawo Chikono hereby declare that **Knowledge Sharing Practices amongst Academics at the Zimbabwe Open University** is my own work and that all sources that I have used have been indicated and acknowledged by means of complete references

Signed  **Date: 25 May 2018**

Abstract

This study investigated knowledge sharing (KS) practices at the Zimbabwe Open University (ZOU) in Zimbabwe. The study assessed the knowledge sharing practices in the ZOU regional campus faculty departments and identified gaps, with the aim to find out how knowledge is being managed, shared in an Open and distance learning institution and if knowledge management (KM) is playing a role.

The quantitative study was undertaken at the 10 regional campuses of the Zimbabwe Open University. A questionnaire survey was carried out to collect data from a sample of 100 academic staff in the 10 Regional Centres. The underlying question was whether the university academic members were aware of the knowledge that exists, how this knowledge is created and, shared and flows in the organization. The study also sought to establish the views of academic staff, on the benefits that can be reaped from KM practices. The study confirmed that there is willingness to engage in knowledge sharing activities. However, the lack of a clear knowledge policy negatively impacts on the university's ability to competitively position itself in the knowledge economy as a knowledge driven university and this impacts research productivity and distance learning course delivery at the ZOU. One of the key recommendations emanating from this research is that the university should have a Knowledge policy aligned to its strategic plan which will act as a guideline on the sharing of knowledge internally and externally as well as make it mandatory for academic staff to publish internally as well as to store their publications in the university repository.

Keywords

Academic staff, Communities of practice, Distance learning, Information management, Knowledge, Knowledge economy, Knowledge management, Knowledge sharing, Tertiary education, Universities, Zimbabwe, Zimbabwe Open University.

List of Abbreviations

CACC: Central Africa Correspondence College

CDE: Centre for Distance Education

ICTs: Information and Communication Technologies

IS: Information Systems

IT: Information Technology

KM: Knowledge Management

KS: Knowledge Sharing

ODL: Open and Distance Learning.

RRC: Rapid Results College.

SARUA: Southern African Regional Universities Association.

SECI (model): Socialization, Externalization, Combination and Internalization

SPSS: Statistical Package for the Social Sciences

UCDE: University College of Distance Education.

UZ: University of Zimbabwe

ZOU: Zimbabwe Open University.

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CHAPTER 1: INTRODUCTION

1.1 Rationale / background

Since the emergence of knowledge management (KM) as a discipline, there have been many arguments and debates over whether knowledge management is just information management in new clothes. According to Nonaka and Takeuchi (1995: 21), western philosophers have generally agreed that knowledge is "justified true belief". Thus, the definition of knowledge is far from perfect in terms of logic. According to this definition, our belief in the truth of something does not constitute our true knowledge of it as long as there is a chance however slight that our beliefs are mistaken.

During the industrialization period value was created from factories, utilizing resources such as labour and capital. Most recently, value is derived from knowledge. Knowledge has become the resource, thus the development of the knowledge economy. Subsequently, the knowledge economy has had a substantial impact on the way companies do their business. Confronted with the knowledge intensity of products and services and the fast-paced transformation in global competition, companies have had to focus on their intangible resources to drive increased financial returns and competitive advantage (Grange 2006: 18). For companies to survive in this era they have to manage their knowledge properly. It has been reported in the management literature that companies that do well or are top in the business world have knowledge management practices embedded in their daily activities, processes and routines (Nonaka and Takeuchi, 1995:4). Therefore, institutions of tertiary distance education have since also noticed the importance of KM as they are facing competition from conventional universities as well as competition for funding from governmental and international donors. They also have pressure from students as they demand high quality tertiary education and the industrial demand for qualified graduates. With the current liquidity crisis and quest to improve the quality of graduates in a country such as Zimbabwe, facing economic challenges, there is indeed a need to share knowledge and information between academic faculty staff to reduce replication of information. The loss of institutional memory due to staff turnover also leads the distance education sector to embrace KM practices.

1.2 History of the Zimbabwe Open University

The Zimbabwe Open University (ZOU) is a multi-disciplinary institution offering degree and non-degree courses through distance teaching and open learning to youth and adult learners. The ZOU provides knowledge, competencies and dispositions necessary for the development of a competitive human resource base. ZOU has a highly decentralized structure in which it delivers its services through a National Centre in Harare Central Business District, and 10 regional centres in all political provinces of Zimbabwe. The institution has six faculties – Agriculture, Applied Social Sciences, Arts and Education, Commerce and Law, Higher Degrees Directorate, Information Technology and Multimedia Communications, Science and Technology - offering undergraduate programmes and postgraduate degree programmes. The ZOU was started in 1993 as the Centre for Distance Education (CDE), then an inter-faculty unit of the University of Zimbabwe (UZ). It became the University College of Distance Education (UCDE) in 1996. On 1 March 1999, it was formally established as the Zimbabwe Open University (ZOU) through an Act of Parliament, Act No. 12/98. As CDE and UCDE, it had focused on providing under- and post-graduate degree training in Educational Administration, Planning and Policy Studies through distance education. The programme was primarily meant for non-graduate teachers who were employed by the Government's two ministries of education, the Ministry of Education and Culture and the Ministry of Higher and Tertiary Education. In Zimbabwe, distance learning has been used to primarily upgrade the quality of basic education. Distance education has also improved skills of teachers in primary and secondary schools. However, distance learning itself is not entirely a new concept in Zimbabwe. Before independence, correspondence colleges like Central Africa Correspondence College (CACC) and Rapid Results College (RRC) catered for the needs of those disadvantaged by the colonial education system from getting both secondary education and vocational training. London University and the University of South Africa (UNISA), both foreign based, offered external degrees to Zimbabweans thirsting for university education but the cost and the distance were prohibitive. The Zimbabwe Open University evolved from University College of Distance Education and was created to reduce the distance and the cost of education offered by foreign institutions.

The table below shows a gross national enrolment of 11,604 of distance learners and this shows that ZOU has a larger market share although the enrolments have dwindled over the years.

Student category Number of students	
Contact students	18 755
Distance students	11 604
Full-time students	28 878
Part-time students	2 789
National citizens	26 535
SADC country citizens	131
Other international students	3

Table 1: ZOU Enrolment figures.

Sources: SARUA university questionnaires (2008 and 2011)

When Zimbabwe Open University was established, its student enrolment rose from 14313 to 23161, when it was the then largest University in Zimbabwe. However, since 2001, the student population numbers at the Zimbabwe Open University have declined. In 2007 the student enrolment figure stood at 16000 and by 2013 the figure had dwindled to a paltry 7000 students, reflecting a (43.75%) decrease. These trends are very disturbing as they are threatening the very existence of this once great University (Rupande and Nyeya, 2014). Economic decline and the liquidity crisis in Zimbabwe have been the major contributing factors in the enrolment decline as prospective students. Zimbabwe has seen establishment of more than 10 new universities over the past 2 decades and this has resulted in fierce competition for students.

1.3 Aim of the research

The rationale of the study is that since ZOU has been in existence for 18 years, and because the lecturers are spread throughout the country in all 10 provinces where the university has its centres. As such, the lecturers have limited personal interactions, the researcher felt that it was important to conduct a study of this nature in order to evaluate knowledge sharing in an institution of this unique nature. The aim of this study was to establish the KS practices that were practiced at the Zimbabwe Open University. The study assessed the KS practices in the Zimbabwe Open University Regional Centres to identify gaps, with the aim to ascertain how knowledge is being managed and shared in the distance learning university space. This includes how KS enablers and barriers have impacted on course delivery within distance learning programmes.

The importance of the study is that it evaluates the measures of knowledge management adopted by ZOU in the delivery of distance teaching and open learning. It is hoped that the findings of the study would assist policymakers and course providers in implementing knowledge-based distance education delivery. This would provide empirical justification for proposed knowledge-based developments in distance education at the ZOU. The study is expected to stimulate other researchers into opening new avenues on how best knowledge management strategies can be harnessed to stimulate growth in knowledge-based distance education.

1.4 Statement of the Problem

The tertiary education sector in Zimbabwe is faced with a challenge of a high turn-over of academic staff. Year after year, academic staff resign for greener pastures while others retire due to old age. However, they do not leave their knowledge behind in the institutional memory. In a related study, Mapolisa and Chirimuuta (2012) explored strategies to hire back former Zimbabwe Open University's staff to the institution; and highlighted utilisation of lecturers' expertise in quality assurance, staff development schemes, competitive salaries, and schemes to acquire houses, cars and start businesses as staff retention strategies. One of the biggest challenges many African Universities continue to face is the attraction and retention of top performers (Mihyo 2008). Even though there are resource centres or mini-libraries in all the regional centres, when employees leave the organization, they leave with their knowledge.

The Zimbabwe Open University claims to be a centre for academic excellence in Zimbabwe through its vision and mission, having developed distance learning and having the largest student enrolment in Zimbabwe (Zimbabwe Open University: 2009). This means that this growth in student enrolment, as well as in the distance learning programmes, has posed a new challenge for the academic staff at the ZOU in terms of developing appropriate strategies and innovations in research and innovation and in providing teaching and learning at the university. Rowley (2000: 329) argued that universities do have a significant level of knowledge management activities, and it is important to recognise these, and use them as foundations for further development, rather than to invent a whole new paradigm. Therefore, a university such as the Zimbabwe Open University is expected to participate in a wider

knowledge creation process which leads to the creation of knowledge repositories from which future generations of scholars and researchers may draw.

1.5 Research questions

The research questions that arose from the problem set out to assess the existence of KS practices. The main question of this study was whether the Zimbabwe Open University faculty is practicing knowledge sharing. Related questions were:

- Does the ZOU have a culture of sharing information and knowledge?
- How is innovation, creativity and new ideas by academic staff encouraged in the university?
- Are there appropriate technological resources to facilitate effective KM
- How do academic staff members conceptualize, internalize and use new knowledge?
- What are the opinions of academic staff about the benefits of KS practices?

1.6 Delimitations of the study

The study was limited to full time academic staff at the Zimbabwe Open University. However, the findings and recommendations can be generalized for the tertiary distance education sector.

1.7 Limitations of the study

The researcher encountered constraints in terms of time and resources. Some respondents did not return the questionnaires and initially there was apathy in completing online questionnaires. The time for carrying out this research was short such that all avenues to data collection would not have been fully explored. Some questions on knowledge sharing and its appropriateness were raised in the study only in so far as they are expected to have a particular bearing on the knowledge sharing patterns. The research took place concurrently with academic semesters for the researcher thus the researcher could not find ample time to

meet the supervisor for discussions as the researcher is a full-time employee during weekdays.

1.8 Significance of the study

Research in the field of KS in Zimbabwean distance education institutions has received limited attention as revealed by a preliminary survey of the reviewed literature. The issue of KS is a major concern to universities in general and open and distance learning institutions in particular since this has implications for staff retention, research productivity and output and course delivery and throughput. The study is significant because it is being conducted at a time when ZOU is moving towards technology-based instruction and course delivery. It is expected that the study will add value to the future strategic planning and to give recommendations to how best the ZOU can achieve its academic excellence goal in its mission through knowledge sharing. The study is significant because since ZOU is relatively in its infancy stages, it was important to conduct a study of this nature in order to evaluate a growing concept, knowledge management, in an institution of this unique nature. This can also be justified by the fact that the various stages of growth must be closely monitored. The study therefore aims at influencing the university policy-makers and course providers as to why they should factor in knowledge management when designing their modular course programmes. This is to ascertain whether knowledge management plays a significant role in course planning and delivery through assessment of a growing segment in distance education, which is the management of knowledge

1.9 Conceptual analysis

1.9.1 Knowledge and information

Defining knowledge is difficult, as it incorporates many intangibles such as experience, intuition, judgement, skills and lessons learned which have the potential to improve actions (Henczel, 2001: 211). Knowledge is a cognitive state of mind, achieved with the coupling of understanding and cognition. It has often been referred to as codified and documented knowledge like patents, databases, manuals, reports, procedures and white papers. Therefore,

these knowledge sources, once decoded, the information they contain, becomes knowledge which can be applied in various scenarios. Knowledge is defined by Davenport and Prusak (1998: 8) as "a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in the documents or repositories but also in organizational routines, processes, practices and norms". It seems therefore that all the above authors are of the same view that knowledge goes hand in hand with data and information. Data are the raw material, then they are processed into information, and finally knowledge is constructed. Jain (2007: 378) states that "knowledge transformation is a three-step process, where data is transformed into information, and information is transformed into knowledge where data is simply raw materials. The very first stage is data, which converts into information, and finally into knowledge, which must be managed". From the above definition, it can be argued that knowledge and experience are related because it is through the conversion of data into information and through experience it becomes tacit knowledge. Knowledge can be information that relates to some phenomenal experiences which in turn becomes knowledge by way of lessons learnt or translated into accepted practices and norms within an organization. It can be argued thus that when information is translated into accepted practices and norms, these become embedded in the mind as tacit knowledge which is then passed on as explicit knowledge.

Although the terms knowledge and information are often used interchangeably, there is a clear distinction between information and knowledge. Nonaka and Takeuchi (1995), made three important observations that firstly, knowledge, unlike information, is about beliefs and commitment. That is, it is a function of a particular stance, perspective or intention. Secondly, knowledge, unlike information is about action which leads to some end. Lastly, knowledge is content specific and relational. Bateson (1979) asserts that information provides a new point of view for interpreting events or objects which makes visible previously invisible meanings or sheds light on unexpected connections. Thus, information is a necessary medium or material for eliciting and constructing knowledge. It affects knowledge by adding something to it or restructuring it. Therefore, it can be argued that information is critical to knowledge

creation. Cong and Pandya (2003: 26) point out that, to understand KM, a distinction has to be drawn among data, information and knowledge. They argue that, "data are raw facts. For data to be of value, they must be processed and given context to obtain information, which decision can be made. Knowledge is then perceived as meaningful information." Therefore, raw facts must be processed by means of being decoded, meanings are revealed which reveals patterns and trends, and then can be termed "information". When information has value, and can be relied upon in decision making, it is then converted to knowledge.

1.9.2 Knowledge management

There is no single accepted definition of Knowledge Management, largely due to the breadth of the concept and the complex nature of knowledge. According to Al-Hawamdeh (2003: 21), KM is the management of knowledge through systematic sharing that can enable one to build on earlier experience and obviate the need for costly reworking of learning by making the same repetitive mistakes.

Davenport and Prusak (1998), also cited by Al-Hawamdeh (2003: 22), state that state that KM is concerned with the exploitation and development of the knowledge assets of an organization's objectives. Therefore, knowledge resources would include explicit knowledge in the form of captured or recorded information and tacit and implicit knowledge in the form of expertise, skills and competencies of the people working in the organization. It involves all those processes associated with identification, sharing and creation of KM.

The central premise behind KM is that all the factors that lead to superior performance - organizational creativity, operational effectiveness, and quality of products and services - are improved when better knowledge is made available and used competitively (Bahra 2001: 75). Al-Hawamdeh (2003: 21) believes that besides explicit knowledge (information), KM includes, 'know-how', which of course can be captured and documented as information, tacit knowledge can only be transferred through socialization and interaction between people. Thus, based on the above KM is broad as it does not only deal with data and information and systems. It encompasses also the human aspect of the organization, organizational learning and innovation

1.10 Literature review

Empirical studies on KS reviewed reflect that whilst studies on KM have been done in Africa, the Middle East and Asia as well as in Europe, studies relating to KS among academic staff in African universities are few. However, Bartol and Srivastava (2002: 64) observed that a growing number of literature on KS has often been approached from a profit-oriented perspective. These reviewed studies, among others, have focused on: the impact of rewards systems and incentives; job satisfaction; motivation and organizational knowledge capabilities and how these factors affect KS. The literature review in Chapter 2 of the thesis discusses the benefits and challenges of KS in an open and distance learning environment. It also reviews some empirical studies on KS in institutions of higher education outlining barriers and enablers of Knowledge sharing.

1.11 Theoretical framework

This research study relied on organizational knowledge creation theory, also known as the SECI model. Nonaka and Takeuchi (1995: 70) described the theory as a continuous and dynamic interaction between tacit and explicit knowledge. They further stated that the interaction is shaped by shifts between different modes of knowledge conversion involving the four phases of the SECI model: socialisation, externalization, combination and internalization. These are in turn induced by several triggers:

> "First, the socialization mode usually starts with building a field of interaction. This field facilitates the sharing of members' experience and mental models. Second, the externalization mode is triggered by meaningful dialogue or collective reflection, in which using of metaphor or analogy helps the team members to articulate hidden tacit knowledge which is otherwise hard to communicate. Third, the combination mode is triggered by networking newly created knowledge to existing knowledge from other sections of the organization, thereby crystallizing them into a new product, service or managerial system. Finally, learning by doing triggers internalization" (Nonaka and Takeuchi 1995: 71).

They further assert that organisational knowledge creation can be viewed as an upward spiral process from the individual level to the collective group level and then to organisational level, sometimes to the inter-organisational level.

The study used this organizational knowledge creation theory and applied the SECI Model to understand how knowledge is created and shared, how new concepts are created, how the new concepts are incorporated into the ZOU and finally, how ZOU academic staff internalise, use and ultimately share knowledge.

1.12 Research design and methodology

This study was undertaken with a population of 100 lecturers across the 10 regional campuses of the Zimbabwe Open University. The researcher used the quantitative approach with the questionnaire as the survey instrument. Researchers usually use questionnaires or surveys in order to make generalisations, therefore, the surveys are usually based on carefully selected samples. Quantitative studies are useful for descriptive studies because large amounts of information can be collected from a large number of people in a short period of time and in a relatively cost-effective way. They can also be carried out by the researcher or by any number of people with limited effect to validity and reliability. The results in a quantitative study can be quickly and easily quantified by either a researcher or through the use of a software package such as SPSS. A quantitative study can be analysed more 'scientifically' and objectively than other forms of research because when data has been quantified, it can be used to compare and contrast other research and may be used to measure change (Creswell ,2009).

1.12.1 Data collection

The study is descriptive, which Creswell (2009) defines as that which describes the results through means, standard deviations, and range of scores. Fink (2009: 24) states that “surveys are data collection methods used to describe, compare, or explain individuals, feelings, values, preferences, and behaviour. A survey can be a self-administered questionnaire that someone fills out alone or with assistance.” Questionnaires were used to collect data, in order

to address the research questions. For example, the questionnaire asked about how knowledge is shared; and how knowledge is acquired, captured and disseminated.

1.12.2 Sampling

As already mentioned, there are 10 regional campuses in the Zimbabwe Open University, that is, a regional campus in every provincial capital. The researcher distributed web-based questionnaires to all the 10 Regional Campuses to a population of 100 Academic staff with the hope that all regional campuses will respond in order for the validity of the results to be supported.

The researcher also carried out a pilot study at the Zimbabwe Open University to check whether the questionnaire has any deficiencies before he distributed the questionnaires.

1.12.3 Data analysis

The researcher analysed the data using SPSS (Statistical Package for the Social Sciences). Chapter 4 shows the summaries and the analysis of the questionnaire data.

1.13 Ethical statement

The researcher adhered to the ethical guidelines of the Research Committee of the University of the Western Cape at all times whilst respecting the rights of participants. The researcher obtained informed consent from research participants based on adequate information on the project. Respondents were promised anonymity. Participation in this research was voluntary and participants were allowed to withdraw at any stage of the research process.

1.14 Outline of chapters

Chapter 1: Has introduced the study and explained the rationale for the study. It has undertaken the conceptual analysis of key concepts like knowledge sharing and distance education and it outlines the theoretical frame.

Chapter 2: The literature review in Chapter 2 of the thesis discusses the philosophical and conceptual arguments relating to a knowledge sharing (KS) with an aim to shed light on empirical studies conducted in knowledge sharing in a university setting

Chapter 3: The Research design and methodology chapter outlines the research process. It includes research design, selection of subjects, instrumentation and field procedures. This chapter also describes the data collection and recording, data processing and analysis procedures. The research data is based on a sample of academic staff from 10 regional centres of the Zimbabwe Open University.

Chapter 4: presents, analyses, interprets and summarizes the data collected by questionnaires.

Chapter 5: from the findings, the author makes some reflections and recommendations for the policy planners at Zimbabwe Open University as well as suggestions for future studies.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The literature review in Chapter 2 of the thesis discusses the philosophical and conceptual arguments relating to a knowledge sharing (KS) with an aim to shed light on empirical studies conducted in knowledge sharing in a university setting. The literature review analyses the gaps that exist in the literature as well as outlines the challenges and opportunities of knowledge sharing in an open and distance learning environment. A variety of fields have reported on the concept of knowledge and knowledge sharing in organizations. The conceptual framework presented in this study has drawn on literature from fields such as management theory, strategic management, higher education, distance education, information and decision sciences, organizational communication, and organizational behaviour. It also reviews some empirical studies on KS in institutions of higher education

2.2 What is Knowledge?

Most of the definitions of knowledge management available in various dictionaries are philosophical in nature. However, Nonaka and Takeuchi's (1995: 58) definition of knowledge is far broader in scope and is stated as "a dynamic human process of justifying personal belief toward the truth". Knowledge is a cognitive state of mind, achieved with the coupling of understanding and cognition. It has often been referred to as codified and documented knowledge like patents, databases, manuals, reports, procedures and white papers. Therefore, with these knowledge sources, once decoded, the information they contain, becomes knowledge which can be applied in various scenarios. Nonaka and Takeuchi (1995: 58), made three important observations that firstly, knowledge, unlike information is about beliefs and commitment. Knowledge is a function of a particular stance, perspective or intention. Secondly, knowledge is about action. It is always knowledge to some end. Lastly, knowledge is content-specific and relational. This means that knowledge is often intangible and cannot be measured. It can however be shared, and it relates to some action.

2.3 Knowledge sharing

According to Srinivas (2016: 32), knowledge sharing (KS) is one of the most important pillars of knowledge management, the life cycle of which includes many disciplines as it goes through a number of stages, starting with the production of knowledge, organisation and in the end the exchange of knowledge and use. Business organisations started initiatives towards sharing of knowledge even with competition in order to promote innovation, increase productivity and provide better services. Davenport (1997) defined knowledge sharing as that which implies a conscious act by an individual who participates in the knowledge exchange even though there is no compulsion to do so. According to Ipe (2003: 341), knowledge sharing is basically the act of making knowledge available to others within the organization. Knowledge sharing between individuals is the process by which knowledge held by an individual is converted into a form that can be understood, absorbed, and used by other individuals. The use of the term sharing implies that this process of presenting individual knowledge in a form that can be used by others involves some conscious action on the part of the individual who possesses the knowledge. This conscious action means the individual acts in a manner which is driven by selfless motivation to share. Therefore, it can be argued that the initial assumption is that knowledge sharing is a voluntary act although there are extrinsic (organizational reward, codification effort, image, and reciprocity) and intrinsic factors (knowledge self-efficacy, trust and enjoyment in helping others) that affect knowledge sharing at individual level, which in turn affects the knowledge sharing collectively at organizational level. To support the above assertion, Yi (2009) came up with four dimensions of knowledge sharing which are:

1) Written contributions
2) Personal interactions
    i) collectivists
    ii) competitors
    iii) individualists
3) Organizational communication
    i) groups
    ii) intention
    iii) trust

iv) commitment

v) willingness

4) Community interactions

i) social networks

ii) Communities of practice

Therefore, with the above in mind, individuals in an organization, interact at these different levels in the process of Knowledge Sharing (KS). The factors above form the focus of the factors that influence or inhibit KS in this study. Figure 1 below illustrates Knowledge sharing between individuals in an organization.

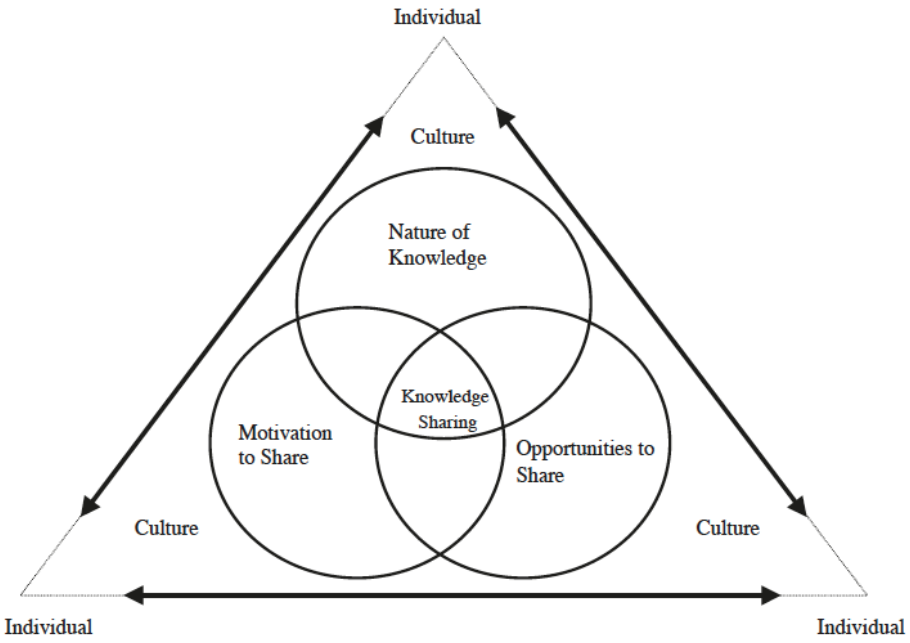

***Figure 1*: A Model of Knowledge Sharing Between Individuals in Organizations.**

(Source: Ipe 2003)

As Figure 1 illustrates, the knowledge at organizational level is possessed by individuals. Therefore, although individuals constitute only one level at which knowledge resides within organizations, the sharing of individual knowledge is imperative to the creation, dissemination, and management of knowledge at all the other levels within an organization. This is mainly done through interactions and all levels. An important factor which comes out

of the illustration is that culture exists at the base right through to the top level, meaning that culture is at the centre of what is shared and how it is shared. However, there seems to be a gap in the literature on how culture affects knowledge sharing particularly in relation to the factors outlined by Yi (2009).

2.4 Knowledge Sharing in Tertiary Distance Education

Empirical studies on KS reviewed reflect that whilst studies on KM have been done in Africa, the Middle East and Asia as well as in Europe, studies relating to KS among academic staff in African universities are few. However, Bartol and Srivastava (2002: 64) observed that a growing number of literature on KS has often been approached from a profit-oriented perspective. These reviewed studies, among others, have focused on: the impact of rewards systems and incentives; job satisfaction; motivation and organizational knowledge capabilities and how these factors affect KS.

Lichtenthaler and Ernst (2006: 373) noted that sourcing and knowledge sharing are daily activities of universities and individuals who engage in knowledge sharing expect to attain greater insights and understanding about concepts or practical applications and, in so doing, enhance their levels of learning and expertise. Hence, knowledge sharing can be considered a valuable means by which academic staff can learn from one another and develop intellectually. At the faculty level, collaboration and knowledge sharing occurs not only between faculty peers and external communities of practice but also between academic staff and their peers within and across campuses and universities. This exchange of knowledge and experience is carried out through the processes of exposition, analysis, synthesis and reflection among individuals. It leads to enhanced understanding and skills development, promotes the creation of new knowledge and ideas, and enhances academic performance.

A study of knowledge sharing behaviour of academics at a university in Nigeria has shown that knowledge sharing is vital for the success of knowledge management in organizations including universities (Elogie and Asemota, 2013). The study revealed that attitude, social networks, perceived behaviour control, knowledge self-efficacy and enjoyment in helping others positively influenced knowledge sharing behaviour. In another study conducted in Nigeria, Osunade, Philips, and Ojo (2007) have studied KS amongst academics in which they

have placed emphasis on the use of computers and the internet. Results from these studies have revealed that technology and human resources are central to KS. A study by Enakrire and Uloma (2012) on KS amongst academics on the effect of tacit knowledge for teaching and learning processes concluded that there is a need for faculties and departments to organize staff/lecturers' training programmes to boost lecturers' tacit knowledge. They also argued that tacit knowledge is a tool for effective teaching and learning processes and moreover, that fear of plagiarism has made some lecturers to keep their knowledge to themselves.

Fullwood, Rowley and Delbridge (2013: 123) assert that universities are knowledge intensive environments and play a central role in knowledge creation through research, and in knowledge dissemination through publication. They also play a critical role in knowledge transfer through working with businesses and other organisations to support innovation, and social and cultural enterprise, as well as supporting learning through their teaching and research training programmes. The study concluded that academics engage in knowledge sharing when carrying out research, and teaching. The study argued that in general academics had positive attitudes and intentions towards knowledge sharing and they had a high level of expectation of some personal benefits or rewards as an outcome of their knowledge sharing. Academics expected their engagement in knowledge sharing to improve and extend their relationships with colleagues, and to offer opportunities for internal promotion and career development in other universities. These findings are broadly consistent with a study on knowledge sharing in a specialist university in Malaysia (Cheng, Ho and Lau, 2009) which found that academics are motivated to share if they perceive the incentives and rewards to benefit them even if there is no immediate reward or pay-off. Mogotsi, Boon and Fletcher (2011) investigated the relationship between demographic variables (gender, age, organizational tenure and professional tenure) and knowledge sharing behaviour in the context of the public service sector in Botswana, a developing country in Africa. The study concluded that gender, age, and professional tenure were not related to knowledge sharing behaviour, whilst organizational tenure correlated negatively with knowledge sharing behaviour. Their study also concluded that demographic variables such as race, age, gender do not appear to play any significant role in relation to knowledge sharing behaviour.

As the reviewed literature shows, the way knowledge is shared has a deep impact on its meaning and that knowledge is transmitted explicitly or internalized through a learning process, whether people trust each other, are motivated, or share the same mental models; all these factors determine the mechanisms, and hence the effectiveness, of knowledge sharing. This was asserted by Hendriks (1999: 91) who argued that knowledge sharing is important because it provides a link between the individual and the organization by moving knowledge that resides with individuals to the organizational level, where it is converted into economic and competitive value for the organization.

2.5 Barriers to knowledge sharing

Sohail and Daud (2009) outline the following factors below as barriers affecting the success of knowledge sharing (KS). These barriers are categorised into three main domains, namely individual, organisational and technological.

At individual level, barriers are often associated with factors such as lack of communication skills and social networks, differences in national culture, differences in position status, and lack of time and trust.

At organisational level, the barriers are related to factors such as lack of infrastructure and resources, the accessibility of formal and informal meeting spaces and the physical environment.

At technological level, barriers are correlated to factors such as unwillingness to use application, unrealistic expectations of Information Systems (IS)/Information Technology (IT) systems, and difficulties in building, integrating and modifying technology-based systems.

Sinclair (2006: 98) asserted that old, bureaucratic, hierarchical organizational culture hinders KM as there are too many constraints and controls to allow knowledge and information to flow freely. Therefore, it can be argued that the reason why people do not share knowledge in the organization is that both the managers and their staff are not aware of the advantages of KS in the organization. The other reason is that there is no environment of trust that could enable people to share knowledge and that there is no formal reward and recognition of sharing information. However, in practice, the lack of knowledge sharing has proved to be a

major barrier to the effective management of knowledge in organizations (Davenport & Prusak, 1998).

2.6 Enablers of knowledge sharing

Knowledge management enablers are the mechanism for the organization to develop its knowledge and also stimulate the creation of knowledge within the organization as well as the sharing and protection of it. They are also the necessary building blocks in the improvement of the effectiveness of activities for knowledge management (Stonehouse and Pemberton, 1999). For instance, Yeh, Lai and Ho (2006) identify certain KM enablers, such as:

- Strategy and Leadership: the most important background factor that guides knowledge management is the business strategy.
- Corporate culture: Corporate culture is the combination of value, core belief, behaviour model, and emblem. It represents the value system of the company and will become the employees' behaviour norm. Every organization's culture is an independent entity different than any other organizations.
- People: People are the core of creating organizational knowledge because it is people who create and share knowledge, and therefore, it is crucial to manage those who are willing to create and share their knowledge. Therefore, a key element for an enterprise to be successful in pushing knowledge management is the process to encourage people to communicate and share their knowledge with others (Nonaka and Takeuchi, 1995).
- Information technology: information technology can enable rapid search, access and retrieval of information, and can support collaboration and communication between organizational members. Information technology and knowledge management are closely tied together because both help the propagation of structured knowledge vertically as well as horizontally within the organization.

In the same vein, Komanyane (2010) observed that the SECI model processes are clearly hard to measure and might well require longitudinal studies beyond the resources of a

master's Mini-dissertation project. Hence the analysis of the enabling factors will need further studies and a higher level.

For example, Gaffoor (2008) cited by Komanyane (2010:4) identifies certain KM enablers, such as:

- Certain organizational cultures (the unique mix of values and beliefs that models the behaviour of an organization).
- valuing human resources (based on the understanding that knowledge exists only because of people, as it is derived from people with their experiences)
- explicit organizational KM strategies in organizational policies, programs and leadership
- effective information communication and technologies (ICT), which are needed to facilitate quick searching, access to and retrieval of information which in turn encourage communication among members of the organization

In light of the above enablers, Nanda (1996: 98) asserted that organizational knowledge is rare - and unique - because it is path dependent, i.e. there are no two organizations that have undergone exactly the same history of learning experiences. Collective knowledge is hard to appropriate by third parties because of its supra-individual character and because it is made up of co-specialized capabilities. Thus, sharing knowledge throughout an organization has intuitive appeal. If organizational members share valuable information freely with other members, the organization's responsiveness and effectiveness can be greatly augmented by preventing those members from having to repeatedly solve the same problems. In an environment of organizational sharing, Knowledge Management Services (KMS) can readily save time and money for both providers and users of knowledge.

The above-mentioned barriers and enablers will reinforce the factors mentioned by Yi (2009) to underlie the proposed study. From the discussion above, the importance and benefits of implementing KM management practices can be noted notwithstanding what hinders and makes an enabling environment for the successful implementation of KS in a distance learning institution. Thus, the key challenge in distance education institutions is to create and

build on these good practices, in an effort to integrate knowledge management more systematically into all aspects of the institution's operations. This means that creating, sharing and using knowledge are among the most important activities of every person in higher education institutions.

The illustration below summarizes these factors influencing knowledge sharing in an organization illustrating the interdependence between the knowledge sharing factors. According to Ipe (2003: 353), individuals may not be inclined to share knowledge easily if the value attributed to such knowledge is very high. However, if there are sufficient incentives (both internal and external), then individuals may be motivated to share that knowledge. Therefore, if there is motivation to share knowledge but the opportunities to share are insufficient or if the culture of the organization attributes power to those who are perceived to possess certain knowledge, then the motivation by itself may not result in real knowledge sharing. All the factors identified in this illustration do not exert the same amount of influence on knowledge sharing in all organizational settings.

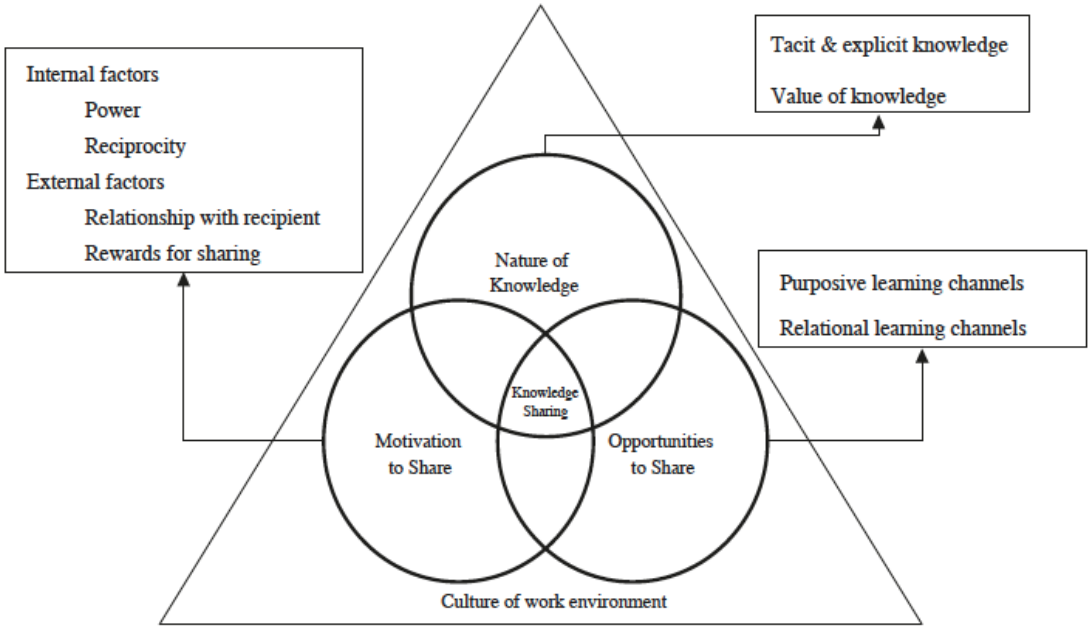

Figure 2: Factors that influence knowledge sharing among individuals in organizations.
(Source: Ipe, 2003).

However, the relative importance of each of these factors is influenced by the business objectives of the organization, its structure, business practices and policies, reward systems, and culture. The absence of one or more of these factors in an organization does not preclude all knowledge sharing since a certain amount of knowledge is shared between individuals all the time, under any circumstance in organizations. Ipe (2003: 354) asserts that the four factors represented in figure 2, which are: nature of knowledge, motivation to share, knowledge sharing and opportunities to share are strongly interrelated with each other and if each of these factors is favourable to knowledge sharing, together they create the ideal environment for knowledge sharing between individuals within the organization.

2.7 Theoretical Framework

Since the researcher touches on some behavioural aspects on knowledge sharing, it is necessary to compare two theories related to the study. Therefore, the researcher zoomed in on the SECI model and the Theory of reasoned action.

In order for organizations to fully leverage their knowledge-based assets, they must first understand factors that affect KS at individual level. Theory of Reasoned Action (TRA) is a model for the prediction of behavioural intention, spanning predictions of attitude and predictions of behaviour. The subsequent separation of behavioural intention from behaviour allows for explanation of limiting factors on attitudinal influence (Ajzen and Fishbein, 1980). Thus, this theory would be more appropriate to measure the knowledge sharing behaviour of academic staff because according to Ajzen (2002: 665), human behaviour is guided by three kinds of consideration, "behavioural beliefs," "normative beliefs," and "control beliefs." In their respective aggregates, "behavioural beliefs" produce a favourable or unfavourable "attitude toward the behaviour"; "normative beliefs" result in "subjective norm"; and "control beliefs" gives rise to "perceived behavioural control.” For instance, Ryu, Ho and Han (2003) used this theory in the study of knowledge sharing behaviour of physicians in hospitals in Korea. The TRA theory was not selected for this particular study because the TRA theory measures intentions which are understood to capture the motivational factors that influence behaviour, they are indicators of how hard people are willing to try or how much of an effort they are planning to exert in order to perform the behaviour (Ajzen, 2002). Because the study

did not focus on knowledge sharing behavioural patterns or attempted to deduce feelings and attitudes towards knowledge sharing the researcher opted for the SECI Model because of its ability to appreciate the dynamic nature of knowledge and knowledge creation as well as it being able to provide a framework for management of the relevant processes.

2.7.1 The SECI Model

Knowledge sharing can positively influence organizational performance through sharing both tacit and explicit knowledge, which emerges into a knowledge creation spiral as proposed by Nonaka and Takeuchi (1995: 70). According to these authors, knowledge is dynamically created through the interaction between individuals, ultimately through the interaction between tacit and explicit knowledge. This conceptualization is often referred to as SECI, an acronym specifying four knowledge creation modes: socialization, externalization, combination, and internalization. This study relies on this organizational knowledge creation theory, also known as the SECI model which Nonaka and Takeuchi (1995:70) describe as the theory with a continuous and dynamic interaction between tacit and explicit knowledge. The illustration below shows the elements of the SECI model.

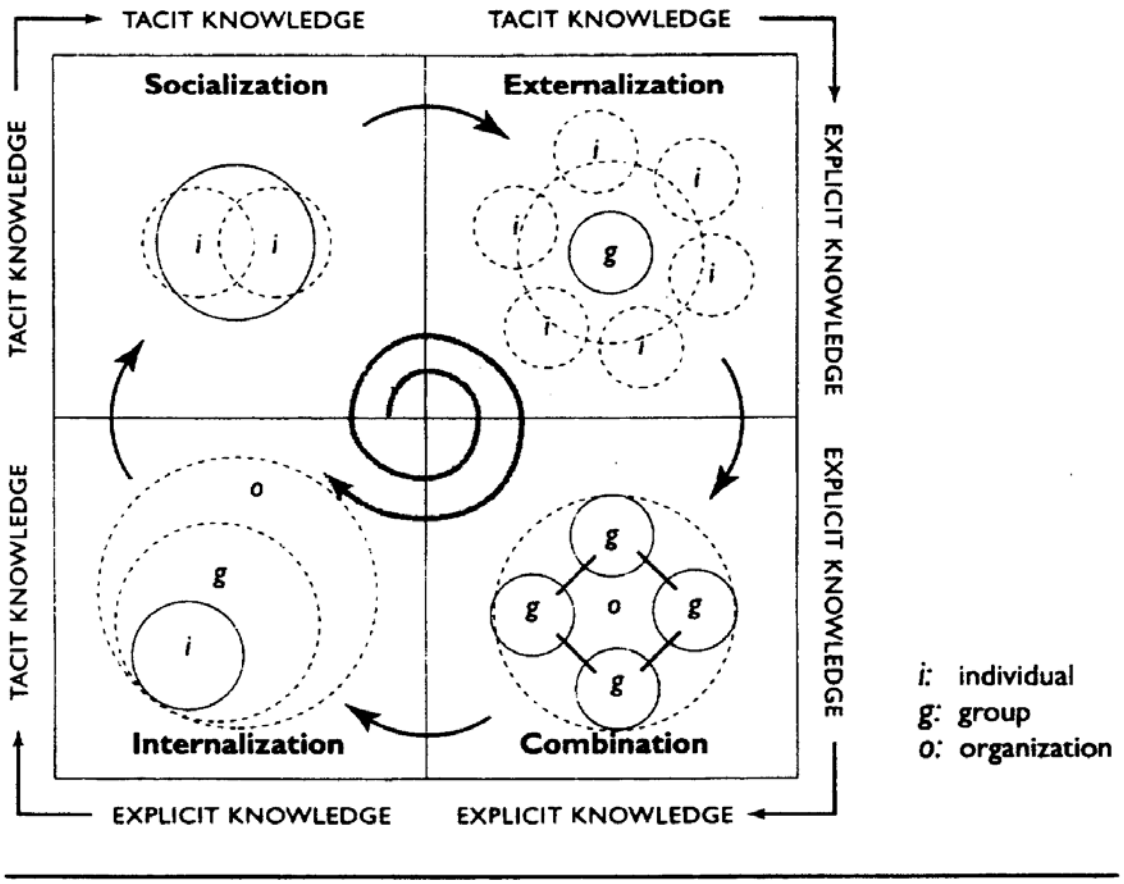

Figure 3: Nonaka's SECI model: Four modes of knowledge conversion

(Source: Nonaka & Takeuchi, 1995)

The interaction is shaped by shifts between different modes of knowledge conversion involving the four phases of the SECI model: Socialisation, Externalization, Combination and Internalization. These are in turn induced by several triggers (Nonaka and Takeuchi 1995: 71).

2.7.1.1. Socialization

First, the socialization mode usually starts with building a field of interaction. This field facilitates the sharing of members' experience and mental models. This process focuses on tacit to tacit knowledge linking. Tacit knowledge goes beyond the boundary and new knowledge is created by using the process of interactions, observing, discussing, analysing, spending time together or living in the same environment. The socialization is also known as converting new knowledge through shared experiences. Organizations gain new knowledge

from outside its boundary also like interacting with customers, suppliers and stakeholders. Socialization occurs in traditional environments where the apprentice learns the technique of wood-craft from his mentor by working with him and observing rather than from reading from books or manuals. During socialization, informal activities (such as having a cup of tea or lunch with colleagues outside the workplace) are exemplified as this type of socialization mode because it promotes common understanding (such as perspectives and viewpoints or feelings), shares systems of meaning, teaches own roles and builds mutual trust in an organization through the sharing of experience. On these occasions, although language or dialogue is often effectively used, Nonaka and Takeuchi pay more attention to physical proximity, rather than verbal communication of transmitting its language (Adachi, 2010: 22). It is therefore interesting to link the socialization mode of knowledge conversion to the knowledge sharing processes at the Zimbabwe Open University as it is apparent that the socialization mode of knowledge conversion approximately corresponds to the function of accumulating the social language of academic roles in the academic framework. This is because it can be an implicit (tacit) activity, accumulating differentiated experience from others while sharing feelings. It is also because it can create order from chaos through repeated interactions, participants recognizing their roles in the organization. Whilst Nonaka and Takeuchi (1995: 62) claim that socialization as the mode of knowledge conversion is strongly practised by Japanese firms, recognition of the importance of sharing experience in the face-to-face environment in business settings can be found in the literature on organization theory. For example, Swan et al. (1999: 265) assert that without physical proximity, where people can have an opportunity to engage in face to- face interaction, firms that focus on the use of Information and Communication Technologies (ICTs) lose opportunities to share crucial knowledge. These discussions presented by western researchers implicitly or explicitly highlight the significance of the socialization mode of knowledge conversion in the form of face-to-face communication.

2.7.1.2. Externalization

Second, the externalization mode is triggered by meaningful dialogue or collective reflection, in which using of metaphor or analogy helps the team members to articulate hidden tacit knowledge which is otherwise hard to communicate. This externalization process focuses on

conversion of tacit to explicit knowledge. It helps in creating new knowledge as tacit knowledge comes out of its boundary and becomes collective group knowledge. This is the stage where knowledge is crystallized. The process of externalization is often driven by metaphor analogy and models. Quality circles are formed in manufacturing sectors where workmen put their learning and experience they have to improve or solve the process related problems.

2.7.1.3. Combination

Third, the combination mode is triggered by networking newly created knowledge to existing knowledge from other sections of the organization, thereby crystallizing them into a new product, service or managerial system. Combination is a process where knowledge transforms from explicit knowledge to explicit knowledge. For example, the finance department collects all financial reports from each department and publics a consolidated annual financial performance report. Creative use of databases such as repositories to get a business report, sorting, adding, categorizing are some examples of the combination process.

2.7.1.4. Internalization

Finally, learning by doing triggers internalization which is the fourth stage of the SECI model. During internalization, explicit knowledge is created using tacit knowledge and is shared across the organization. When this tacit knowledge is read or practiced by individuals then it broadens the learning spiral of knowledge creation. Organizations try to innovate or learn when this new knowledge is shared during the Socialization process. Organizations provide training programs for its employees at different stages of their working life with the company. By reading these training manuals and documents employees internalize the tacit knowledge and try to create new knowledge after the internalization process.

2.8 The Concept of "Ba"

The SECI model describes a dynamic process in which explicit and tacit knowledge are exchanged and transformed. The four modes of knowledge creation allow us to conceptualize the actualization of knowledge within social institutions through a series of transcendental processes and thus the *Ba* offers an integrating conceptual metaphor for the SECI model of dynamic knowledge conversions.

2.8.1 What is the *Ba*?

According to Nonaka and Konno (1998: 40), the concept of *Ba* was originally proposed by the Japanese philosopher Kitaro Nishida and further developed by Shimizu. The *ba* can be thought of as a shared space for emerging relationships. This space can be physical (office space), virtual (internet, email) mental (shared experiences, ideas) or any combination of them. Thus, *ba* is considered to be a shared space that serves as a foundation for Knowledge creation. Nonaka and Konno (1998: 40) further argue that knowledge is embedded in these shared spaces, where it is acquired through one's own experience or reflection on the experiences of others. If knowledge is separated from *ba* it becomes information, which can then be communicated independently from *ba*. Information resides in media and networks, it is tangible. In contrast, knowledge resides in *ba*, it is intangible. Therefore, at organisational level, and in this case, the Zimbabwe Open University, the use of knowledge requires the concentration of the knowledge resources at a certain space and time (organic concentration), meaning the concentration of knowledge throughout the regional campuses. Thus, the sharing of knowledge organizationally means that the staff is able to apply and develop the necessary inherent knowledge. Therefore, when knowledge is created, the person possessing the knowledge and the knowledge base of a company are focussed at a defined space and time. *Ba* is the platform for the resource concentration of the organizational knowledge assets and the intellectualizing capabilities within the knowledge creation processes. *Ba* collects the applied knowledge area and integrates it. Thus, *ba* can be thought of as being built from a foundation of knowledge.

2.8.2 There are four types of *Ba:*

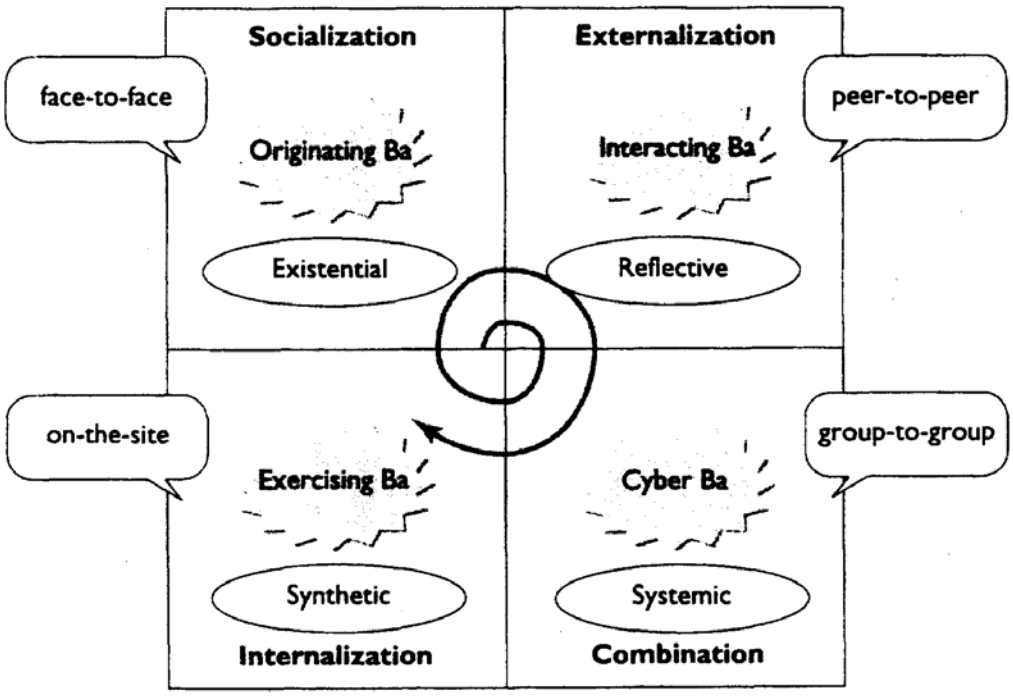

Figure 4: Nonaka's SECI model: Four types of ba.
(Source: Nonaka & Konno, 1998)

Originating ba- which is the wold where individuals share feelings, emotions, experiences and mental models. This is the primary *ba* from which the knowledge creation process begins and represents the socialization phase. Knowledge vision and culture are the organizational issues closely related to the originating ba.

Interacting ba. - is the place where tacit knowledge is made explicit, thus it represents the externalization process. Through dialogue, the individual's mental models and skills are converted into common terms and concepts. Individuals share the mental models of others but also reflect and analyse their own. Collective reflections are institutionalized in the company culture and there is joint engagement in the creation of meaning and value.

Cyber ba. – is a place of interaction in a virtual world instead of real space and time and it represents the combination phase. In this phase, the combining of new explicit knowledge

with existing information and knowledge generates and systematizes explicit knowledge throughout the organization. This includes email, chat rooms, discussion groups, social media, digital repositories, virtual conferences. The combination of explicit knowledge is most efficiently supported in collaborative environments utilizing information technology. The use of on-line technology has grown over the last two decades enhancing this conversion process. The combining of new explicit knowledge with existing information and knowledge generates and systematizes explicit knowledge throughout the organization.

Exercising ba. –supports the internalization phase and facilitates the conversion of explicit knowledge to tacit knowledge. Focussed training with senior mentors and colleagues consists primarily of continued exercises that stress certain patterns and working out of such patterns. Thus, the internalization of knowledge is continuously enhanced by the use of formal knowledge (explicit) and real-life situations.

The *Ba* illustrates that knowledge in organizations is dynamic in nature and is dependent on social relationships between individuals for its creation, sharing, and use. This means that awareness of the different characteristic of *ba* can facilitate successful support of knowledge creation because eventually the knowledge generated in each *ba* is shared and forms the knowledge base of organizations.

2.9 Knowledge and knowledge sharing

Nonaka and Konno (1998: 42) further argue that organisational knowledge creation can be viewed as an upward spiral process from the individual level to the collective group level and then to organisational level, sometimes to the inter-organisational level. In a study examining the relative efficacy of various Information Communication Technologies (ICTs) applications in facilitating sharing of explicit and tacit knowledge among professional accountants in Malaysia, Phang and Foong (2010) examined how certain key ICT facilities could effectively support or promote knowledge sharing of explicit and tacit knowledge among professional accountants in Malaysia. Using a questionnaire, their study adopted a process-oriented approach by using Nonaka and Takeuchi's SECI model. The results indicated that effective ICT support is critical for promoting knowledge sharing and certain ICT facilities tend to promote certain types of knowledge sharing more effectively. They further found out that

firms can quite easily leverage on the knowledge possessed by making such rules and procedures (explicit knowledge) even more explicit and more transferable. In the more complex task settings, however, it is the individual tacit knowledge or expertise rather than the explicit rules that differentiates task success from task failure. These results indicate that this model can also be applied in a similar study such as this one in an academic setting. Lievre and Tang (2015) used the SECI model to study the obstacles to knowledge transfer between organizations belonging to different cultures by making use of the socialization–externalization – combination – internalization (SECI) model. This study is relevant because earlier in the literature review, culture is mentioned as a potential barrier to knowledge sharing. Hence, it will be interesting to see if this study will yield the same or different results. Zaqout and Abbas (2012: 357) conducted a survey at a university in Malaysia to investigate the factors that stimulated the sharing of tacit and explicit knowledge and their effects on performance among research-mode graduate students. Their findings suggested that students experienced a positive and constructive approach toward knowledge sharing with the exogenous variables, namely, trust, social networks, and information and communications technology (ICT) reporting significant positive direct effects on the mediating variables, namely, tacit and explicit knowledge. Only tacit knowledge had a significant direct effect on performance, the endogenous variable. In addition, the knowledge-sharing activities were localized to the respective campuses. This assertion will be tested with Academic staff at the Zimbabwe Open University.

Using the SECI model Baig and Waheed (2016) conducted a case study seeking to understand the role of personality trait, engagement in online social networking sites and online community of practices on online knowledge sharing behaviour. Their study aimed at examining the extent to which these variables altogether predict the online knowledge sharing in students' behaviour and also to provide an insight of the online knowledge sharing in Pakistan business education sector/academia among students. They discussed following different requisites of knowledge sharing that can be grouped as understanding of context and willingness to share. When knowledge is subjected to be shared, individual's willingness to cooperate plays a very important role and their study found a significant role of engagement in community of practice. The results of this study supported the conclusion of Renko et al.

(2001) that the social interaction that is frequent, tends to have more inclination towards the knowledge sharing. This positive relationship of the online social networking sites with online knowledge sharing behaviour is because the individuals who interact socially more tend to share knowledge more with each other. Individuals tend to spend more time online, more they interact and more they are inclined towards sharing their knowledge with each other. By conducting this study but with Academic staff, this researcher is able to test the theory in a different scenario.

The study used this SECI model to investigate how knowledge is created and shared, how new concepts are created, how the new concepts are incorporated into the organisation and finally how staff internalise and use and ultimately share knowledge.

2.10 Conclusion

From the above literature, it is clear that knowledge sharing in organizations is a complex process that is value laden and driven by internal and external factors within the organization. More knowledge is shared informally than through formal channels, and much of the process is dependent on the culture of the work environment. This literature review has described knowledge sharing between individuals and identified factors that have a significant influence on the knowledge sharing process and illustrating the relationship between these factors. That is, the enablers and barriers of knowledge sharing in an organizational setting. This discussion concludes that knowledge sharing offers great benefits for higher education institutions, although it faces specific challenges, which come from their nature as typical structured institutions of higher learning. KS enablers or critical success factors were also discussed, namely: people, information technology, corporate strategy and organizational structure. These serve as measures of KS and form the basis of much of the case studies of knowledge sharing. The literature review shows that knowledge sharing is still a newish concept especially in African universities and other universities in developing regions.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter deals with the actual research process. It includes research design, selection of subjects, instrumentation and field procedures. This chapter also describes the data collection and recording, data processing and analysis procedures.

3.2 Research Design

Conceptually, research studies have been categorised in various ways. Hussey (2007: 10) classified research studies according to purpose as exploratory, descriptive, analytical or predictive. Descriptive research described phenomena, as they existed. It is used to identify and obtain information on characteristics of a particular problem or issue with the data collected often being quantitative and subjected to statistical techniques to summarise the information. This study took a descriptive survey approach of which it is characterized by the random selection of samples from the larger population. This method sought to gain or deepen insights into the nature of the problem through the exploration and or examination of attitudes as determinants of outcomes perceived worth for the success of and or failure of knowledge sharing at ZOU. Therefore, the knowledge obtained in a survey allows generalizations to be made about characteristics, opinions, beliefs, and attitudes of the entire population being studied (Busha and Harter, 1980). In doing so the researcher used the field method to obtain his data thus consisting of questionnaires.

A descriptive survey has advantages and disadvantages. Its major advantage in this study was that it allowed for gathered data to be generalised beyond the immediate research situation. It thus satisfied the requirements of validity and reliability. Reliability of an instrument refers to how well the instrument consistently gives similar results. This is the consistency which the research instrument performs. Therefore, conducting a pre-test of the questionnaire tested the reliability of the questionnaire. Validity is concerned with the soundness of the measuring instrument. Kondo (1998: 58) pointed out that a well-structured and piloted survey method was found to be a relatively cheap and quick way of obtaining information. However, in a

descriptive survey, respondents may not always be truthful and instead will give answers that they feel that the researcher wants to hear, participants may also refuse to answer any questions that they feel are too personal or difficult to answer. Subjectivity and error also present a challenge in descriptive surveys because questions presented by a researcher are predetermined and prescriptive, while studies can contain errors. In a descriptive survey, the researcher may choose what information to use and ignore data that does not conform to their hypothesis.

3.2.1 Triangulation

Kondo (1998: 58) noted that as a weakness, the survey method is limited in its heavy dependence on one type of data collection method, the questionnaire. In this study, thus it would have been necessary to complement the survey method by triangulation. Hussey (2007: 74) described triangulation as the use of different research techniques in the same study so as to overcome the potential bias and sterility of a single method approach. Hence, Hussey (2007: 74) argues that triangulation led to greater validity and reliability than a single methodological approach. Triangulation is the use of multiple, different methods, investigators, sources, and theories to obtain corroborating evidence. However, this was not possible owing to the time frame in which this research has to be presented. Dooley (2007: 39) revealed that bias and errors often threaten data gathered in descriptive survey research. The most common is the interferences being sample and random errors. Small samples rarely represented the population. Bias also threatens the accuracy of the data collected. Leedy (1993: 166) stated that bias was inherent in all research but infected the descriptive survey more easily than most other methodological procedures. Hence, Leedy (1993: 166) defines bias as any influence, condition, or set of conditions that singly or together distort the data from what may have been obtained under the conditions of pure chance. In this study, the researcher guarded against errors and biases by ensuring that the sample was stratified and random. This was done by selecting one homogenous stratum of academic staff to represent the characteristics of the respondents. The data collection instrument was pilot tested to ensure that valid data were collected. The respondents were assured of anonymity and confidentiality in letters accompanying the questionnaires.

3.3 Research Methodology

The focus in this study is the academic staff of the Zimbabwe Open University based in the Regional Centres in the 9 provinces of Zimbabwe. It uses the quantitative questionnaire survey approach. Creswell (1994: 117) describes survey design as a description of trends, attitudes or opinions of a population by studying a sample of the population. From the sample results, the researcher then generalizes about the whole population. The survey approach was chosen because of its ability to generalize from a small sample and its relative convenience and affordability.

3.3.1 Population

Hussey (2007: 144) stated that population is a body of people or any collection of items under consideration. Wimmer and Dominick (2000: 432) define a sample as a group of human beings or other entities. The target population under study at the Zimbabwe Open University are the fulltime academic staff. There are 10 Regional Centres of the Zimbabwe Open University. The 158 academics make up the population for this study. The decision was made early on to restrict the exploratory study to a rather homogenous group of academic staff for two reasons:

- It was felt that academic staff might be best placed to provide a picture of the status of KS from a faculty perspective
- The limited resources of a master's dissertation hindered a bigger, more diverse and stratified sampling approach.

Research texts suggest that with small populations, such as in this study, the bigger the sampling ratio the more accurate the sample will be. However, smaller samples are acceptable when less accuracy is acceptable, when the population is homogenous and not many variables will be examined at a time (Neuman and Celano, 2006: 182).

3.3.2 Sampling Procedure

According to Wimmer and Dominick (2000), a sample is described as a small separated part showing the quality of the whole population from which it is drawn. However, there is no single correct procedure for sampling. The method chosen depends on purpose of enquiry, type of analysis to be made and on certain restrictions, time and facilities which has to be

accepted as external constraints (Nisbet and Entwhistle (1970) Disproportionate stratified random sampling was used in this study to determine the sample size. Sekaran and Bougie (1992: 233) noted that disproportionate sampling decisions are made either when some stratum or strata are too small or too large or when there is more variability suspected within a particular stratum. According to Leedy (1993), it is the most convenient in terms of time constraints and that it yields results because each member of the population has an equal chance of being selected. The ZOU has a staff complement of 850 Support and Academic staff and an annual registration of about 16 000 students (Ndudzo, 2015). According to the Southern African Regional Universities Association (SARUA), the academic staff numbers are 158, as shown on the Table 2 below.

Major Field of Study	Total Number (headcount)
Science, Engineering & Technology	28
Business, Management & Law	31
Humanities and Social Sciences	85
Health Sciences	14
TOTALS	158

Table 2: ZOU Staff headcount

****. Southern African Regional Universities Association (2016)***

The academic staff population at the ZOU consists of definitive strata, which is, different programmes, levels of study, faculties. In this study, the researcher took all the 100 Academic staff members as the representative strata. Since ZOU has a more homogeneous faculty population in terms of its goals and objectives, this made it easier to randomise the sample. Ideally, the researcher anticipated sampling systematically the total population of academic staff at ZOU with a proportionate spread of subjects' age and gender. However, this was not possible because of time limitations as well as the fact that information from academic staff is difficult to obtain because of their different locations from the National centre. To create a reliable sample, the researcher adopted the method configured by Krejcie and Morgan (1970), as depicted in figure 5 in creating the sample for the study. Figure 5 above shows an extract of the table of sample sizes for different population sizes.

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Figure 5: Determining sample size

(Source: Krejcie, and Morgan, 1970)

Note: "N" is population size and "S" is sample size.

According to Krejcie and Morgan (1970: 607), the ever-increasing demand for research has created a need for an efficient method of determining the sample size needed to be representative of a given population. The research division of the National Education Association has published a formula for determining sample size.

$s = X^2NP\ (1- P) \div d^2\ (N -1) + X^2P\ (1- P)$.

s = required sample size.

X^2 = the table value of chi-square for 1 degree of freedom at the N = the population size.

P = the population proportion (assumed to be .50 since this

d = the degree of accuracy expressed as a proportion (.05).

Hence, Krejcie and Morgan (1970: 607) further state that no calculations are needed to use the sample table in figure 5. For example, one may wish to know the sample size required to be representative of the opinions of 158 academic staff regarding knowledge sharing. To obtain the required sample size we enter figure 5 at N = 158. The sample size representative of the academic staff in this study is therefore 113 according to Krejcie and Morgan (1970) method.

Krejcie and Morgan (1970: 607) further argue that figure 5 is applicable to any defined population and desired confidence level (3.841) would provide the maximum sample size). Therefore, in this study, this sample size is representative as it contains the characteristics under investigation, thus generalizations can be reached justifiably to represent the overall population.

3.4. The Questionnaire

The questionnaire was designed aimed at the ZOU academic staff (Appendix 1). The questionnaire instrument was used to gather data mainly because of the nature of distance education and the characteristics of distance learning academic staff as they are invariably located. Added to the above advantages, questionnaires also enable respondents to feel more at ease to answer questions even of a personal nature and they can afford to be more open and honest. The questionnaires were distributed and collected from 20 January to 30 March 2017 during the semester teaching period where there was an anticipated high response rate since most distance learners were not writing their final end of semester examinations and lecturers were available. The necessity of using the questionnaire as a data collection instrument is related to three major factors:

- The very limited time available to undertake data gathering.
- The need for maintaining anonymity of the respondents.
- The need for achieving as wide coverage as possible.

The questions reflect the research objectives and research questions of this investigation. Data on the major research areas determined by the research questions and the research

objectives were collected. To ensure objectivity and remove possible bias the researcher posted structured and semi-structured questions to extract information from academic staff. Thus, these questionnaires mainly addressed the following questions:

- What are the characteristics of respondents?
- What evidence is there that the university has a culture of sharing information and knowledge?
- How are innovation, creativity and new ideas encouraged?
- Are there appropriate technological resources to facilitate effective KM, for example central knowledge repositories and social networking?
- How do academic staff members conceptualize, internalize and use the new knowledge?
- What are the views of academic staff, on the benefits that can be reaped from KS practices?
- What are the barriers to knowledge sharing?
- What are the enablers of knowledge sharing?
- What are the attitudes of academic staff towards knowledge sharing?
- What are the Information Technology competencies of academic staff?
- How are the expectations of academic staff towards knowledge sharing in Distance Education.?
- To what extent is the access and frequency use of ICTs by ZOU academic staff in relation to Knowledge sharing?

Using the questionnaire ensured greater uniformity in the manner in which questions were asked and this resulted in greater comparability of answers. This instrument also proved economical in data collection from the subjects as the questionnaires were distributed online minimizing travel cost. The questions were standardised to ensure that respondents answered the same questions. Distributing questionnaires online removed the human interaction which in turn ensured anonymity.

- However, in this study the questionnaire had its own drawbacks, which threatened its validity and reliability, which were:
- Respondents could delegate other people to complete the questionnaire.

- The validity of the instrument depended on the ability and willingness of the respondents to provide that information requested.

3.4.2 Pilot Study

A pilot study is a small-scale rehearsal of the main survey and should therefore be conducted in exactly the same way as planned for the main survey. Dooley (2002: 341), stated that a pilot study is widely used in research to test the main features of the inquiry such as the design of the questionnaire, various question forms, adequacy of the sample, various methods of collecting data, the non-response rate, the cost of the survey, instructions and definitions. Therefore, in this research, the researcher carried out a pilot study to perfect the instrument. The questionnaires were scrutinised and analysed by the research supervisor and then administered to the sample population different to the respondents. Pilot testing helped to determine whether the questionnaires investigated the problem adequately.

3.4.3 Reliability and Validity

Reliability of an instrument refers to how well the instrument consistently gives similar results. This is the consistency which the research instrument performs. Therefore, conducting a pre-test of the questionnaire tested the reliability of the questionnaire. Validity is concerned with the soundness of the measuring instrument. The questionnaire method has high face validity because it is more likely to measure what it is supposed to measure, for instance, the perception of students towards knowledge sharing.

3.4.4 Data collection and analysis plan

With permission from the Zimbabwe Open University authorities, the researcher distributed questionnaires electronically via a Google questionnaire and manually as a follow-up on those who had not managed to send their responses via Google. The responses were tabulated and analysed in rank order using descriptive statistical analysis. This means that frequency of each item was converted into a percentage of the total sample. Tables were used to illustrate the numbers calculated for the purposes of interpretation and analysis.

3.5 Conclusion

This chapter focused on the research methodology, design and sampling procedures. The descriptive survey method was identified as the best method to collect. Questionnaires are the instruments that were used to collect data. The data collection procedures were also identified as well. The next chapter concentrates on data presentation, analysis and discussion

CHAPTER 4: SUMMARY AND ANALYSIS OF DATA

4.1 Introduction

As stated in Chapter 1, the study explored Nonaka and Takeuchi's SECI model to explore KM sharing practices at the Zimbabwe Open University. Since the SECI processes as discussed in Chapter 1 are clearly hard to measure, the research uses the KM enablers identified in the literature as indicators: organisational culture, human resources procedures, ICT and organisational structure. As explained in Chapter 3, these KM enablers were used to structure the questionnaire. This chapter summarises and analyses the data collected by questionnaires completed by the academic staff in the regional centres of the Zimbabwe Open University (ZOU). The Statistical Package for Social Sciences (SPSS) was used to analyse and summarise the data.

4.2 Summary and analysis of responses to questionnaire

The study questionnaire has seven sections from A to G. The questionnaire is included in Appendix 1. Section A covers the background information about the respondents. Section B explores the focuses on organisational culture and KS, what respondents understand as KS and their perception of the University's support for KS. Section C collects data on ICTs that support KM in the departments. Section D explores the Knowledge sharing practices. Section E gathers data enablers of knowledge sharing. Section F is about conceptualization of new knowledge in the university and finally Section G explores the benefits of knowledge sharing. The tables and figures that follow include the question numbers for easy reference. The figures and tables in this section provide the number of responses to each question. Initially the questionnaire was sent via an online Google forms questionnaire and there was a poor response of 13 responses over a period of 2 weeks. The researcher then printed and manually distributed 100 questionnaires and the response was favourable where 73 questionnaires were returned to the researcher. In total 86 (86%) of the study population responded. One of the attributes to this was that Academics preferred to "browse" the entire physical questionnaire before answering.

4.2.1 Background Information

The target population for this research was the academic staff because they are believed to know and experience the overall flow of knowledge in the faculties and academic departments.

2. What is your age?		
Age group	Frequency	Percent
20-30 years	1	1.2
31-40 years	20	23.3
41-50 years	37	43.0
51+ years	28	32.6
Total	86	100.0

Table 3: Demographic characteristics

Table 3 gives the demographic characteristics. The results from the response show that 43 % fell in the 41-50 age group. 32.6% fell in the 51+ age-range. There is a correlation between age and qualification as well as job title. All the staff members with the Title "Professor" fell in the 51+ age group which gives an indication that they were mature and settled in the University. The findings largely concur with Curran (2012:21) who observed that there is a relationship between age and job satisfaction. Curran (2012: 21) cites two relevant literature observations to consolidate this finding. First, she cites Martocchio (1989: 409-414) who established that research shows that older people are more generally satisfied at their jobs than younger people and also found out that older employees are more content and satisfied with their jobs for reasons which include commitment to their families. In the context of this study, the foregoing literature findings motivated the researcher to explore the degree to which lecturer's level of maturity was one of the indicators of effective knowledge sharing in the studied university, that is, The Zimbabwe Open University.

4.2.2 Age-qualification analysis

Age Group	%	Qualification	Frequency
20-30	1	Bachelor (Honours or equivalent)	0
		Masters (MA/MSc, M)	1
		PhD	0
31-40	20	Bachelor (Honours or equivalent)	1
		Masters (MA/MSc, M)	19
		PhD	0
41-50	37	Bachelor (Honours or equivalent)	0
		Masters (MA/MSc, M)	31
		PhD	6
51+	28	Bachelor (Honours or equivalent)	0
		Masters (MA/MSc, M)	25
		PhD	3

Table 4: Age-Qualification analysis

Table 4 shows the age- qualification analysis of a sample of 86 academic staff at the ZOU. The results from the responses indicated that 1% had a Bachelor Honours qualification and 23 % who fell in the 31-40 age group held a master's degree qualification constituting 19% those holding a master's level qualification. The reason could be that these were entry level academic staff starting their academic career. Table 4 shows the distribution of qualifications. The age group 31- 40 had the highest number of Masters (19%) and PhD (0%) holders. The 41-50 age group is also the age group where there is a higher concentration of master's degree holders as well as a higher occurrence of PhD holders. This could be as a result of turnover to new universities as well as with staff leaving the country for international universities. This is mainly because the effectiveness of staff retention strategies in retaining lecturers in the Zimbabwean universities are being undermined by the unfavourable socio-political economic environment in the second half of the 21st Century's first decade (Samuel and Chipunza, 2009). Mupemhi and Mupemhi (2011: 40) concluded that although they believed that the university culture, business strategy, HR strategy and reward strategy are key factors in attracting motivating and retaining staff, the business

strategy and HR strategy are not the driving forces of employee attraction, motivation and retention. They went on to assert that lack of support for doctoral studies can push lecturers out of a university. The lecturers who do not get such valuable support to pursue PhD studies in a university of their choice feel elbowed out of their university system. They feel unwanted, un-valued and unrecognised. On the basis of such experiences, those lecturers who educate themselves using their own resources quit the university upon completing their PhD studies, leaving the university with staff retention challenges. This is significant in that this will affect knowledge sharing as well as retention for institutional memory.

4.2.3 Knowledge sharing practices

4.2.3.1 Knowledge Sharing Culture

Organizational climate is also expected to directly influence individuals' intentions to share knowledge. Scholars in cross-cultural research argue that cultural factors such as group conformity and face saving in a Confucian society can directly affect intention (Bang et al. 2000). As the data collection for this study is limited to a sample of Academic staff at Zimbabwe Open University, the unique character of the Zimbabwe Open University as a distance learning institution's culture must be taken into consideration. As the only dedicated ODL institution in Zimbabwe, and the second largest provider of ODL in Southern Africa after the University of South Africa, the Zimbabwe Open University is a driving force for open and distance learning in Zimbabwe.

This section of the questionnaire seeks to understand the university's' organizational cultures and how these factors mentioned above ultimately affect knowledge sharing practices in the faculties and departments. This might give a more realistic picture of the situation than the previous section which gave more general, possibly theoretical, responses to the perceived benefits of KS. Yeh, Lai and Ho (2006: 797) believe that organizational culture influences the willingness of employees to share and put knowledge into the organization. Syed-Ikhsan and Rowland (2004: 100)) stress that the culture of an organization is the major factor that can make or break the success of KS initiatives. This section seeks to find out if the organizational culture of the Zimbabwe Open University enables KS practices.

Q12. The importance of KS is clearly communicated in the university		
Response	Frequency	%
1= Strongly disagree	2	2.3
2= Disagree	10	11.6
3= Neutral	19	22.1
4= Agree	44	51.2
5= Strongly agree	11	12.8
Total	86	100.0

Table 5: KS Communication

Table 5 above summarizes responses to Section B; whose aim was to find out how knowledge is shared and stored in the department by asking for responses to a number of statements to relating the environment and processes deemed favourable for KS. The table indicates a general view that knowledge/information is easily shared in the departments. Forty-four (51.2%) of respondents indicate they agree that the importance of KS is clearly communicated in the university. Corporate culture is the combination of value, core belief, behaviour model, and emblem. It represents the value system of the company and will become the employees' behaviour norm. Every organization's culture is an independent entity different than any other organizations'. This is echoed by one of Zimbabwe Open University's core values of creation of an innovative culture as well as to enhance the quality of tutorials through training of part time and full-time tutors

Table 6 below summarizes the staff responses concerning a knowledge sharing culture.

Q13. Knowledge sharing can become a culture in the university		
Response	Frequency	%
1= Strongly disagree	1	1.2
2= Disagree	3	3.5
3= Neutral	10	11.6
4= Agree	35	40.7
5= Strongly agree	37	43.0
Total	86	100.0

Table 6: Knowledge sharing culture

People are the core of creating organizational knowledge because it is people who create and share knowledge, and therefore, it is crucial to manage those who are willing to create and

share their knowledge. Therefore, a key element for an enterprise to be successful in pushing knowledge management is the process to encourage people to communicate and share their knowledge with others (Nonaka and Takeuchi, 1995). Table 6 above indicates responses to the question that KS can become a culture in the university. Thirty-seven (43.0%) of the respondents strongly agreed that knowledge. 35(40.7%)

Q26. There is general lack of interest to share knowledge within the university		
Response	Frequency	%
1=Strongly disagree	3	3.5
2= Disagree	27	31.4
3= Neutral	26	30.2
4= Agree	26	30.2
5= Strongly agree	4	4.7
Total	86	100.0

Table 7: Interest to share knowledge within the university

Question 26 sought to find out how the respondents felt about sharing knowledge and the results were that 26(30.2%) remained neutral. This may be because some respondents were undecided. However, 26(30.2 %) agreed to this and well as a further 4(4.7%) strongly agreeing with the question. However, 27(31.4%) disagreed which means that a majority of the population feels that there is willingness to share knowledge. This is supported but the response to question 40, in which a substantial number (42 i.e,.48.8%) agreed that they feel motivated to share knowledge with others further 28(32.6%) felt motivated to share their knowledge with others. Responses to Question 37 and 38 also reflects this assertion where a substantial 44(51.2%) indicated that they are willing to share their lecture notes and PowerPoint slides. 53(61.6%) also indicated that they are willing to share their seminar, conference and training experience and knowledge. However, 18(21%) of the respondents agreed with the notion that academic staff do not share knowledge because of poor verbal and written communication and interpersonal skills. At an individual or employee level, knowledge -sharing barriers are often related to factors such as lacking communication skills and social networks, differences in national culture, overemphasis of position statuses, and a lack of time and trust. At an organisational level, barriers tend to be linked to, for instance, the economic viability, lack of infrastructure and resources, the accessibility of formal and

informal meeting spaces, and the physical environment (Andreas Riege, 2005). This means that as much as there are socio economic challenges affecting the country at present a greater challenge to knowledge sharing in academic institutions as there is also a degree of mistrust (31.4%). The fact that 29(33.7%) remained neutral can also indicate how bureaucracy affects the perception of trust within an organization such a Zimbabwe Open University. This may imply the existence of organizational silos where staff work in isolation. This thus hinders the flow of information across faculty and departmental staff.

According to the findings in a similar study by Mupa, Chabaya and Chiome (2011: 104), respondents' attitudes are well-represented by the following quote: 'We do not have a specific knowledge management policy to deal with the systems that we use, the infrastructure that we might have such as the IT systems'. What is important is a strategy, under any title which serves the same aim of 'getting the right knowledge to the right people at the right time and helping people share and put knowledge into action in ways to improve an organisation's performance' (O'Dell and Grayson, 1998: 4)

4.2.3.2 Knowledge Management Enablers

Knowledge management enablers are the mechanism for the organization to develop its knowledge and also stimulate the creation of knowledge within the organization as well as the sharing and protection of it. They are also the necessary building blocks in the improvement of the effectiveness of activities for knowledge management (Ichijo, Krough, and Nonaka, 1998; Stonehouse and Pemberton, 1999). In a study by Monavvarian and Kasaei (2007: 354) who examined the connection between Knowledge Management in the Ministry of Labour in Iran focusing on the following factors: organizational culture, organizational structure, technology, human resources, transparency of documents, flow of communication and information, and training. Their study revealed that the most important factors for effective implementation of KM at the Iranian Ministry of Labour were culture followed by technology and training. Strategy and Leadership is also an important background factor that guides knowledge management is the business strategy

Following is an analysis of responses in relation to the enablers of KS discussed in Chapter 2 which are:

4.2.3.3 Policy Framework

Knowledge management policy is critical as it provides guidelines for employees on how knowledge is shared as well as specify the kind and format and well as a prescribe the medium of sharing knowledge. Syed-Ikhsan and Rowland have a similar finding (2004). Their Malaysian respondents overwhelming agree on the importance of a KM policy while only 52% report they have one. And the Kenyan study by Ondari-Okemwa (2007) makes a similar finding on the lack of explicit policy. About 95% of its respondents find lack of knowledge policy to be an obstacle to knowledge flow or access.

Q49: There exists a Knowledge sharing strategy in the Zimbabwe Open University		
Response	Frequency	%
1= Strongly disagree	3	3.5
2= Disagree	15	17.4
3= Neutral	28	32.6
4= Agree	33	38.4
5= Strongly agree	7	8.1
Total	86	100.0

Table 8: Knowledge sharing strategy in the Zimbabwe Open University

There were mixed responses concerning whether the respondents felt that there is a knowledge sharing strategy in the Zimbabwe Open University. According to Tsui (2006) Knowledge sharing is becoming increasingly important to ensure that practice and policy are based on sound evidence. For this to happen, the gaps among research, practice, and policy must be bridged. Knowledge sharing is a tool that can be used to promote evidence-based practice and decision making, and also to promote exchange and dialogue among researchers, policymakers, and service providers. However, little is known about knowledge-sharing strategies and their effectiveness. There are a number of possible reasons for why a coherent, integrated understanding of knowledge-sharing strategies does not yet exist:

• Knowledge sharing often occurs within and among diverse disciplines whose members may not communicate and share their expertise and promising practices.

• Knowledge sharing occurs even when sharing knowledge is not the objective; when informal knowledge sharing does occur, it may not be identified as a knowledge-sharing strategy.

• Knowledge sharing encompasses a broad scope of activities; lack of agreement on what "counts" as knowledge sharing limits collaboration and shared understanding.

In the case of the Zimbabwe Open University, there is no clear Knowledge sharing strategy in the 5-year university strategic plan. This explains the responses on Table 9 below where 19(22.1%) disagreed with the assertion that the university is able to respond adequately to the changes in the knowledge economy.

Q50: The university is able to respond adequately to the changes in the knowledge economy		
Response	Frequency	%
1= Strongly disagree	6	7.0
2= Disagree	19	22.1
3= Neutral	32	37.2
4= Agree	25	29.1
5= Strongly agree	4	4.7
Total	86	100.0

Table 9: Response to the changes in the knowledge economy

Out of the academic staff who responded to this question, (25)29.1% agreed that the university is able to respond adequately to the changes in the knowledge economy. However, 32(37.2%) remained neutral. This is a significant population to be undecided and this could be attributed to the view that some of the academic staff may not know what is meant by knowledge economy or not adequately understand the concept of knowledge sharing and what a knowledge strategy entails. The University's strategy makes little reference to

knowledge sharing as part of its strategy. The economic challenges and budget constraints has probably driven the strategy to focus more on enrolment numbers.

4.2.3.4 Human Resource Strategy

Like any other university in Zimbabwe, Staff retention has been over the years negatively impacted by the prevailing economic conditions. However, in this study, an interesting perspective can be deduced given that 19(22.1) % of the respondents strongly disagree and 24(27.9%) disagree that staff retention is not a priority, against a 13(15.1%) who are neutral and 23(26.7%) who fell in the spectrum agreeing and 7(8.1%) strongly agreeing with this assertion that staff retention is not a priority.

Q29: Retention of highly skilled and experienced staff is not a high priority in my university.		
Response	Frequency	%
1= Strongly disagree	19	22.1
2= Disagree	24	27.9
3= Neutral	13	15.1
4= Agree	23	26.7
5= Strongly agree	7	8.1
Total	86	100.0

Table 10: Retention of highly skilled and experienced staff

Therefore, whilst the university is operating in a harsh economic climate, this is evidence that the university management make efforts to retain academic staff.

4.2.4 Innovation

4.2.4.1 ICT support for Knowledge sharing

The significance of Information Technology (IT) as an enabler of knowledge sharing was discussed in Chapter 2. IT enables access and retrieval of information and creates a conducive environment that supports teamwork and collaborative communication amongst members of the organization, in this case, academic staff. Information technology and knowledge management are closely tied together because both help the propagation of structured knowledge vertically as well as horizontally within the organization. Technical

knowledge capability emphasizes knowledge integration in an organization through the capability that the information infrastructure provides for knowledge sharing – that is, the more technical knowledge organizations own, the more their members tend to share knowledge. In addition, structural knowledge capability emphasizes the development of a mechanism including organizational regulation and an incentive system.

Information technology facilitates social interactions among various organizational levels. While technology alone is not a panacea for ensuring that knowledge will be shared, the knowledge-based view of the firm recognizes that IT is a powerful tool for enabling and coordinating the distribution of knowledge within and across organizational and geographical boundaries. Social rules, which shape social processes and interaction behaviours, are built into technological infrastructures (DeSanctis & Poole, 1994). The technological capability of sharing knowledge can alleviate problems regarding the distribution of knowledge that hierarchical social structure may at one time have reinforced. However, knowledge sharing, as the result of the presence of technological infrastructure, is not automatic. We argue that two types of technology practices (providing collaborative technology tools and ensuring that data quality management practices are in place) can help stimulate successful knowledge sharing. This section thus established the technologies available at ZOU and finds out how technology and innovation enable staff to share knowledge.

Question.	YES	NO
7. Do you have constant access to the Internet?	82	4
3. Computer in your office	86	0
10. Have you ever visited the ZOU website?	82	4

Table 11: Access to Information technology

From the responses shown above on Table 11, it was encouraging to notice that 86(100%) of the respondents have a computer and 80(94%) access to the internet in their office. This reflects that ZOU has made strides to move from a traditional institution to a more computerized institution. It is also important to note that 25(29%) of the respondents rated

their computer skills as excellent and 50(57.6%) responded and rated their IT skills as 'Good'. These findings suggest that IT expertise has been found to enable knowledge sharing amongst the academics as staff are more likely to know where, when and how to share knowledge, and these competencies can be called "corporate yellow pages" which are said to encourage knowledge sharing in the organization.

Q21. Technology plays a significant role in promoting knowledge sharing		
Response	Frequency	%
1= Strongly disagree	1	1.2
2= Disagree	2	2.3
3= Neutral	8	9.3
4= Agree	42	48.8
5= Strongly agree	33	38.4
Total	86	100.0

Table 12: Promoting knowledge sharing.

Question 21 on Table 12 above summarises the perceptions of staff on the role of technology in promoting KS. 42(48.8%) responded with "agree" and 33(38.4%) strongly agreed that technology played a significant role in promoting KS. Syed-Ikhsan and Rowland (2004: 108) also indicated in their study that Internet is most important. The responses to this question directly correlate to the high Information technology (IT) competencies where most of the staff have good and very good IT skills.

Q22. The ZOU website is effectively used for knowledge sharing		
Response	Frequency	%
1= Strongly disagree	5	5.8
2= Disagree	16	18.6
3= Neutral	29	33.7
4= Agree	27	31.4
5= Strongly agree	9	10.5
Total	86	100.0

Table 13: The ZOU website is effectively used for knowledge sharing.

However, as reflected on Table 13 above it appears that despite the high level of IT competency among staff, there is a significant percentage 16(18.6%) of staff who have visited the ZOU website but felt that the institutional website is not effectively used for knowledge sharing against 27(31.4%) agree and 9(10.5%) strongly agree. This could be attributed to the fact that the ZOU website is used more as a marketing tool to draw new students rather than as staff communication too. This is directly related to the tenure of the academic staff. Senior staff tends to be more neutral that staff who have fewer years working for the ZOU. 36(41.9%) of staff felt that the ZOU website is effectively used for knowledge sharing against 37(42.9%) of the respondents who agreed that Technology plays a significant role in promoting knowledge. This can be attributed to the prevalence of technology, i.e. computers and Internet at their disposal. This also shows that ZOU as a university has made progress towards computerising its academic activities. The ZOU developed an online assignment submission system hence it is also imperative that academic staff have the necessary tools. This is further supported by the 29(33.7%) who "strongly agreed" that Technology plays a significant role in promoting knowledge.

Q23. I am aware of the repositories database in my organization		
Response	Frequency	%
1= Strongly disagree	9	10.6
2= Disagree	11	12.8
3= Neutral	17	20.0
4= Agree	39	45.9
5= Strongly agree	10	11.8
Total	86	100.0

Table 14: Awareness of the institutional repository.

The ZOU implemented technologies to enhance knowledge sharing and one of this was the DSpace library repository. From the responses, it appears most staff 39(45.9%) are of the repositories at ZOU. This means that more academic staff are aware of what other academics are publishing as staff deposit their publications in the repository. This facilitates knowledge sharing in that other academic staff are able to view what other researchers have worked on.

ZOU also has an Intranet which staff uses for information sharing. 36(41.9%) of staff felt that the ZOU website is effectively used for knowledge sharing. This has a positive correlation with the 39(45.9%) who are aware of the institutional repositories. However, whilst 57.7% of the respondents are aware of the existence of repositories, it is also of concern that 22.4% staff are not aware of the existence of the repositories at ZOU. This can be attributed to connectivity challenges at the university where some of the regional centres do not have fast internet connection.

Despite the high awareness of repositories at the ZOU by the academic staff, 27(31.8%) responded to question 24 disagreeing with the assertion that the digital repository is accessible and easy to use. This is against 36.5% who agreed and 31.8% who remained neutral. This could be attributed to the fact that most of the academic staff do not know of the existence of the repository. 21.8% felt that the digital repository is not accessible and not easy to use. 31.8% of the respondents remained neutral. This could be attributed to the fact that due to poor connectivity some of the regional academic staff, even though they are aware of the repository, they may not access it hence the neutral response.

As characteristic with Zimbabwean universities nowadays, the Zimbabwe Open University established a digital repository which also acts as a knowledge sharing database where academic staff deposit their research articles. However, whilst this innovation has been largely successful in terms of rolling it out, 17(20%) of the respondents disagreed and 10 that the repository is not accessible against 23(27.1%) who agreed and 8(9.4%) who strongly agreed that the repository is accessible. However, it is concerning that 27(31.8%) responded as neutral, that is neither agree or disagree.

Q24. The Digital Repository is accessible and easy to use		
Response	Frequency	%
1= Strongly disagree	10	11.8
2= Disagree	17	20.0
3= Neutral	27	31.8
4= Agree	23	27.1
5= Strongly agree	8	9.4
Total	85	100.0

Table 15: Accessibility of the Digital Repository.

This could also reflect on the internal marketing of the digital repository to the staff. This also closely reflects on the combined 20(23.4%) on Table 14 who indicated that they are not aware of the ZOU Digital repository.

Q34: Existing university environment is not conducive for innovation and sharing knowledge.		
Response	Frequency	%
1= Strongly disagree	14	16.3
2= Disagree	22	25.6
3= Neutral	28	32.6
4= Agree	18	20.9
5= Strongly agree	4	4.7
Total	86	100.0

Table 16: Innovation and knowledge sharing

Collaborative tools allow individuals within the organization to work together and collaborate interactively. Collaboration is seen as one of the key ways in which knowledge is transmitted and created within the organization. It is important to identify relevant knowledge in various places of an organization to build a technical infrastructure that supports knowledge sharing and dissemination. Ideally, there should be enabling technologies to allow an organization to apply its collective intellect to a problem, regardless of time or geographic location. For example, knowledge sharing across the ZOU regional campuses in multiple provinces requires collaborative infrastructural systems. Using collaborative technologies, such as intranet-based repositories, can lead to faster access to information and reduced costs Thus; the knowledge of individuals is converted into organizational knowledge through the process of knowledge sharing with the help of information technology (Nelson & Cooprider, 1996: 424). Organisational environment is one of the key enablers of knowledge sharing. Table 16 indicates the responses from academics on their perceptions of the conduciveness of the university environment for innovation and sharing knowledge. 14(16.3%) of the respondents strongly disagreed, 22(25.6%) disagreed with this notion. Interestingly, 28(32.6%) remained neutral. However, 18(20.9%) agreed and 4(4.7%) strongly agreed which means the majority of staff feel that the university environment is conducive for innovation and sharing knowledge.

4.2.5 Benefits of Knowledge sharing

Section G dealt with the benefits of knowledge sharing.

Q52. The competitiveness of this organization is increased		
Response	Frequency	%
1= Strongly disagree	1	1.2
2= Disagree	4	4.7
3= Neutral	15	17.4
4= Agree	43	50.0
5= Strongly agree	23	26.7
Total	86	100.0

Table 17: Organisational competitiveness

Respondents were asked to rank responses from Disagree to Strongly Agree. Respondents were asked to respond on their perceptions of the benefits of knowledge sharing using predetermined questions which were responded to as shown on table 17. The results of this study suggest fostering this behaviour or activity through the enhancement of organizational knowledge capabilities. If an organization possesses more organizational capabilities for combining knowledge resources so as to generate new capabilities, then knowledge sharing is likely to be more effective and organisational competitiveness is increased. The results of this study show that technical, structural, and human knowledge capabilities all exert significant influences on knowledge sharing activities at the Zimbabwe Open University. According to Yang and Chen (2005), Information and communication technology (e.g. e-mail, on-line forums, or search engines) are important and well-known resources for organizational knowledge sharing; however, technical knowledge and capabilities are more essential than information technology itself. Therefore, technical knowledge capability emphasizes knowledge integration in an organization through the capability that the information infrastructure provides for knowledge sharing – that is, the more technical knowledge organizations own, the more their members tend to share knowledge. This is reflected by the availability of computers and Internet to staff at the Zimbabwe Open University which in itself is an enabler for knowledge sharing. In addition, structural

knowledge capability emphasizes the development of a mechanism including organizational regulation and an incentive system.

Question 25. There is lack of rewards and recognition systems that encourage knowledge sharing		
Response	Frequency	%
1= Strongly disagree	2	2.3
2= Disagree	11	12.8
3= Neutral	22	25.6
4= Agree	33	38.4
5= Strongly agree	18	20.9
Total	86	100.0

Table 18: Rewards systems and knowledge sharing.

Reward, compensation, promotion, and prizes are among the incentive systems which can encourage individuals to contribute their professional knowledge to the organization. The organizational regulation is composed of a subjective norm, political directives, and a procedure design that are common ordinances to foster knowledge sharing behaviour within the firm's members (Yang and Chen,2005). A good structural knowledge capability increases the individual's motivation for knowledge sharing. Beyond identified effects, human knowledge capability concentrates on establishing positive relationships and a good social network for effective knowledge sharing. Quality relationships can improve the trust among a firm's members and further promote the members' attitude to and intention of knowledge sharing in an organization. Table 18 above shows the result from the responses to question 25, which asked respondents their views regarding if there is lack of rewards and recognition systems that encourage knowledge sharing at the Zimbabwe Open University. The results show that the majority of staff (59.3%) felt that there is lack of a reward system that encourages knowledge sharing. 33(38.4%) agreed and 18(20.9%) strongly agreed that there is a lack of rewards and recognition systems against 11(12.8%) who disagreed) and 2(2.3%) who strongly disagreed. It is however interesting that 22(25.6%) remained neutral and this probably indicates that staff may not be aware of the link between a reward system and knowledge sharing culture

Reward, compensation, promotion, and prizes are among the incentive systems which can encourage individuals to contribute their professional knowledge at the Zimbabwe Open

University. The organizational regulation is composed of a subjective norm, political directives, and a procedure design that are common ordinances to foster knowledge sharing behaviour within the university's academic staff members. A good structural knowledge capability increases the staff member's motivation for knowledge sharing. Beyond identified effects, human knowledge capability concentrates on establishing positive relationships and a good social network for effective knowledge sharing. Employees who believe their mutual relationships with others can improve through their knowledge sharing, and who are operating on the basis of their desire for fairness and reciprocity (Huber 2001: 74), are likely to have positive attitudes toward knowledge sharing. Therefore, quality relationships can improve the trust among a firm's members and further promote the members' attitude to and intention of knowledge sharing in an organization.

4.2.6 Conclusion

The aim of this study was to find out what are the knowledge sharing practices that are practiced at the Zimbabwe Open University. The study assessed the KS practices in the Zimbabwe Open University Regional Centres to identify gaps, with the aim to find out how knowledge is being managed and shared in the distance learning university space. A knowledge organization focuses on developing interpersonal, structural, and network relationships to achieve effective knowledge sharing and to further generate new knowledge or capabilities for organizational competitiveness and success. This research thesis elaborates upon some organizational variables which can affect knowledge sharing by academic staff in at the Zimbabwe Open University. By identifying these capability factors as the determinants of shared knowledge, the Zimbabwe Open University can more efficiently deploy and organize their resources and capabilities for knowledge sharing.

CHAPTER 5: DISCUSSION OF FINDINGS AND CONCLUSIONS

5.1 Introduction

This chapter goes back to the research questions identified in Chapter 1 and attempts to answer them in relation to findings from Chapter 4 and the literature reviewed in Chapter 2. This chapter returns to the research questions using data gathered across the sections of the questionnaire as summarized in the previous chapter.

The study set out to evaluate the knowledge sharing practices by academic staff at Zimbabwe Open University. The underlying premise being that good KM leads to efficiency and effectiveness. It probed the existence of certain KM enablers as they provide the conducive conditions and tools that are needed in the organization to implement and practice KM. The study identified possible gaps. The chapter also makes some recommendations to the Zimbabwe Open University, so that it might reap the benefits of effective knowledge sharing. The limitations that come from the chosen methodology of the study have to be acknowledged before the research questions are examined. As explained in Chapter 3, it was decided to limit the survey to full time academic staff. The discussion that follows represents the situation through the perceptions of academics. No attempt was made to include other non-academic staff members. The questionnaire survey approach was used alone. There was no attempt to triangulate its data, for example by comparing respondents' claims with observation data. This was beyond the scope of the dissertation study and would have demanded far more time and resources. This chapter includes some recommendations for future research that might extend it. This chapter returns to the research questions using data gathered across the sections of the questionnaire as summarized in the previous chapter. A Sample of 86 full time academic staff from across faculties was used. The methodology that was used was the descriptive survey approach. This study was largely prompted by the fact that opens and distance learning has become popular and has been catching up in the knowledge revolution. Distance education has become an outcome of various technologies in the field of education and the convergence of new Information technologies such as

telecommunications, computers, satellite, and fibre optic technologies are making it easier for institutions to implement distance education. Although the research was not easy to carry out, respondents were cooperative, and enthusiastic and supportive on this research as it was of potential benefit to them. The respondents completed the questionnaires in situations beyond the researcher. However, some respondents did not the research study seriously as the regarded it as the usual academic inquisitiveness by University students. The initial electronic distribution was poorly received, and this indicated that some of the respondents still prefer manual ways of data collection. As a result, this lengthened data collection period as the researcher had to print and manually distribute questionnaire. Some respondents from the Zimbabwe Open University staff had been promised ICT training in line with the University's Strategic plan prior to this study which has not happened. Hence those who completed the questionnaire with ill feelings could introduce some biases into the research findings. The culture of secrecy in institutions of higher learning also made some respondents fail to co-operate willingly with the researcher.

5.2 Discussion of findings

This section looks at each research question in an attempt to throw light on the central research problem – the status of KS at the Zimbabwe Open University.

5.2.1 What evidence is there that the university has a culture of sharing information and knowledge?

The findings of the study confirmed that there is willingness to engage in knowledge sharing activities. For instance, 31.4% of staff disagreed with the assertion that there is generally unwillingness to share knowledge. This is also backed by the 51.2% who indicated that they agreed that the importance of knowledge sharing is clearly communicated in the university. A significant number (43%) of the respondents also strongly agreed that knowledge sharing can become a culture in the university. The above situations explain why staff members generally felt there was interest in sharing knowledge within the university. However, despite the positive response to this question, the research found gaps between beliefs and actual practice within the university. One of the major contradictions is that even though there is some degree of awareness of what knowledge sharing is about, there is no clear knowledge

management policy existing. There is no designated knowledge management expert to craft the knowledge strategy of the university. This impacts the direction and the impact the university will have in the knowledge economy. These factors affect the socialization in which a level field of interaction facilitating knowledge sharing to be created.

5.2.2 Are there appropriate technological resources to facilitate effective KM, for example central knowledge repositories and social networking?

The findings of the study confirmed that academic staff have access to basic ICT tools such as computers at the Zimbabwe Open University. The above situations explain why staff members generally felt there was interest in sharing knowledge within the university. This is because, there is Information Technology as an enabler in Knowledge sharing. Hence these findings revealed that lack of access to ICT by academic Staff had a negative impact the quality of knowledge sharing. A knowledge-based system is likely to enhance the quality of ZOU academic research output and improve service delivery. The study found out that knowledge sharing linked to a reward system was necessary for staff in order to effectively deliver services to distance learners. However, it emerged that the hostile economic environment is slowing down progress on the computerisation and networking of the Regional Centres impacts on staff access to repositories as well as on sharing research.

5.2.3 How do academic staff members conceptualize, internalize and use the new knowledge?

The study also revealed some evidence that lack of trust might hinder the culture of knowledge sharing in the university. Lack of trust can lead to knowledge silos within the academic staff community as shown by Ondari-Okemwa (2007) and Gaffoor (2008) in their studies. Nonaka, Toyama and Konno (2000) are of the view that training programs can help in reducing internalization of knowledge. This can be done through regular knowledge sharing sessions and encouraging staff to attend conferences and workshops as well as engage in community of practice. Although the lack of trust exists, results of the study also reveal that there is willingness to share notes as well as new knowledge from training. By doing so, members of the academic staff are then able to have meaningful dialogue which triggers externalization of knowledge thus revealing hidden tacit knowledge which is often difficult to communicate in everyday conversations.

5.2.4 What are the views of academic staff, on the benefits that can be reaped from KS practices?

On the whole, the Zimbabwe Open University academic staff are positive about KS. They believe strongly that KS is as important to the university and that technology plays a significant role in promoting knowledge in the university. The findings also revealed that knowledge sharing is also linked to a reward system. This indicated that if ZOU creates an enabling environment for knowledge sharing, there will be a positive correlation between staff retention and knowledge sharing. The study also revealed that there is no defined Knowledge Policy at the Zimbabwe Open University and this lack of a clear KS policy in the university's strategy negatively impacts on how staff overall perceive knowledge sharing and subsequently how they participate in the Knowledge economy. KM policy is important as it provides guidelines for employees on how to share knowledge, and whom to share it with, what kind of knowledge, and in which format. This means that new knowledge cannot be adequately shared when existing knowledge is not known. A knowledge policy would thus enable crystallization on knowledge into developing ideas that will uplift the open and distance learning field. A Kenyan study by Ondari-Okemwa (2007) makes a similar finding on the lack of explicit policy. About 95% of its respondents find lack of knowledge policy to be an obstacle to knowledge flow or access. A related study by Syed-Ikhsan and Rowland (2004: 105) has a similar finding. Their Malaysian respondents overwhelming agree on the importance of a KM policy while only 52% reported they have one.

This study identified certain other barriers to knowledge sharing, for example:

- Poor communication channels between members of the department and across faculties and departments are identified as the greatest barrier that hinders knowledge sharing in the Zimbabwe Open University. This echoes Syed-Ikhsan and Rowland's finding (2004: 106) that 53.6% of their respondents indicate that communication channels between employees hinders knowledge sharing government departments. Ondari-Okemwa and Smith (2009: 34) are of the view that bureaucratic structures have an unspoken motivation to gain competitive advantage. They say, "knowledge sharing decreases as the level of competition within an organization increases" Ondari-Okemwa and Smith (2009: 34.).

- Lack of trust. Lack of trust is a major hindrance for knowledge sharing. Lack of trust might hinder the culture of knowledge sharing. Lack of trust can lead to silo building as shown by Ondari-Okemwa (2007).
- Lack of a KM Policy which makes it unclear on how staff should share knowledge.

5.3 Conclusion

This chapter has highlighted the summary of the whole project. This chapter has also given the conclusions made by the study that lack of knowledge sharing policy in the university's 5-year strategy negatively impacts on the university competitively positioning itself in the knowledge economy as a knowledge driven university and this impacts research productivity and distance learning course delivery at the ZOU. It has therefore established that there is need for a concerted effort on the part of the ZOU and its stakeholders that they commit themselves towards making the university a knowledge driven institution. This project is expected to help and influence decision makers to improve on the ICT access by distance learners at the Zimbabwe Open University.

5.4 Recommendations

In the light of the above findings of the study, the researcher puts forward the following suggestions for further research and probable implementation by the Zimbabwe Open University and the research fraternity.

- The Zimbabwe Open University regional centres should be equipped with modern, up-to-date IT infrastructure with highly qualified personnel to be in place. This will facilitate knowledge sharing at a micro level.
- Academic Staff need to form communities of practice which will improve collaboration in research.
- Academic staff need to go for regular workshops and encouraged to share their knowledge of what they learnt.
- The ZOU should source more ICT equipment to upgrade the current information systems by putting in place, through its IT Service Unit, a robust network that would facilitate networking of all Regional Centres thus also linking the National Centre to

the regional centres spread throughout the country's ten regions. The network will need to be of high capacity to ensure that high quality and high-performance services such as transmitting digital images or videoconferencing, is made possible over the network, this will go a long way in facilitating knowledge sharing within the university.

- The university should consider appointing a knowledge management expert who will spearhead the knowledge management policy.
- The university should have a Knowledge policy aligned to its strategic plan which will act as a guideline on the sharing lot knowledge internally and externally.
- The university should make it mandatory for Academic staff to publish internally as well as to store their publications in the university repository.

5.4.1 Recommendations for future research

The limitations of this dissertation study come from the small and limited sample, as described in Chapter 3. Future research with more resources could extend the depth of the study. A longer term and qualitative participation observation study could uncover the "why", that the questionnaire survey could not probe. It would be good to extend the study in future to include more levels of staff, since the academic staff and university management might see things from a limited perspective and might understandably wish to put a positive spin on their departments and regional centres. There are a few ambiguities and contradictions among the data which might be followed up. For example, a follow up study could investigate the role of senior management, or support staff real and potential, in Knowledge Sharing or on a broader Knowledge Management Scale.

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APPENDICES

Appendix 1: Questionnaire

University of the Western Cape
Faculty of Arts
Department of Library and Information Science

Dear Respondent

My name is Albert Nhawo Chikono, a Masters student in Library and Information Science at the University of the Western Cape. I am carrying out master's research entitled: Knowledge Sharing amongst academics at the Zimbabwe Open University (ZOU) The research project targets academics, to examine how knowledge is being managed, shared in an open and distance learning institution and if knowledge management (KM) is playing a role. The proposed study will also assess the knowledge sharing practices in the ZOU regional campus faculty departments and identify gaps in knowledge sharing.

I therefore kindly solicit your assistance to provide answers to the set of questions provided. In case you have any questions and wish to have a detailed account of this study please contact me at anchikono@gmail.com or Dr Gavin Davis at the University of the Western Cape gdavis@uwc.ac.za.

- You will be anonymous, and all answers will be confidential.
- Information obtained through this exercise will be strictly used for academic purposes.
- Your participation is voluntary, and you are free to withdraw at any time without giving any reason.

Thank you,

Yours faithfully

Albert N. Chikono

In the questions below, there are seven sections each of which has a number of statements that you may agree or disagree with, and these statements are ranked from 1(Strongly disagree) to 5(Strongly Agree). The questionnaire should take approximately 10 minutes to complete.

Section A: Background/Biographical information

1. What is your job title?

   ---

2. A g e (Please tick appropriate box)

2 0-3 0 y e a r s	
3 1-4 0 y e a r s	
4 1-5 0 y e a r s	
5 1+ y e a r s	

3. What is your highest academic qualification?

---

4. H o w l o n g have you been working for the university?
   (Please tick appropriate box)

0- 3 years	
4- 6 years	
7-10 years	
11+ years	

5. Do you have a computer in your office?

   (Please tick appropriate box)

Yes	
No	

6. How would you rate your information technology appreciation?
   (Please tick appropriate box)

Excellent	
Good	
Fair	
Poor	

7. Do you have access to the internet?
   (Please tick appropriate box)

Yes	
No	

8. If yes to question 8 where do you access internet services?
   (Please tick appropriate box)

Home	
Work	
Other (please specify)	

9. If No to question 8 how do you share knowledge with your peers?
   _____

10. Have you visited the ZOU website?
    Yes No

Section B: What evidence is there that the university has a culture of sharing information and knowledge?						
Please tick appropriate box		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
11	KS is significant for the success and growth of distance learning programme					
12	The importance of KS is clearly communicated in the university					
13	Knowledge sharing can become a culture in the university if university management regularly displays and reinforces the theme that 'knowledge is at the epicentre of the university'					
14	Knowledge sharing can be encouraged if it is clearly linked with rewards.					
15	Existing university culture does not provide sufficient support for sharing knowledge.					
16	Academics are only willing to collaborate with particular individuals not everyone.					

Section C: Innovation						
Please tick appropriate box		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
17	There is lack of formal and informal activities to cultivate knowledge sharing in my university.					
18	My colleagues are willing to share information with me					
19	My colleagues are willing to share their lecture notes, power point slides and other resources with me.					
20	Technology systems and processes are in place in the Zimbabwe Open University to share knowledge					
21	Technology plays a significant role in promoting Knowledge Sharing in the University					
22	The ZOU website is effectively used for knowledge sharing.					
23	I am aware of the repositories (databases) in my organization.					
24	The Digital Repository is accessible and easy to use					

Section D: Knowledge Sharing practices						
Please tick appropriate box		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
25	There is lack of rewards and recognition systems that encourages staff to share their knowledge.					
26	There is general lack of interest to share knowledge within the university					
27	There is lack of interaction between those who need knowledge and those who can provide knowledge.					
28	Junior faculty staff are reluctant to seek knowledge from senior lecturers because of the status fear.					
29	Retention of highly skilled and experienced staff is not a high priority in my university.					
30	The work environment and layout of work areas restrict effective knowledge sharing in my regional centre.					
31	It is difficult to convince colleagues on the value and the benefits of the knowledge that I may possess.					
32	Not enough trust exists in this organisation					
33	Others are not willing to readily share knowledge					

Section E: Enablers of Knowledge Sharing						
Please tick appropriate box		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
34	Existing university environment is not conducive for innovation and sharing knowledge.					
35	There is a general lack of trust among staff in my university					
36	Academic staff at the university does not share knowledge because of the fear of it being misused by taking unjust credit for it.					
37	I am willing to share my lecture notes, power point slides and other resources with my colleagues.					
38	I am willing to share seminar / workshop / conference/training experience and knowledge					
39	Academic staff do not share the knowledge because of poor verbal/written communication and interpersonal skills					
40	I feel motivated to share my knowledge with others.					
41	The organisational culture facilitates a learning environment					
42	I regularly attend training courses					
43	I regularly attend informal gatherings where knowledge is shared.					

Section F: Conceptualization of new knowledge						
Please tick appropriate box		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
44	The Zimbabwe Open University encourages the academic staff to publish their knowledge on the university website or in the institutional repository from where others could access it.					
45	The Zimbabwe Open University should use its newsletter or other similar tools to disseminate knowledge and encourage knowledge sharing among the staff					
46	Non-monetary rewards (such as appreciation, recognition) are more effective in encouraging knowledge sharing than monetary rewards					
47	Knowledge sharing can be encouraged if there is a designated knowledge officer in the Zimbabwe Open University.					
48	There is growing awareness on the benefit of knowledge sharing in the University.					
49	There exists a knowledge sharing strategy in the Zimbabwe Open University					
50	The university is able to respond adequately to the changes in the knowledge economy					
51	The organisational culture facilitates a learning environment					

Section G: Benefits of Knowledge Sharing						
Please tick appropriate box		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
52	The competitiveness of this organisation is increased					
53	Helps increase research output in the university					
54	Knowledge is highly valued by management					
55	Knowledge sharing contributes to positive performance appraisals					
56	People who share knowledge are regarded as experts					
57	Colleagues will likely share knowledge					

Thank you very much for your time in completing the questionnaire. Please do give any other relevant comments in the space below.

_____

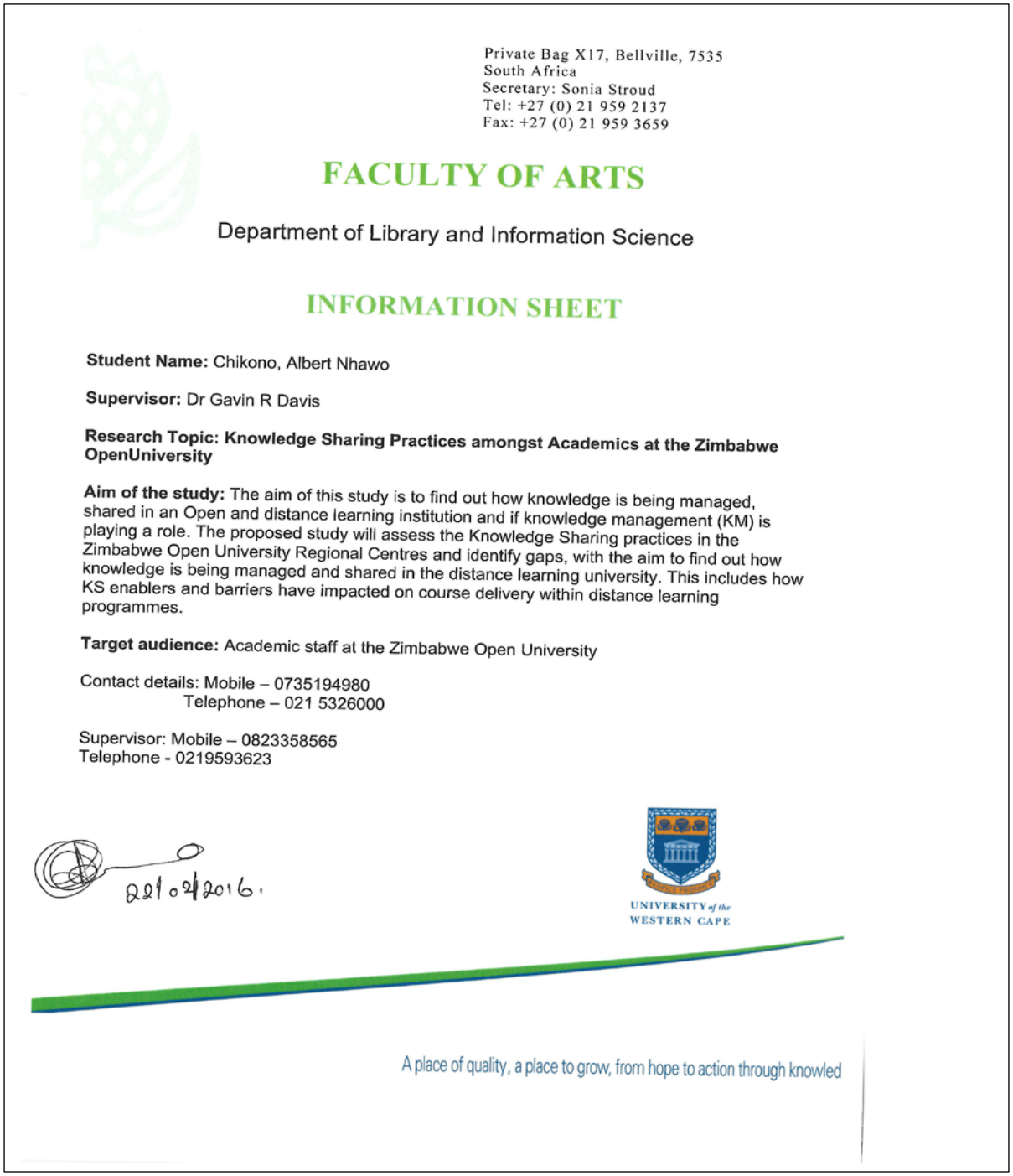
_____

_____

_____

Thank you,
Regards
Albert N Chikono
anchikono@gmail.com
+27735194980

Appendix 2: Researcher Information sheet



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FACULTY OF ARTS

Department of Library and Information Science

INFORMATION SHEET

Student Name: Chikono, Albert Nhawo

Supervisor: Dr Gavin R Davis

Research Topic: Knowledge Sharing Practices amongst Academics at the Zimbabwe OpenUniversity

Aim of the study: The aim of this study is to find out how knowledge is being managed, shared in an Open and distance learning institution and if knowledge management (KM) is playing a role. The proposed study will assess the Knowledge Sharing practices in the Zimbabwe Open University Regional Centres and identify gaps, with the aim to find out how knowledge is being managed and shared in the distance learning university. This includes how KS enablers and barriers have impacted on course delivery within distance learning programmes.

Target audience: Academic staff at the Zimbabwe Open University

Contact details: Mobile – 0735194980
Telephone – 021 5326000

Supervisor: Mobile – 0823358565
Telephone - 0219593623

22/04/2016.

UNIVERSITY of the WESTERN CAPE

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Appendix 3: Research Permission Letter

ZIMBABWE OPEN UNIVERSITY
"Empowerment Through Open Learning"

MASVINGO REGION

MEMORANDUM

TO: The Registrar **REF:** MSV14/1

FROM: Regional Director, Masvingo

DATE: 5 April 2016

RE: **PERMISSION TO OBTAIN INFORMATION FOR RESEARCH PURPOSES: MR A. CHIKONO**

Mr Chikono has written to obtain information/some statistics on Regional Centre Staff for research purposes.

The researcher was granted permission in January 2013 (see letter Ref: NC14/1) attached. Apparently, the student took time to meet data collection period.

Accordingly, the Research Office needs a fresh letter offering permission.

REGIONAL DIRECTOR
MASVINGO REGION
ZIMBABWE OPEN UNIVERSITY
05 APR 2016
P.O.Box 1210
MASVINGO
Tel: 039-64993

Thank you.

PROF. R. A. CHABAYA

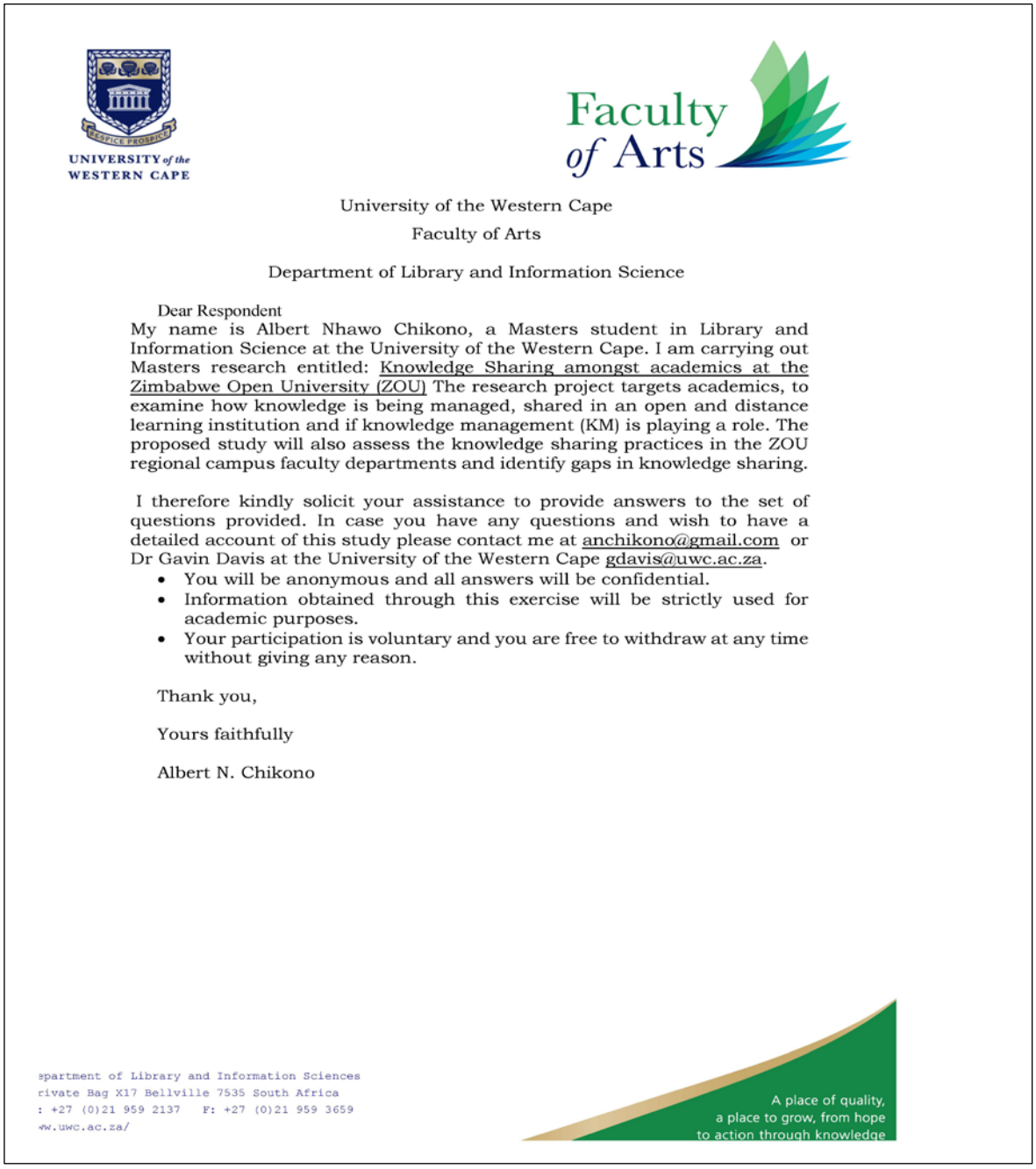
Approved/Not ~~Approved~~

Remarks.....

PROF. D. NDUDZO ..... **Date** 6/4/16

P. O. Box 1210 Masvingo
Tel: 039-264965 – Fax: 039-264993
Email: masvingoregion@zou.ac.zw

Appendix 4: Research Letter



University of the Western Cape

Faculty of Arts

Department of Library and Information Science

Dear Respondent

My name is Albert Nhawo Chikono, a Masters student in Library and Information Science at the University of the Western Cape. I am carrying out Masters research entitled: Knowledge Sharing amongst academics at the Zimbabwe Open University (ZOU) The research project targets academics, to examine how knowledge is being managed, shared in an open and distance learning institution and if knowledge management (KM) is playing a role. The proposed study will also assess the knowledge sharing practices in the ZOU regional campus faculty departments and identify gaps in knowledge sharing.

I therefore kindly solicit your assistance to provide answers to the set of questions provided. In case you have any questions and wish to have a detailed account of this study please contact me at anchikono@gmail.com or Dr Gavin Davis at the University of the Western Cape gdavis@uwc.ac.za.

- You will be anonymous and all answers will be confidential.
- Information obtained through this exercise will be strictly used for academic purposes.
- Your participation is voluntary and you are free to withdraw at any time without giving any reason.

Thank you,

Yours faithfully

Albert N. Chikono

epartment of Library and Information Sciences
rivate Bag X17 Bellville 7535 South Africa
: +27 (0)21 959 2137 F: +27 (0)21 959 3659
ww.uwc.ac.za/

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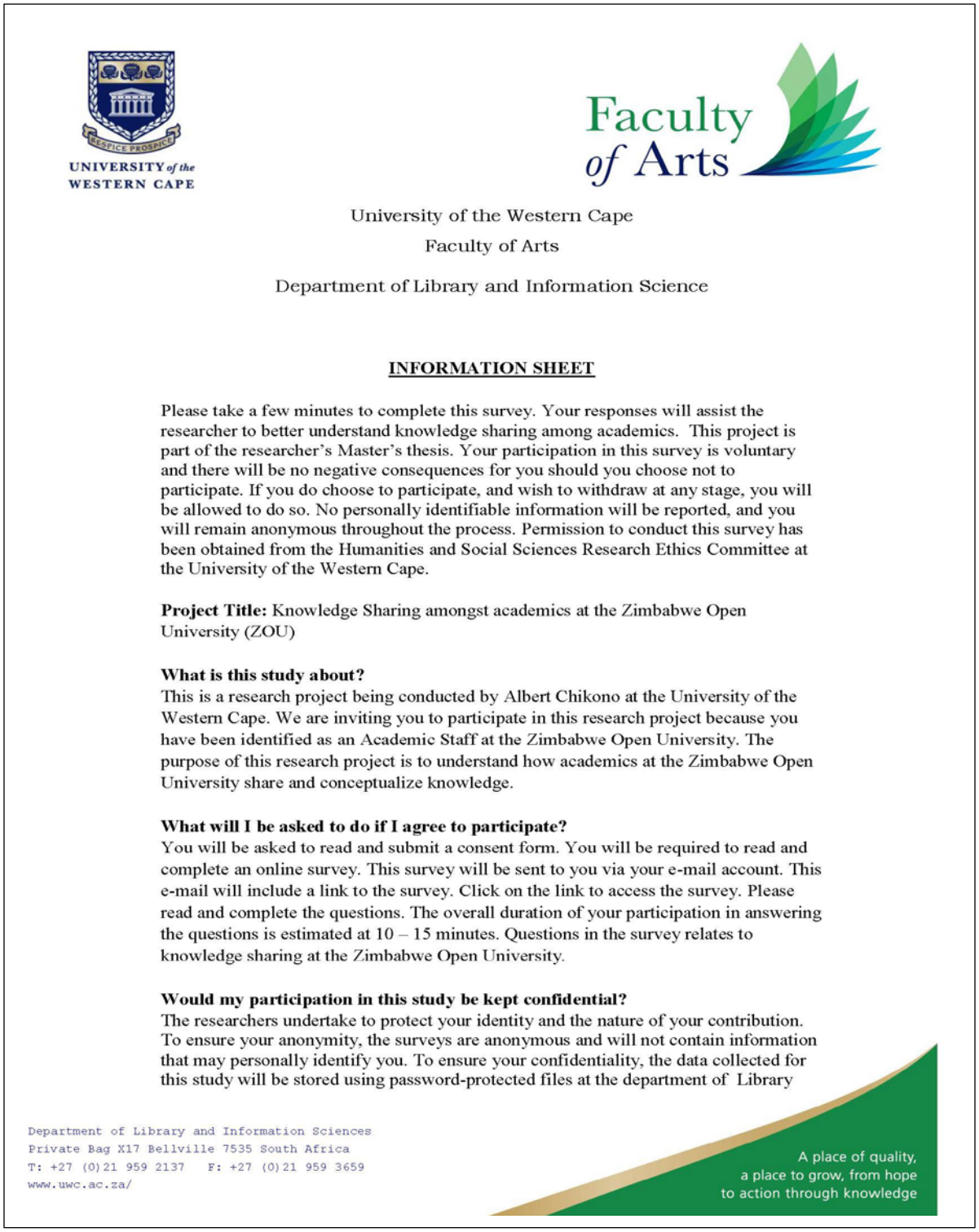
Appendix 5: Information Sheet



University of the Western Cape

Faculty of Arts

Department of Library and Information Science

INFORMATION SHEET

Please take a few minutes to complete this survey. Your responses will assist the researcher to better understand knowledge sharing among academics. This project is part of the researcher's Master's thesis. Your participation in this survey is voluntary and there will be no negative consequences for you should you choose not to participate. If you do choose to participate, and wish to withdraw at any stage, you will be allowed to do so. No personally identifiable information will be reported, and you will remain anonymous throughout the process. Permission to conduct this survey has been obtained from the Humanities and Social Sciences Research Ethics Committee at the University of the Western Cape.

Project Title: Knowledge Sharing amongst academics at the Zimbabwe Open University (ZOU)

What is this study about?
This is a research project being conducted by Albert Chikono at the University of the Western Cape. We are inviting you to participate in this research project because you have been identified as an Academic Staff at the Zimbabwe Open University. The purpose of this research project is to understand how academics at the Zimbabwe Open University share and conceptualize knowledge.

What will I be asked to do if I agree to participate?
You will be asked to read and submit a consent form. You will be required to read and complete an online survey. This survey will be sent to you via your e-mail account. This e-mail will include a link to the survey. Click on the link to access the survey. Please read and complete the questions. The overall duration of your participation in answering the questions is estimated at 10 – 15 minutes. Questions in the survey relates to knowledge sharing at the Zimbabwe Open University.

Would my participation in this study be kept confidential?
The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, the surveys are anonymous and will not contain information that may personally identify you. To ensure your confidentiality, the data collected for this study will be stored using password-protected files at the department of Library

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and Information Science at the University of the Western Cape. If we write a report or article about this research project, your identity will be protected.

What are the risks of this research?
There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?
This research is not designed to help you personally, but the results may help the investigator learn more about knowledge sharing amongst academic staff. We hope that, in the future, other people might benefit from this study through improved understanding of knowledge sharing in an open and distance learning environment.

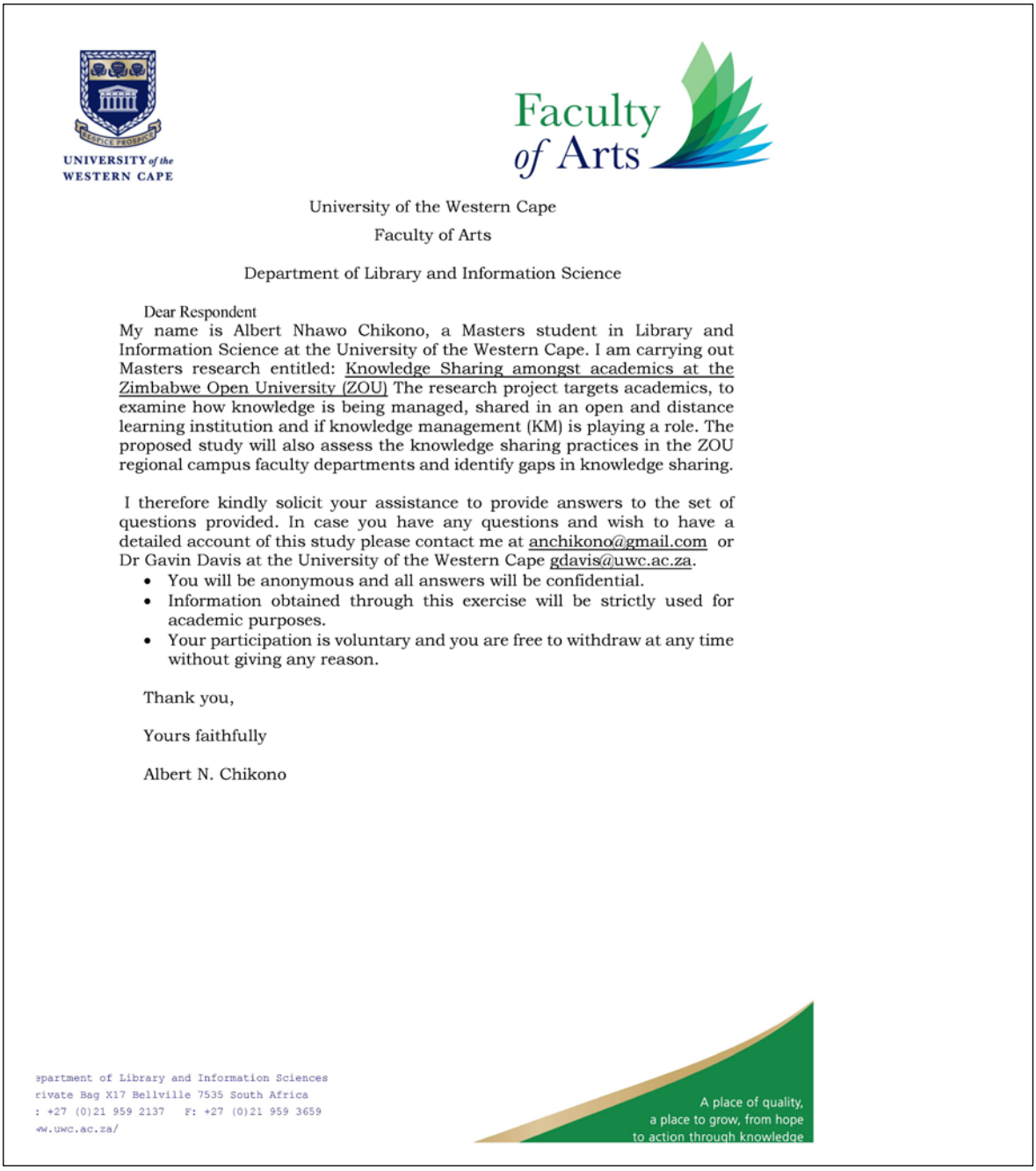
Do I have to be in this research and may I stop participating at any time?
Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?
This research is being conducted by Albert Chikono at the Department of Library and Information Science at the University of the Western Cape. If you have any questions about the research study itself, please contact Dr Gavin Davis at: Department of Library and Information Science, University of the Western Cape, Bellville, 7535; gdavis@uwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Gavin Davis
Department of Library and Information Science
University of the Western Cape
Private Bag X17
Bellville 7535
gdavis@uwc.ac.za

Appendix 6: Consent form



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