

EVALUATION OF EMPLOYEES' PERCEPTIONS ON THE ADOPTION OF A HUMAN RESOURCE INFORMATION SYSTEM AT ALFRED NZO DISTRICT MUNICIPALITY

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Declaration

I, Lucky Emmanuel Mazabelana, student number 214539832, hereby declare that this dissertation is my own work. It is being submitted in partial fulfilment of the requirements for the degree of Master of Commerce at the University of KwaZulu-Natal, Durban, Westville. It has not been previously submitted for any degree or examination at this university or any other university.

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Lucky Emmanuel Mazabelana

Dedication

I dedicate this dissertation to my parents, my late father Mandlenkosi, and mother Nonceba Mazabelana, who raised me under difficult circumstances and sacrificed everything for my education. Your prayers, guidance, support and love made me the person I am today; you are special in my heart and I promise to strive to make it up to my mother through endless support and love. Rest in peace father; Radebe, Mthimkhulu you played your role.

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I thank God Almighty for everlasting love, strength, wisdom, protection and opportunity to pursue this degree.

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Abstract

Many organisations in South Africa have started to use human resource information systems to deliver human resource functions. As the world is driven by technology and continues to change, there is a need for human resource departments to response quickly to the needs of its customers and for organisations to be competitive. This can be done through the use of human resource information systems (HRIS) and processes at the intersection of human resource management (HRM) and information technology (IT).

However, there are few studies that have been conducted to investigate the readiness of organisations to use HRIS. HRIS' failures are documented and literature shows that many HRIS projects failed because of a number of reasons, which could have been dealt with before the implementation of the system to ensure that the organisation was ready for change. Organisations spend a lot of money implementing systems that are already set for failure.

This study closes this gap by examining factors affecting HRIS adoption. Using 'Diffusion of Innovation' as a theoretical framework, data was obtained from the Co-operate Department at Alfred Nzo District Municipality. To get an understanding of employees' perceptions of the acceptability of HRIS, the study examined all five variables of innovation: compatibility; complexity; trialability; relative advantage; and observability.

Semi-structured in-depth interviews were conducted to generate knowledge about employees' perceptions on the adoption of HRIS at Alfred Nzo district municipality and relevant documents were collected to support results.

Results revealed that technology is under-utilised and employees are hesitant to use HRIS. This implies that the municipality needs to deal with resistance and bring everybody on board, even top management to support HRIS before adopting or adapting the current system. Moreover, the municipality needs a system that integrates all HR functions and the organisation as a whole.

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List of Acronyms

ANDM	Alfred Nzo District Municipality
HRIS	Human Resource Information System
HRD	Human Resource Development
HRM	Human Resource Management
HR	Human Resource
IT	Information Technology
SAMRAS	South African Municipal Resource Administration System
AG	Auditor General
SARS	South African Revenue Services
E-HRM	Electronic Human Resource Management
КМ	Kilometres
СР	Compatibility
TR	Trialability
RA	Relative Advantage
OB	Observability
ARV	Antiretroviral Treatment
UKZN	University of KwaZulu-Natal
EC	Eastern Cape
CV	Curriculum Vitae
LGSETA	Local Government Sector Education Training Authority
OD	Organisational Development
SMITG	School of Management, Information Technology & Governance

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CHAPTER ONE

1. Introduction

This chapter presents a general review of the research problem the study seeks to address. The chapter launches the study by providing the background and the statement of the problem with which the study was conceived. The purpose, contribution, significance, aims, research objectives and questions of the study are outlined. Limitations and concepts are also presented.

The chapter starts with a historical overview of the HRIS, before narrowing down to the HRIS at Alfred Nzo district municipality. The chapter closes with a short summary of the major issues addressed in the chapter.

1.1 Background of the Study

According to W. J. Jones and Hoell (2005) a human resource information system (HRIS) is a systematic procedure used by organisations for HR purposes. Organisations collect, store, maintain, and validate data by HRIS. HRIS can be in the form of payroll records and time cards of an organisation (Kovach & Cathcart, 1999). In the 1990's, HR technology users moved from HR-specific systems to an integrated HRIS (W. J. Jones & Hoell, 2005). A HRIS can be used for personnel development, communication and integration, records and compliance and HR analysis, and its benefits include improved accuracy, the provision of timely and quick access to information, and the saving of costs (Obeidat, 2012).

This study will be conducted at Alfred Nzo district municipality located in the north-east of the Eastern Cape Province, stretching from the mountains of the Drakensberg, bordering Lesotho in the north, Sisonke district municipality in the east and Oliver Tambo district municipality in the south. The mission of Alfred Nzo district municipality is to create a conducive environment by improving human capabilities and enhancing relevant skills, and maximizing the utilization of natural resources in order to improve the quality of life for its communities. According to the Alfred-Nzo-Developmental-Agency (2013-2014), the municipality had 396 employees at the beginning of the accounting period.

This number of personnel is supported by corporate services made up of four departments. Firstly, the department of human resource management which is responsible for recruitment of new personnel, selection after application, dealing with labour relations, leave application administration and ensuring that occupational health and safety issues are observed. In addition to the above mentioned responsibilities, HRM is responsible for employee wellness programs, conducting job evaluations and performance management. Secondly, human resource development is responsible for the implementation and management of skills' programmes, internships, in-service training and the administration of study assistance. Moreover HRD is responsible for the administration of inductions, bursary schemes (external), the management of employees' records, cleaning services, support services, and telephones and printing facilities. Thirdly, the legal-services department is responsible for the administration of litigations, drafting of contracts, collection of debtors, dealing with labour relations, municipal code, providing legal advice, and conciliation and arbitration. Lastly, the information and communication technology department is responsible for network security, the development of websites, ensuring integrated IT-based systems, implementation of IT strategy, policies and procedures, administration of IT risk management procedures and IT-based solutions (Alfred-Nzo-development-Agency, 2011-2012).

The first three departments, HRM, HRD and legal services, perform human resource functions and the fourth, which is the department of information and communication technology provides IT support to the entire municipality. The municipality introduced technology, such as the South African municipal resource administration system (SAMRAS), which is used for financial management activities, and VIP payroll for salary administration. Both systems can administer wages and salaries. However, despite having the technology in place, human resource functions are still performed manually. This leads to inaccuracies of report information, waste of time for HR employees doing administration work instead of focusing on strategic issues, as well as poor decision making because of poor management records. Moreover, the situation leads to penalties resulting from late submissions or incorrect reports submitted to relevant national bodies such as the Auditor General. The problems mentioned result in the municipality being cost ineffective (Alfred-Nzo-development-Agency, 2011-2012).

The current systems are mainly used in finance, and even the payroll is managed in the finance department with little input from HR. However people in the HR department know

nothing about the system. The HR department performs its task manually, for example filing documents. The files are then kept in cupboards in the offices within the municipality with no backup at all. The management of HR documents is poor as documents are sometimes lost, misplaced, and although containing confidential information, left lying on tables. Due to inadequate infrastructure, more than 5 people may share an office resulting in little confidentiality of information as no password is required to access files (Alfred-Nzo-development-Agency (2011-2012); Alfred-Nzo-Developmental-Agency (2013-2014)).

Because the municipality doesn't maintain proper HR records or update them regularly, it is difficult to meet internal requirements, such as adhering to the employment equity act when recruiting or developing the right employees, and external requirements such as generating reports to the Auditor General (AG) or preparing reports to South African revenue services (SARS) (Alfred-Nzo-development-Agency, 2011-2012). Bondarouk and Ruël (2009), argue that information technology infuses human resource management with global networking. New technologies have been a threat to the old ways of performing human resource functions within private and public organizations for more than a decade now (Bondarouk & Ruël, 2009).

The current study generated knowledge about employees' perceptions of the acceptability of a human resource information system at Alfred Nzo district municipality. The information will determine the readiness of the municipality for the system and highlight challenges regarding the adoption of a HRIS. The results of the study will help to inform the municipality on the acceptability and usability of the human resource information system at Alfred Nzo district municipality and identify issues to be dealt with prior to the HRIS implementation. If this study is not conducted, the status quo of the human resource department will not change and as the world continues to evolve due to internal and external forces, such as advances in technology, it is evident that the municipality will be unable to comply with regulations such as the employment equity act or skills' development act. Moreover, human resource is now becoming a strategic partner therefore there is a need for accurate information to enable decision makers to make strategic decision concerning employees.

1.1.1 Conceptual basis

- According to Lippert and Swiercz (2005, p. 340), a human resource information system is "an interaction of human resources and information technology via HR software which enables automation of HR activities and processes".
- Bharadwaj (2000, p. 88), defined human resource information technology as "a combination of human resource management (HRM) and information technology (IT) into one common database through the use of enterprise resource planning (ERP) software".
- e-HRM is "the planning, implementation and application of information technology for both networking and supporting at least two individual or collective actors in their shared performing of HR activities" (Olivas-Luján & Rousseau, 2010, p. 90).
- Schuler and Jackson (2008, p. 85), defined human resources as "the set of individuals who make up the workforce of an organization, business sector, or economy".
- Thurston (2008 p. 32), defined an HR portal as "a web based application used to access HR information, HR services, and employee information and to submit employee changes".

1.2 Problem Statement

As the world continues to evolve due to advances in technology, organisations become more competitive and organisations are required to have mechanisms in place to ensure the effectiveness of their operations. HRIS ensures that HR departments deliver quality through accurate and timely information. HRIS benefits can only be realized if the system is adopted or adapted properly and integrated across the organisation. However, there are challenges pertaining to the implementation or adoption of a human resource information systems which are faced by many organisations (Chakraborty & Mansor, 2013). This study is prompted by the realisation that Alfred Nzo district municipality is experiencing challenges to service delivery to the community due to a lack of innovation such as a HRIS, to facilitate effective and efficient service delivery. In this 21st century, with tremendous opportunities provided by advancements in technology, human resource functions are still performed manually at Alfred Nzo district municipality.

As indicated above, in terms of the 2013-2014 municipality annual report there are costs involved because of the current lack of proper documentation in employee's files, out-dated HR records, and poor decision making due to inaccurate information.

Because HR supports the entire organisation, this problem affects the municipality as a whole and if not addressed the municipality will not be able to comply with Acts, for example the Employment Equity Act, and Skills Development Act, or deliver a quality service to the community.

1.3 Purpose

The purpose of the study is to examine factors affecting HRIS adoption at Alfred Nzo district municipality

1.4 Significance

Findings may be of benefit to the Alfred Nzo district municipality management. The management may use the study to understand a HRIS and what issues need to be dealt with before the implementation or improvement of a HRIS to ensure acceptability of the system.

1.5 Research Aim

The aim of the study is to understand employees' perceptions on the adoption of a human resource information system at Alfred Nzo district municipality.

1.6 Research Questions

- **1.2.1** How compatible are the benefits of a human resource information system with the needs of Alfred Nzo district municipality?
- **1.2.2** How do Alfred Nzo district municipality employees perceive the complexity of a HRIS?
- **1.2.3** How is a human resource information system triable at Alfred Nzo district municipality?
- **1.2.4** What are the relative advantages of a human resource information system to Alfred Nzo district municipality?

1.2.5 How observant are the benefits of a human resource information system to Alfred Nzo district municipality?

1.7 Research Objectives

- 1.7.1 To determine whether the benefits of a human resource information system are compatible with the needs of Alfred Nzo District Municipality
- 1.7.2 To understand the complexity of a human resource information system at Alfred Nzo District Municipality.
- 1.7.3 To understand the trialability of a human resource information system at Alfred Nzo district municipality.
- 1.7.4 To determine the relative advantages of a human resource information system to Alfred Nzo district municipality.
- 1.7.5 To determine the observability of benefits of a human resource information system to Alfred Nzo district municipality.

1.8 Research Design

A case study research design will be used in this study. A case study is a detailed study providing rich information about any given research problem. The researcher chose a case study research design for a number of reasons, which include but are not limited to: the detailed description given of a particular phenomenon; real-life situations are examined and an opportunity to expand experience is provided through previous research (Labaree, 2013).

1.9 Research Approaches/Paradigms

This study will use a qualitative paradigm because of its unique contribution to the domain of research by providing quality and rich data about a phenomenon being studied. According to Gill and Johnson (2010), qualitative researchers are primarily concerned with practice and process rather than outcomes. This method is suitable in this study because the researcher is interested in practices and processes rather than the outcomes of the adoption of a human resource information system at Alfred Nzo district municipality.

1.10 Study Site

The study site is Alfred Nzo district municipality located in the north-east of the Eastern Cape Province.

1.11 Target Population

The group of people or the individuals the survey applies to are referred to as the target population (Kitchenham & Pfleeger, 2002). The target population for this study encompasses the staff of Alfred Nzo district municipality's corporate services department, but excludes the information and communication technology staff within that department.

1.12 Sample

The sample of this study will be extracted from Alfred Nzo district municipality corporate services, but excludes information and communication technology staff within that department. Both executives and officers will be included.

1.13 Sampling Method

This study will use a non-probability sampling method to select participants in the study. According to Trochim (2005), non-probability sampling gives participants no equal opportunity for participating in the study, instead the researcher directs how participants are selected

1.14 Sample Size

Participants will be selected from corporate service department and will consist of three subsets excluding information and communication technology, namely; HRM department, HRD department and legal services department. Participating in the study will be 7 officers and 3 executives making a total number of 10 staff.

1.15 Data Collection Instruments

This study will use semi-structured in-depth interviews and document collection to collect factual material.

1.16 Data Analysis

Data analysis is a process of examining raw data to be factual material in order to aggregate findings (Rubin & Bellamy, 2012). This study will use thematic and content analysis as data analysis methods.

Thematic analysis will be used to analyse the raw data gathered from semi-structured interviews and identify themes.

Content analysis will be used to analyse raw data gathered using a documentary method (Joffe & Yardley, 2004).

1.17 Ethical Considerations

Ethical considerations are very crucial when conducting a study. It is for this reason that the researcher applied for and received ethical approval from University of KwaZulu-Natal Ethics Committee and a gatekeeper's letter from the management of Alfred Nzo district municipality. To ensure consent was informed, respondents were assured that their dignity would be upheld and participation in the study was voluntary. Furthermore they were informed of their right to withdraw from the study at any given time. Participants were constantly informed of their right to not disclose private and confidential information and assured anonymity when participating in the study to uphold privacy.

1.18 Limitations of the Study

The problem that is being addressed is not limited to Alfred Nzo district municipality head office, but affects other offices of the municipality. The study focused on Alfred Nzo district municipality head office. Taking cost and time into consideration, the biggest limitation of the study was the inability to interview all the employees, including other Alfred Nzo district municipality offices apart from the head office.

Another limitation was distance as the study site was approximately 450 kilometres (KM) away from the researcher. To address this issue the researcher moved to Mount Ayliff a week prior to the starting date of data collection to ensure that there was sufficient time to conduct the study.

1.19 Study Outline

The research study is divided into five chapters as presented below.

Chapter 1: Introduction and background to the study

The chapter presents a general review of the research problem the study seeks to address. The chapter launches the study by providing the background and the statement of the problem with which the study was conceived. The purpose, contribution, significance, aims, research objectives and questions of the study are outlined. Limitations and concepts are also presented.

Chapter 2: Literature review

The chapter examines literature on the concept of a HRIS, components of a HRIS, benefits of the HRIS, HRIS functions, human resources management, adoption of a human resources information system using five attributes of diffusion of innovation; compatibility, complexity, trialability, relative advantage and observability, implementation of a HRIS and models related to a HRIS.

Chapter 3: Methodology

This chapter presents research methodology. The chapter starts by presenting the research design, paradigms, data collection instruments, data analysis and strategies used to ensure that the study is trustworthy. Ethical issues are considered at the end of the chapter.

Chapter 4: Data presentation

The chapter present data compatibility, complexity, trialability, relative advantages and observability of a human resource information system at Alfred Nzo district municipality.

Chapter 5: Data discussion

The chapter discusses the findings from a number of viewpoints. It discusses the main findings obtained drawing together results from previous chapters. The chapter concludes with some recommendations.

The next chapter, chapter 2, presents a review of the relevant literature.

CHAPTER TWO

LITERATURE REVIEW

2. Introduction

This chapter examines literature written on the concept of a HRIS, components of a HRIS, benefits of the HRIS, HRIS functions, human resources management, and adoption of a human resources information system using five attributes of diffusion of innovation: compatibility; complexity; trialability; relative advantage; and observability, and the implementation of a HRIS and models related to a HRIS. The literature will be reviewed to get an insight into what scholars and academics have said about human resource information systems and the adoption of a HRIS.

At the end of this chapter there will be a summary which will clearly outline opinions based on literature, gaps established in the literature and how this study will address the gaps.

2.1 Concept of a Human Resource Information System

According to W. J. Jones and Hoell (2005) a human resource information system (HRIS) is a systematic procedure used by organisations for HR purposes. Organisations collect, store, maintain, and validate data by using a HRIS. A HRIS can be in the form of payroll records and time cards of an organisation. An organisation's success in the 21st century depends largely on its coordinated, strategic management and integration of HR and IT. The user-friendly quality of human resource information systems increased the number of HR professionals who are using computers for HR functions today. However, there is a lack of training on HRIS, and in many organisations technology is under-utilised for HR functions because of the discrepancy between job requirements and employees' ability to use a HRIS. As a result the integration of HR and IT is low (W. J. Jones & Hoell, 2005).

2.2 Why do we need HRIS?

HRISs provide organisations with many advantages. Below are some reasons why a HRIS is needed:

- It provides complete information as a unit, with an integrated database.
- It increases competitiveness by providing human resource operations and management processes.
- HRIS collects relevant data and processes it to provide information and knowledge for quick and quality decision making.
- It produces different accurate HR related reports.
- It enhances the efficiency and effectiveness of personnel administrative function.
- It moves the focus of HR from the processing of transactions to more strategic HRM.
- It reengineers HR processes.
- It improves employee satisfaction by providing personnel services quickly.

2.3 Components of HRIS

According Singh, Jindal, and Samim (2011) there are three major functional components in any HRIS. Firstly, the input function enters personnel information into the human resource information system. Data entry was once regarded as the only way to input information, however today scanning is possible and storage of the actual image of an original document, including signatures and handwritten notes. Secondly, data maintenance functions updates and adds new data to the database as soon as it is entered into the HRIS. In organisations where HR functions are performed manually, clerks update and add new data by hand and file documents once they are finished. Human resource information updates and adds new data accurately, rapidly and makes data available immediately. Electronic data storage and workflow management is on the rise nowadays. Lastly, the output function is one area of HRIS that is very visible to users. For valuable output to be generated, a HRIS ought to process output, make essential calculations and format the presentation in a manner that the users can understand. However in organisations where HR functions are done manually, this is performed by hand. Furthermore, one must take into consideration that a significant HRIS component is information, not computers, thus elements of a HRIS supports validity, reliability and utility of information (Singh et al., 2011).

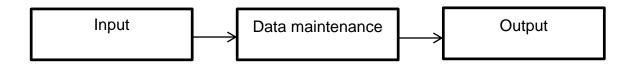


Figure 2.3: Components of Human Resource Information Systems (Aggarwal & Kapoor, 2012).

2.4 The Benefits of the HRIS

Ngai and Wat (2006), argue that organisations are not easily convinced to undertake change, there has to be competitive advantage for doing so. Human resource information system failure, due to lack of sufficient capital and skills, is well documented thus organisations are reluctant to implement a HRIS unless they see the benefits. Improved accuracy, the provision of timely and quick access to information, and the saving of costs are the most common benefits cited in many studies. In addition, Aggarwal and Kapoor (2012) identified the following benefits:

- Increase competitiveness by improving personnel operations.
- Ability to produce different reports related to HR.
- Shift the focus of HR to strategic HRM from the processing of transactions.
- Make employees an active part of HRIS.
- Reengineer organisation's HR function as a whole.

Krishna and Bhaskar (2011), gave their brief summary of HRIS benefits as mentioned below:

- Workforce Planning
- Employee Benefits Administration
- Payroll Administration
- Recruitment
- Induction
- Orientation and On-boarding
- Training and Development
- Skills Management
- Personnel Administration
- Time Management

- Travel Management
- Personnel Cost Planning
- Performance Appraisal

2.5 HRIS Functions

According to Obeidat (2012) there are four HRIS functions related to HR practices, namely; personnel development, communication and integration, records and compliance and HR analysis. In addition to these four functions concerned directly with company employees, there are three more functions that represent the role of the HR department: strategic integration, forecasting and planning and knowledge management (Obeidat, 2012). The functions can also be categorized as follows.

2.5.1 Strategic Integration

HRIS improves organisational performance, changes the manner in which organisations are managed and facilitates strategic value generation by helping design and implement internally stable policies and practices (Obeidat, 2012).

2.5.2 Human Resources Analysis

Obeidat (2012), argued that a HRIS facilitates decision making because decisions are based on human resources' analysis. This function helps organisations to assess whether employee's competencies are compatible or not. This function is well known for collecting and identifying HR needs (Obeidat, 2012).

1.1.1 Personnel Development

Once an organisation has identified through HR analysis any deficiency an employee may have, the next step is to decide on the most appropriate training or development method to close the gap. Deficiencies can be determined through the analysis of an employee's performance, appraisal, and career development (Obeidat, 2012).

1.1.2 Knowledge Management

Obeidat (2012), argued that knowledge management of HRM is achieved effectively through HRIS. A HRIS is used to control an employee's basic data, which creates a more profitable

and effective organisation. A HRIS contributes to knowledge management through advancing organisational learning (Obeidat, 2012).

1.1.3 Communication and Integration

This function underpins and integrates various activities and changes within an organisation. HRIS includes communication devices appropriate for distributing information to all customers within and outside the company (Obeidat, 2012).

1.1.4 Forecasting and Planning

This function is used to transform information from recruitment, administrative subsystems, training and development into forecast feedback about organisational future personnel and skill needs (Aggarwal & Kapoor, 2012). An HRIS underpins strategic planning through the creation of personnel supply and demand needs and projecting (Obeidat, 2012).

1.1.5 Records and Compliance

According to Obeidat (2012) this function is important to meet different legal requirements that command specific information retention. This function provides vital data for knowledge management (Obeidat, 2012). Human resource professionals are responsible for ensuring data integrity and data accuracy is vital (Aggarwal & Kapoor, 2012).

2.6 Human Resources Management

Armstrong and Taylor (2014), defined human resource management as a strategic and clear approach to the management of an organisation's workforce. A workforce is the most valuable asset contributing to the achievement of an organisation's objectives. HRM is a set of consistent polices with an ideological and ethical supporting (Armstrong & Taylor, 2014).

According to Ulrich (1998) also cited by Caldwell (2003) the roles of the human resource department includes becoming a partner with senior and line managers in the implementation of strategy; being an expert in the way work is organised and performed; being a champion for employees; and being a change agent (Caldwell, 2003; Ulrich, 1998).

2.7 Adoption of a Human Resources Information System (HRIS)

Everett M Rogers (2002), argued that innovations that are perceived by individuals as having greater relative advantage, compatibility, trialability, observability, and less complexity will be adopted quicker compared to other innovations (Everett M Rogers, 2002).

2.7.1 Compatibility

Complexity has been discussed in the context of Clinical Change as a variable by Sanson-Fisher (2004). In this context, complexity is a measure to which innovation is perceived as being consistent with their past experiences, norms, values and daily tasks at work. Adoption increases if adopters perceive new innovation as addressing issues at hand (Sanson-Fisher, 2004).

In some research conducted previously by other researchers, CP and related advantages are perceived to be the same, although different to some extent where one needs to pay careful attention. E.M. Rogers (2003, p. 16), stated that "compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters". The more innovation is compatible with the needs of an individual, the more the level of uncertainty decreases and acceptance of the innovation increases. Innovation can be compatible and sometimes incompatible with values and beliefs of a particular culture, previously introduced ideas or needs of clients (Kassim, Ramayah, & Kurnia, 2012).

The study by Greenhalgh, Robert, Macfarlane, Bate, and Kyriakidou (2004) in the context of service organisations, found that the compatibility of innovation with values, norms, and perceived needs played a vital role in the adoption, and the more compatible perceived needs are, the more rapid adoption becomes. Compatibility with organisational culture is also a crucial indicator of rapid and successful assimilation. Innovations designed to be consistent with adopters' values, beliefs and needs and ways of working are readily adopted (Gotham, 2004).

Compatibility has been discussed in the context of mobile banking as a variable by Al-Jabri and Sohail (2012). In this context, compatibility means current and past experiences, values, habits and beliefs that are perceived as being consistent with services. Innovation must be

perceived as being consistent with the adopter's lifestyle for adoption to be rapid. The attribute seemed useful in determining the customers' attitude towards adoption of online banking in Malaysia and other counties, which showed the relationship between compatibility and adoption within mobile banking. The findings revealed the importance of compatibility as a predictor of adoption, and this attribute positively impacted on the adoption of mobile banking.

Völlink, Meertens, and Midden (2002), argued that seeing compatibility as the degree to which innovation is perceived to be consistent with social-culture and belief was too broad to predict a decision for innovation adoption and narrowed down the concept by dividing it into attitude and lifestyle.

Findings revealed compatibility to be the second attribute adopters evaluate after relative advantage in making a decision whether or not to adopt innovation (Völlink et al., 2002). Carter and Bélanger (2005), found compatibility to be the most important variable, especially with organisational values and capacity.

Papastathopoulou, Avlonitis, and Panagopoulos (2007), found compatibility to be a significant accelerator of innovation and defined compatibility as low switching cost in the context of implications for industrial sellers and buyers. The more compatible the innovation is with the needs of potential users, the lesser the perceived difficulty. Reiner (2011), emphasised careful consideration of different perceptions of compatibility among groups due to the heterogeneity of adopters who composed communities. Compatibility of one organisation differs from that of another.

The study by Ong, Poong, and Ng (2008) found the highest correlation between innovation adoption and perceived capability, with the adopters' knowledge of the innovation impacting on the way compatibility is perceived. Design of innovation must be based on adopter's beliefs and experience in order to gain acceptance.

Lee, Hsieh, and Hsu (2011) discussed compatibility as a variable in the context of the e-Learning Systems as innovation being consistent with end-user's values, past experience and needs. In this context, compatibility was related to the consistency of technology and the potential adopter's past experience. McConnell et al. (2012) discussed compatibility as a variable in the context of long-term care and, in this context, they argued that compatibility is found when the adopter's perceived innovation is consistent with past experiences, norms, values and daily tasks at work. If innovation can be connected with past experiences, norms, values and daily tasks, adoption becomes much easier. Previous studies supported this argument, for example those studies conducted by Völlink et al. (2002), Greenhalgh et al. (2004) and Papastathopoulou et al. (2007). However, McConnell et al. (2012) findings contradicted previous studies, as compatibility was not perceived as significant when deciding whether or not to adopt a new innovation.

Obeidat (2013), discussed compatibility in the context of human resource information systems. In this context, compatibility is referred to as the extent to which innovation is consistent with organisational culture, values and needs of employees as well as their past experiences. Innovation that is compatible with organisational culture is more likely to be adopted. The findings have shown the impact of compatibility to be significant in HRIS and indicated that the more compatible the innovation with the systems of the society within an organisation, the more a HRIS is easily adopted (Obeidat, 2013).

2.7.2 Complexity

E.M. Rogers (2003, p. 16) argued that "complexity is the degree to which an innovation is perceived as relatively difficult to understand and use". Complexity connects negatively with the rate of adoption. Complexity is dependent on perception, and therefore if an innovation is perceived as difficult it will have no meaning to adopters. Sanson-Fisher (2004), in the context of clinical change, argued that complexity was the extent to which potential adopters perceived innovation to be very difficult to use and understand. He found that clinical procedures need to be simple and well defined in order for adopters to adopt them rapidly and easily.

Complexity has been discussed in the context of enterprise resource planning systems as a variable by Bradford and Florin (2003). In this instance, consensus building during the implementation process was found to be significant when the user's satisfaction was negatively affected by complexity. Complexity was found to be the opposite of ease of use, or innovation perceived to be free from effort, both mental and physical. Organisations that perceive innovation to be complex tend to struggle to adopt and don't fully understand the

benefits of innovation therefore insufficient skills and knowledge will result in resistance to change and increased perceived complexity (Bradford & Florin, 2003).

The study conducted by Greenhalgh et al. (2004) revealed that complexity relied on the potential players' perceptions, with innovation perceived as simple to use being adopted easily. Practical experience and demonstrations play a crucial role in reducing perceived complexity of innovation. If innovation is designed in such a way that its implementation be broken down into small parts, it enables easy assimilation and adoption. The fewer the barriers to overcome in an organisational setting, the simpler adoption will be. Interventions to reduce complexity need to be initiated to ensure success of innovation (Gotham, 2004).

The results of the study conducted by Papastathopoulou et al. (2007) revealed the significance of taking into consideration factors arising from complexity in the process of innovation implementation because empirical evidence has shown that complexity impacts on adoption. There is a need for a change agent to effectively deal with complexity (Papastathopoulou et al., 2007). Complexity as an attribute impacting on innovation adoption has received less attention over the past years from researchers. Complexity is referred to as the ease of innovation understanding (Dearing, 2009).

The study conducted by Carayon (2010), in the context of patient safety as an innovation, argued simple innovations are readily adopted by potential adopters. He suggested provision of in-house usability knowledge where innovation is perceived to be complex and division of the entire innovation into small pieces for easy assimilation, and to demonstrate clear benefits. Although involvement of end users in the design and implementation of innovation is significant, approaches that add to the already high workload adopters have, need to be taken into consideration and avoided (Carayon, 2010).

The findings by Lee et al. (2011) indicate that complexity had an important positive effect on the employees' behavioural aim of innovation adoption. Empirical research has revealed that if end users perceived innovation as being negative, the users' aim of adopting innovation will be lower. Reiner (2011) definition of complexity seems to agree with the findings of Lee et al. (2011). Complexity has been defined by Reiner (2011) as the extent to which innovation is perceived as being difficult to use and understand by potential adopters. More rapid adaption is found where innovation is perceived to be simple to understand.

The findings by Kassim et al. (2012) indicate that complexity related negatively to the degree of HRIS use. Reason for this could be that if adopters perceived a HRIS to be difficult to use and understand then intention to extensively use it will be lower. Similarly McConnell et al. (2012) found complexity to be the extent to which innovation is perceived as being difficult to understand and implement. Less complex innovations perceived by potential end-users are likely to be adopted easily.

The contrary is found in the study conducted by Al-Jabri and Sohail (2012) in the context of mobile banking adoption. In this context, complexity has been found to be insignificantly impacting on adoption, yet studies conducted by Papastathopoulou et al. (2007), Greenhalgh et al. (2004), and Carayon (2010) revealed that taking into consideration factors arising from complexity in the process of innovation implementation were significant. Emani et al. (2012) defined complexity as the extent to which innovation is perceived as being easy to use and understood as a whole or in small parts.

In the context of human resource information systems, the results of a recent study conducted by Obeidat (2013) confirmed the significant relationship between complexity and HRIS adoption. He further emphasised the need for extra effort and high skills to support potential adopters where more complex innovation is being implemented.

2.7.3 Trialability

E.M. Rogers (2003, p. 16), argued that "trialability is the degree to which an innovation may be experimented with on a limited basis". Trialability connects positively with the rate of adoption. It is of significance to divide an innovation for trials so that it can easily be adopted, however some innovations are difficult to break down therefore one is required to keep on trying. The more an innovation is tried, the more the uncertainty about innovation adoption is dispelled, and faster.

The study conducted by Lundblad (2003) revealed that trialability is the degree to which an innovation can be tested and tried by potential adopters prior to full implementation. The assumption is that if adopters perceive trialability to be certain, then adoption is faster (Greenhalgh et al., 2004). Sanson-Fisher (2004), in the context of clinical change, argued trialability to be the extent to which innovation may be tested to assess its suitability and changed or adapted if needs be. He then found that where clinicians are able to try medical

interventions on a limited basis, adoption is much faster as they explore procedures of implementation, patient's acceptability as well as results (Sanson-Fisher, 2004).

The study by Everett M Rogers, Medina, Rivera, and Wiley (2005) in the context of complex adaptive systems and the diffusion of innovations, discussed trialability as the chance to test innovation gradually until it is fully implemented. When a new product is introduced, an organisation may give away free samples to its customers so that they can try it and provide feedback after they have tested it. The feedback increases certainty of the innovation and results in increased adoption through support. Ong et al. (2008), argued that innovations that can be tested on a limited basis are more likely to be easily adopted by potential adopters because they explore the level of uncertainty by trying the innovation. The study found trialability to have positive and important connotations with the purpose to use 3G services (Ong et al., 2008).

Trialability has been discussed in the context of optimizing technology development as a variable by Reiner (2011). In this context, trialability is found to be the extent to which innovation may be tested on a small scale. The more trialable the innovation, the less uncertainty it has for potential adopters. The findings of the study conducted by Lee et al. (2011) indicated that trialability had a positive impact on employees who believed that using a system wouldn't require much of their effort, but it had a negative impact on employees who believed that a system wouldn't enhance their work performance.

McConnell et al. (2012), found trialability not to be significantly related with decisions to adopt innovation, and defined trialability as the extent to which potential adopters perceive innovation to be trialed in the context of a long-term care measurement battery. Again the study conducted by Al-Jabri and Sohail (2012), in the context of mobile banking, found trialability to be insignificantly associated with an adopter's decision to adopt new innovation and further pointed out that the more innovation is experimented with by potential adopters, the more they will feel comfortable and easily adopt.

The recent study by Obeidat (2013), in the context of a Human Resource Information System revealed that there is a significant association between innovation diffusion and a HRIS. The results for the study also show that trialability is an important variable to be considered as it plays a vital role in decisions to adopt innovation and is therefore one of the strongest predictors for accepting or redetecting innovation (Obeidat, 2013).

2.7.4 Relative Advantage

McConnell et al. (2012) discussed relative advantage as a variable in the context of longterm care and, in this context, they argued that relative advantage is found when an adopter's perceived innovation was seen as being better compared with the status quo. When adopters perceived current practice as superior, innovations were likely to be neglected.

Relative advantage has been discussed in the context of clinical change as a variable by Sanson-Fisher (2004). In this context, relative advantage was argued as the extent to which an innovation is seen as better compared to the status quo. Studies provided facts about cost-effectiveness and potential benefits to patients of a new clinical activity implementation, but the information could be less important than what adopters perceived as being advantageous, therefore there are other mitigating factors affecting decisions about implementation such as the relationship of patient, clinician and health care system (Sanson-Fisher, 2004).

E.M. Rogers (2003, p. 16), argued that "relative advantage is the degree to which an innovation is perceived as being better than the idea it superseded". Relative advantage connected positively with the rate of adoption. Adopters first look at how they are to benefit out of the innovation, and if benefits (economic profitability, productivity improvement or time saving) are greater they are more likely to easily adopt the innovation. The nature of innovation determined the kind of benefits it brings into the organisation. The adoption relies on the user's perceptions if what they expect out of an innovation matches their needs, then adoption is likely to be easy (Kassim et al., 2012).

The study by Greenhalgh et al. (2004) in the context of a service organisation, found that innovations with clear advantages in relation to either effectiveness or cost effectiveness were more easily adopted and implemented. All depended on the users of innovation; when they perceived no relative advantage they would not think it through any further. However wide spread adoption was not guaranteed by relative advantage therefore "relative advantage is a sine qua non for adoption". Dingfelder and Mandell (2011), argued that innovation has to be harmonised with the needs of adopters, their values, and beliefs as well as history.

Even evidence-based innovation was not adopted easily, so it endured for a longer period among adopters assimilating, during that period the meaning of innovation was discussed, challenged and reframed. The meaning of innovation to potential adopters after the discourse either increased or decreased their perceived relative advantage (Gotham, 2004).

Relative advantage was found to be the most important predictor of innovation success when change was perceived as compared to the status quo. The adopter's perception of an advantage was more important than the benefits of the innovation; rapid adoption was found when innovation had been perceived to be advantageous (Reiner, 2011).

Relative advantage was among the five innovation attributes which explained adoption rate when there was a change. Everett M Rogers et al. (2005), assumed that the nature of innovation will determine most important attributes, although the rule behind assessment of attributes remained vague. The studies conducted in the context of health by McConnell et al. (2012), Sanson-Fisher (2004), Greenhalgh et al. (2004) and Gotham (2004) supported the view proposed by Everett M Rogers et al. (2005) concerning decisions whether or not to adopt new innovation. However, Völlink et al. (2002) approached relative advantage from a different view, concluding that the attributes formulated by Everett M Rogers et al. (2005) were too broad to predict whether or not to adopt a new innovation, and further postulated that relative advantage rather be divided into two specific sub-dimensions, namely capital cost of innovation and adopter's perceived savings. Völlink et al. (2002) disagreed with the postulation that all innovation attributes are always significant at the same time. Völlink and colleagues viewed relative advantage as the first attribute potential adopters seem to be interested in, relative advantage seems to be the decider to proceed with the evaluation of other attributes, and the evaluation process is stopped as soon as advantage is perceived as minor.

Relative advantage as an indicator for innovation adoption has been widely used in health however now the focus will be on its use in the context of human resource information systems. Kassim et al. (2012), conducted a study in the context of human resource information systems where they found no significant relationship between relative advantage and adoption of innovation. Their argument was that although a HRIS may be beneficial to young professionals, the older could find it very difficult to adapt and may prefer the old (manual) way of performing tasks. In Kassim et al. (2012), respondents' profiles and age seemed to play a vital role in adoption more than relative advantage. Perceived usefulness of an adoption is referred to as relative advantage. An important relationship was found between this attribute and human resource information systems by Obeidat (2013) which contradicted what had been found by Kassim et al. (2012) in their study. Kassim's study found no important relationship between relative advantage and the adoption of innovation.

2.7.5 Observability

Rogers (2003:16) defined observability as "the degree to which the results of an innovation are visible to others." The outcome of some ideas are observed and communicated to others for easily adoption, but it is important to still remember that some innovations are difficult to observe and describe to others. A key motivational factor in the adoption and diffusion of technology is role modelling. Visibility of benefits makes it easy for users to adopt innovation (Kassim et al., 2012; E.M. Rogers, 2003).

Observability has been discussed in the context of clinical change as a variable by Sanson-Fisher (2004). In this context, observability was argued as an extent to which outcomes of an innovation are noticeable to others. The study revealed that charismatic leaders within an environment where innovation is being implemented play a vital role in influencing adoption because he or she is the one to demonstrate results of the innovation to potential adopters. Once respected people demonstrate the application of a new procedure, adopters tend to have a positive attitude towards innovation. The more influential the people providing the role model, the more likely that innovation will be adopted quickly (Sanson-Fisher, 2004).

The study conducted by Ong et al. (2008) divided observability into sub-characteristics, namely: results demonstration and visibility. Häggman (2009), argued observability to be the visibility of innovation results to others, and similarly Dearing (2009), argued observability to be the degree to which results can be seen to others. The results of the study conducted by Lee et al. (2011), in the context of Intentions to use E-Learning Systems, indicated that observability has an insignificant impact on adoption and further postulated possible reasons such as that adopters perceived the innovation to be less useful in facilitating their job performance although they observed the results. In contrast, findings of the study by McConnell et al. (2012), in the context of long-term measurement battery, indicated that observability impacted on the intention to adopt innovation positively. McConnell et al.

(2012), also defined observability to be the extent to which outcomes of an innovation are understood.

A study by Al-Jabri and Sohail (2012) in Saudi Arabia investigated mobile banking adoption. The study explored observability as one of the five Roger's diffusion of innovation attributes pertaining to mobile banking adoption. The findings of the study showed that observability has an important impact on mobile banking adoption. This shows that adopters could see the favourable results such as access to transactions anytime and anywhere.

A recent study by Obeidat (2013), found observability to have an important relationship with human resource information system functions. The study found that the higher the visibility of HRIS to people, the lower the uncertainty, which leads to easy adoption.

2.8 Implementation of a Human Resources Information System (HRIS)

Kavanagh, Thite, and Johnson (2012), argued that the implementation process begins with a team of individuals and can take from six weeks to three years to complete. There is no one best way to manage this process, however those who are involved must ensure that key issues are examined and business goals for a HRIS implementation are accomplished (Kavanagh et al., 2012).

HRIS implementation can be traumatic for employees and as a result they can be resistant, thus there is need for good project management. This project management needs to be able to handle behavioural and management issues throughout the implementation process (Kavanagh et al., 2012). The organisation needs to identify a steering committee, configure a project management team, identify available resources and limits, control project creep, select an implementation team and train end-users in order to minimise resistance and ensure success (Kavanagh et al., 2012).

Kavanagh et al. (2012), emphasizes significant factors that must be present if a HRIS is to be implemented successfully. These include the following: top management support; provision of adequate resources and time; continuous communication; conducive organisational culture; user involvement; project champions; more flat organisational structure; change management methodology; project control and monitoring; and cross integration between business systems (Kavanagh et al., 2012).

2.9 Model related to Human Resources Information System

According to Aggarwal and Kapoor (2012) a HRIS design for HRM is very important in strategic implementation of business objectives of an organisation and in ensuring effective and efficient functioning of a company. Organizational issues and processes connected to the management of people are best addressed by a HRIS. Technology does a number of activities within HR functions such as recruitment and selection, compensation and benefits, performance evaluation, training and development, employee relations and legal issues, health and safety and retention, and work life balance. A HRIS enables HR functions to manage the workforce as well as personnel information flow in an integrated approach (Aggarwal & Kapoor, 2012).

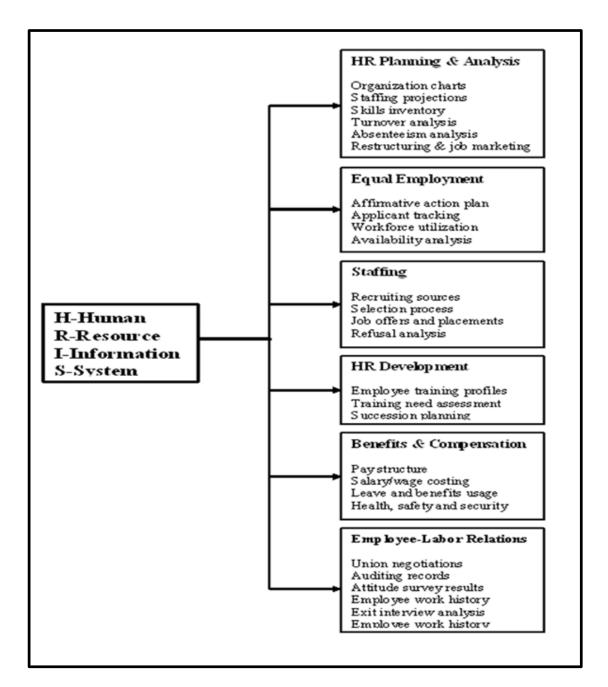


Figure 2.9: Model of Human Resource Information System (Aggarwal & Kapoor, 2012).

2.10 Theoretical Framework

This study is conducted using the diffusion of innovation theory developed by Everett M Rogers (2004). This theory explains how, as time goes, an idea or product gains a market share and spreads through a specific population or social system. The end result of this diffusion is that people move away from traditional ways of doing things and adopt a new idea, behaviour or product. Adoption means that a person does something differently than the usual way (i.e., purchase or use a new product, acquire and perform a new behaviour, etc.). The variables of diffusion of innovation will be used to introduce Alfred Nzo district municipality employees into HRIS and access their perception towards the system, the focus of this study will only be on understanding how the five main variables of diffusion of innovation and to use this knowledge to access the readiness of the municipality for HRIS.

2.10.1 Variables of Diffusion of Innovation Theory

- 1.10.1.1 Relative advantage: the degree to which an innovation is seen as better than the idea, program or product it replaces.
- 1.10.1.2 Compatibility: the consistency of innovation with the values, experiences and needs of potential adopters.
- 1.10.1.3 Complexity: the difficulty of innovation to understand and/or use influences its adoption.
- 1.10.1.4 Trialability: the extent to which innovation can be tested or experimented with before a commitment to adopt is made, makes it easy to adopt.
- 1.10.1.5 Observability: the theory states that the extent to which the innovation provides tangible results makes it easy to adopt

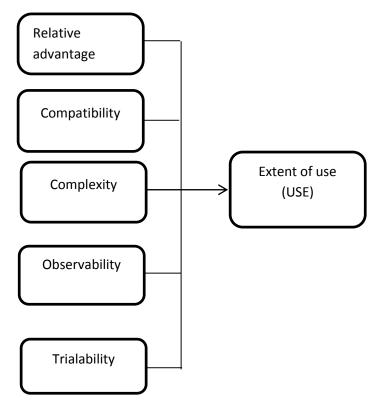


Figure 2.10: Diffusion of Innovation Model (Everett M Rogers, 2004).

2.10.2 Application of the Theory

2.10.2.1 Compatibility

The researcher will use this construct to investigate the compatibility of the human resource information system at Alfred Nzo district municipality.

2.10.2.2 Complexity

The researcher will use this construct to explore how complex the human resource information system is perceived by employees at Alfred Nzo district municipality.

2.10.2.3 Trialability

The researcher will use this construct to explore the trialability of the human resource information system at Alfred Nzo district municipality.

2.10.2.4 Relative advantage

This construct will be used to investigate the relative advantage of the human resource information system to Alfred Nzo district municipality

2.10.2.5 Observability

This construct will use to explore observability of the human resource information system benefits to Alfred Nzo district municipality.

2.11 Summary

This chapter examined current literature on the concept of a HRIS, components of a HRIS, benefits of the HRIS, HRIS functions, human resources management, adoption of a human resources information system using five attributes of diffusion of innovation; compatibility, complexity, trialability, relative advantage and observability, implementation of a HRIS and models related to a HRIS.

A lot has been written about the diffusion of innovation since 1962 when a diffusion of innovation book was first published, till the last edition which is fifth (E.M. Rogers, 2003). Evidence from the literature reviewed showed that the attributes have been widely used across different disciplines more especially in health. However trialability and observability have received less attention compared to other variables over the years. Diffusion of innovation is very popular in USA, Malaysia, Taiwan, Jordan and Australia but little has been done in human resource information system studies using diffusion of innovation. This may be because a HRIS is a new field of study. Many studies have tested the validity of diffusion of innovation attributes.

In a nutshell, the review of previous studies shows that innovations perceived as having greater relative advantage, compatibility, trialability, observability, and less complexity are readily adopted (Everett M Rogers, 2002). There is no study I am aware of that has been conducted in South Africa in human resource information systems using any of the attributes of diffusion of innovation.

Thus, the current study seeks to explain how, why, and at what rate human resource information systems will spread over Alfred Nzo district municipality. The researcher will investigate how a greater relative advantage, compatibility, trialability, observability, and less complexity will impact on the adoption process.

CHAPTER THREE

METHODOLOGY

3. Introduction

This chapter presents research methodology. The chapter starts by presenting the research design, paradigms, data collection instruments, data analysis and strategies used to ensure that the study is trustworthy. Ethical issues are considered at the end of the chapter.

3.1 Research Paradigms

This study used qualitative research methodology. Qualitative research paradigms collect detailed and rich data about a particular phenomenon; this paradigm is used when the aim of the study is not to arrive at findings by statistical procedures (Gill & Johnson, 2010). Qualitative research is only relevant in the absence of examining numbers, amounts or frequencies and presents the measuring quality of the entity. Denzin and Lincoln (2011), argued that when a researcher uses a qualitative research paradigm, data about the social nature of life and perceptions of people can be collected

This study used a qualitative paradigm because of its unique contribution to the domain of research by providing quality and rich data about a phenomenon being studied. According to Gill and Johnson (2010), qualitative researchers are primarily concerned with practice and process rather than outcomes. That is, the focus is on the process that is occurring instead of the outcome of that process. The focus is on participants' perceptions and experiences and the way they make sense of their lives (Denzin & Lincoln, 2011). This method was suitable for this study because the researcher was interested in practices and processes rather than outcomes of the adoption of a human resource information system at Alfred Nzo district municipality.

3.2 Research Design

A case study research design was used in this study. A case study is a detailed study that provides rich information about any given research problem. It reduces a research field known to be very broad into easily manageable researchable examples. This design is believed to be the best when a phenomenon studied is complex (Labaree, 2013).

The researcher chose a case study research design for a number of reasons. These include, but are not limited to a detailed description of a particular phenomenon, and examining a real-life situation and providing an opportunity to expand experience gained through previous research (Labaree, 2013).

3.3 Study Site

A study site is a particular place a study is conducted from. The study site was Alfred Nzo district municipality, located on the north-eastern side of the Province of the Eastern Cape and stretches from the Drakensberg Mountains, borders Lesotho in the north, Sisonke district municipality in the east and O.R. Tambo district municipality in the south.

3.4 Target Population

The group of people, or the individuals the survey applies to are referred to as the target population (Kitchenham & Pfleeger, 2002). The target population are those individuals or group with the data a researcher is looking for in order to aggregate findings. The target population for this study encompasses Alfred Nzo district municipality's corporate services department staff, but excludes information and communication technology within that department. A corporate service, excluding information and communication technology, has about fifteen (15) staff, three of which are executives and twelve are officers.

3.5 Sample

Kitchenham and Pfleeger (2002), argued that in the domains of research a sample can be a group of people, object or items extracted from a target population as a subset to participate in the study. The sample of this study was extracted from Alfred Nzo district municipality corporate services, but excluding information and communication technology within that department, both executives and officers were included.

3.6 Sampling Strategies

This study used a non-probability sampling method to select participants in the study. According to Trochim (2005) non-probability sampling gives participants no equal opportunity for participating in the study, instead the researcher decides how participants are selected. This study used quota sampling where subgroups are represented by a selection of enough people from each subset to participate in the study (Trochim, 2005). Respondents were selected from subgroups of the corporate services department.

3.7 Sampling and Sample Size

Sampling can be defined as the act of choosing participants from the target population to participate in the study and represent the entire target population, whereas the exact total number of individuals or items selected to participate in the study is referred to as sample size (Kitchenham & Pfleeger, 2002). Alfred Nzo district municipality has two main units:

- Executives (3)
- \succ Officers (12)

Corporate service department consists of three subsets excluding information and communication technology, namely HRM department, HRD department and legal services department. Non-proportional quota sampling was used to select officers who participated in the study and 7 officers participated. Purposive sampling was used to select executives who participated in the study, all 3 executives participated. A total number of 10 staff was selected to participate in the study.

3.8 Data Collection Methods

Data can best be defined as any factual material recorded which is required to validate findings whereas devices used to collect that data are referred to as data collection instruments (Mullins, 2010). This study used semi-structured in-depth interviews and document collection to collect factual material

The two above mentioned qualitative techniques not only complement each other but also collect different factual material necessary to aggregate findings. These research instruments are best used where qualitative research methodology and designs are adopted for the study and participants' perceptions are best accessed using these techniques.

3.8.1 Semi-structured Interviews

According to Frels and Onwuegbuzie (2013) an interview is a research instrument for collecting data in which either qualitative or quantitative questions can be asked. Qualitative

differs from quantitative in the manner in which questions are asked; quantitative questions are closed, while qualitative questions are open-ended and participants have the latitude to answer with their own words. Most qualitative researchers use interviews to collect data and their purpose is to understand people's lives as they are lived. Perceptions and experiences are generated through interviews. The interaction between the researcher and participant during an interview is beneficial not only to the research but also to the participants; it gives them an opportunity to explore the way they live. Interviews provide researchers with the latitude to choose from a range of formats, namely structured, unstructured and semi-structured interviews (Frels & Onwuegbuzie, 2013).

For the purposes of understanding the objectives of the study, a semi-structured in-depth interview was adopted. Semi-structured in-depth interviews were used due to the advantages found in interviews, including but not limited to collecting rich data, involving participants in the research process, providing latitude for interaction between researcher and participants, and a researcher is able to clarify any ambiguity so that relevant data is captured (Bowling, 2002; Stringer, Astrakianakis, & Haines, 2013).

3.8.2 Document Collection

Documents with relevant information concerning the phenomenon under study are gathered (Simons, 2009). All relevant documents were collected and used throughout the study where applicable; the documents were obtained from both the municipality and the internet. The researcher gathered the documents believed to have the required information to aggregate findings. These documents included but were not limited to reports, government gazettes and HR documents.

3.9 Data Quality Control (reliability and validity)

Research is insignificant, becomes creative writing and loses its usefulness when it is without rigor. Hence, careful consideration is given to reliability and validity in all research methods (Morse, Barrett, Mayan, Olson, & Spiers, 2008). Long and Johnson (2000), defined reliability as "the extent of consistency or dependability with which an instrument measures the attribute it is designed to measure". Furthermore, replicability of results using similar methodology makes a research instrument to be considered reliable. Therefore, for this study to be valid and reliable, independent researchers should be able to replicate results using

other research methodology (Howell et al., 1994 - 2012). Validity is defined by Long and Johnson (2000) as "the extent to which an instrument measures what it is intended to measure".

Trustworthiness in qualitative research is ensured by the following criteria: credibility, fittingness, auditability, and confirmability but these criteria were advanced to credibility, transferability, dependability, and confirmability (Morse et al., 2008). In this study trustworthiness was ensured by credibility, and the following provisions were made; firstly, the researcher familiarised himself with the culture of the municipality prior to data collection through consultation of appropriate documents and visits to the municipality. This built trust and a relationship between the researcher and participants. Secondly, although the study used non-probability sampling, where participants have no equal opportunity for participating in the study quota sampling was adopted to ensure that subgroups were represented. In this way, data was collected across different departments within corporate departments which made data more reliable and valid. Lastly, to ensure honesty, participants were given opportunities to refuse to take part in the study if they were not willing. This ensured that data was collected from those who were willing and prepared to provide genuine data (Shenton, 2004).

3.10 Data Analysis

Data analysis is a process of examining raw data thought to be factual material, in order to aggregate findings (Rubin & Bellamy, 2012). This study used thematic and content analysis as data analysis methods.

3.11 Thematic Analysis

According to Braun and Clarke (2006) thematic analysis is a method where a researcher identifies, analyses and reports themes (stories) within data. This method organises and describes a data set in more detail. It goes beyond interpretation of different aspects of the topic being researched, and organises and describes obtained data in detail. A thematic analysing method was used to analyse raw data gathered using semi-structured interviews by identifying themes. Thematic analysis in this study followed guidelines provided by Braun and Clarke (2006) as presented below.

Phases	Tasks		
1. Familiarizing yourself with your data	• personally collecting data		
	• data transcribed into written report		
	• repeated reading		
	• notes taking		
2. Generating initial codes	• production of initial codes		
	• organising of data		
3. Searching for themes	• code analysis		
	• sorting of codes into themes		
4. Reviewing themes	• reviewing of coded data extracts		
	• refining themes		
5. Defining and naming themes	• identifying the core meaning of each		
	theme		
	• writing a detailed analysis		
6. Producing the report	• write-up of the report		

Table 3.11.: Phases of data analysis for this research

3.11.1 Phase 1: familiarizing yourself with your data

The researcher was engaged in analysis, and started by personally collecting data from Alfred Nzo district municipality in order to have prior knowledge of the data. Because the researcher was working on interviews, the data was transcribed into written form in order for thematic analysis to take place. The researcher read all written texts several times in order to

become very familiar with the text set. The researcher also listened repeatedly to the voice recording of the interviews along with the relevant field notes. Notes were taken during this stage for coding.

3.11.2 Phase 2: generating initial codes

The production of initial codes from the data collected began at this phase and data was then organised in meaningful groups. This involved identifying data that was interesting to the researcher which could be assessed regarding the phenomenon.

3.11.3 Phase 3: searching for themes

Analysis of codes began and the researcher considered how different codes came together to form a main theme. At this phase analysis of themes was broader rather than codes, the codes were sorted into themes.

3.11.4 Phase 4: reviewing themes

Themes were reviewed and refined by the researcher at this stage. This involved reviewing coded data extracts and reading collated extracts for each theme to see if these themes formed a coherent pattern. If the themes formed a coherent pattern then the researcher moved on to the next phase. However, if these themes did not fit the researcher needed to consider if the theme was problematic in itself or some of the data extracts within it did not fit. If this was the case themes were reworked, new themes were created or others discarded.

3.11.5 Phase 5: defining and naming themes

This phase involved defining and refining themes to be present in analysis and analyzed data within these themes. The core meaning of each theme was identified and aspects of these themes determined. This involved paraphrasing the content of data extracted, identifying what was interesting and writing a detailed analysis

3.11.6 Phase 6: producing the report

The researcher wrote a concise, coherent, logical and non-repetitive report, telling the complicated story of the data.

3.12 Content Analysing

A content analysing method was used to analyse raw data gathered using a documentary method (Joffe & Yardley, 2004) The process where data is coded with a view to understanding the data collected and singling out findings relevant to a phenomenon being studied is called content analysis (Joffe & Yardley, 2004). Specific documents were collected that could provide valuable information to the research problem; a purposive sampling technique was used to retrieve the documents. These documents included, but were not limited to the municipality's annual report, manuals and newsletters.

3.13 Ethical Consideration

Ethical considerations are very crucial when conducting a study. It was for this reason therefore that the researcher for this study got ethical approval from the University of KwaZulu-Natal Ethics Committee and a gatekeeper's letter from the management of Alfred Nzo district municipality. To ensure consent was informed, respondents were assured that their human dignity would be upheld and participation in the study was voluntary. Furthermore they were informed of their right to withdraw from the study at any given time. Participants were constantly informed of their right to not disclose private and confidential information and assured anonymity when participating in the study to uphold privacy.

3.14 Limitations of the Study

The problem that is being addressed is not limited to Alfred Nzo district municipality head office, but affects other offices of the municipality. The study focused on Alfred Nzo district municipality head office. Taking cost and time into consideration, the biggest limitation of the study was the inability to interview all the employees, including other Alfred Nzo district municipality offices, apart from the head office.

Another limitation was distance. The study site was approximately 450 kilometres away from the researcher. To address this issue the researcher had taken time off from school to conduct the study and spent a week at Mount Ayliff to ensure sufficient time for conducting the study.

CHAPTER FOUR

DATA PRESENTATION

4. Introduction

This chapter presents data on the adoption of a HRIS at Alfred Nzo district municipality. A qualitative study employing in-depth interviews was conducted to collect data for the study. Data collected were analysed manually using thematic analysis.

The following main themes were developed: the compatibility of human resource information system's benefits with municipality needs; the complexity of a HRIS; human resource information system's trialability; relative advantages of a human resource information system and observation of the benefits of a human resource information system. Thematic analysis helped to move data from a broad reading of the data towards discovering patterns.

4.1 Presentation of Sample

The final count of ten respondents represented a 100% sample size, but 66.6% of the target population. Although it was not a necessity that respondents had a full understanding of human resource information systems (HRIS), it was expected that there would be an awareness of the system.

The sample of respondents was select from three subgroups, namely; legal services, human resources management and human resource development. In reality, some of the functions of the HRM department or legal services were performed in the HRD department, and vice versa. It was possible to find a person employed as an HR officer given extra duties to perform in the HRD department, or find that a person had moved to HRD department. The respondents all came out of the broader corporate department. The following lists demographic information of respondents

Numbers	Department	Position	Gender	Race	Employment type
1	HRM	Payroll officer	Female	African	Permanent
2	HRM	HR officer	Female	African	Temporary
3	HRM	HR officer	Male	African	Temporary
4	HRM	HR clerk	Male	African	Permanent
5	HRM	HR officer	Female	African	Temporary
6	Legal-services	Wellness officer	Male	African	Permanent
7	HRD	HRD & Conditions of services officer	Female	African	Permanent
8	HRD	HRD Manager	Female	African	Permanent
9	Legal-services	LRA Manager	Male	African	Permanent
10	HRM	Organisational developmental manager	Female	African	Permanent

Table 4.1: Respondent's demographic information

4.2 Recap of the Research Process

Prior to the data collection process, permission to collect data was sought from relevant authorities at the University of KwaZulu-Natal (UKZN). In adhering to research ethics, consent was sought from participants before collecting data and the response was positive.

To start data collection, the researcher introduced himself to the participants and explained the main purpose of the study. The issues of confidentiality, anonymity and privacy were explained to the participants. After getting permission, the process of data collection started. Non-proportional quota sampling was used to select officers and purposive sampling was used to select executives who participated in the study. The data was obtained through indepth interviews involving 7 officers and 3 executives. All in-depth interviews were recorded using an audio recorder. Documented information such as annual reports were used to supplement the findings.

After data collection, thematic analysis was used to analyse raw data gathered using semistructured interviews by identifying themes. Thematic analysis in this study followed guidelines provided by Braun and Clarke (2006).

4.3 Main Themes in the Data Presentation

This was underpinned by five research objectives:

- To determine whether the benefits of a human resource information system are compatible with the needs of Alfred Nzo District Municipality;
- To understand the complexity of a human resource information system at Alfred Nzo district municipality;
- To understand the trialability of a human resource information system at Alfred Nzo district municipality;
- To determine the relative advantages of a human resource information system to Alfred Nzo district municipality;
- To determine the observability of benefits of a human resource information system to Alfred Nzo district municipality.

As mentioned above, five main themes are presented in the following sections

4.4 Compatibility of HRIS benefits with ANDM needs

4.4.1 How is the culture of the municipality in relation to employee's reaction to change?

Majority of the respondents surveyed suggested that the municipality is generally reluctant to change. Respondent 9 stated this:

I'm part of new management. Previously there was another management. The new management tried to implement new things and employees did not accept the changes at all. The changes were to correct past behaviours but guess what happened? The old managers perceived us as people who were maverick and I could not understand why but, perhaps, it was because they were benefiting from those things, you know what I mean, right! Some didn't even attend training sessions till they were threatened to attend.

Top management doesn't support change programmes and employees are also seen to be very resistant to change to such an extent that disciplinary action to reinforce change programmes had to be taken against certain individuals. In some instances, however, training sessions are believed to mitigate the resistance.

Although the majority of respondents reported that the municipality was reluctant to change, almost a quarter of respondents reported the municipality to be flexible. Respondent 5 said this:

I personally like change because there is a reason behind any change. Management doesn't unilaterally implement change without our concerns; they consult to be quite certain. We understand the reasoning behind change and potential benefits.

Respondents surveyed reported the municipality to be flexible enough to adjust to changes. The respondents were young females who were confident in themselves and to the municipality at large to adjust to any change provided proper consultation and engagement activities were initiated prior to change implementation.

A few respondents were not so clear about the municipality's culture in relation to adaptation to change. This is reflected in what respondent 10 said:

Well, this one is quite tricky. I think there are some challenges in the manner in which change is communicated and the manner in which change is implemented by the employees. It would be dynamic enough to adjust to change. We are a diverse environment.

Although these respondents couldn't be clear about the employee's adaptation to change, they were positive towards change and they didn't have a problem with changes per se, but the challenges associated with change programmes seemed to be the real issue.

4.4.2 Have you had any technological changes in the way you performed your job in the past? If yes, please tell more about the change

Many respondents had experienced technological changes at work. This is supported by respondent 8:

We use Munisoft system for order requisitions but for authorisation we still need to print out a document and move one office to another. We take a document to finance for budget and to supply chain thence come back to our office for scanning and emailing. There is still a lot of paper involved.

These respondents had been exposed to technological changes by the municipality although only one module had been activated per system introduced. The systems introduced in the municipality are independent. The systems are not integrated amongst departments within the municipality and as such employees in human resource management are not even aware of the existence of the Munisoft system in human resource development yet they are in one unit "corporate department". Other employees had been exposed to integrated systems by their previous employers and they understood human resource information systems as well as its benefits.

However some of respondents had not been exposed to technological changes. Respondent 10 said this:

No, I haven't really in this particular case because we haven't yet migrated to use technology at a high level. With the current system (VIP payroll) we do have modules that would assist us unfortunately we have not yet migrated. The respondents performed their duties largely in the traditional way of Human Resources function they had piles of files in their offices. Some of them are newly employed and have less than a year in the municipality with no other employment history.

4.4.3 What is your view concerning the status quo of HR functions within the municipality?

Half of respondents reported to be very happy and satisfied with their daily tasks. Respondent 5 put it like this:

I am very happy because I like filing, the way I do my work suits me. It gives me experience which I can add (in CV) if I apply for administration work and it enhances my employment spectrum. Besides I will know exactly what to do and how to do probation for example and again I will know where to start when I look for a document filed because now I have learnt that files are alphabetical. Unlike if I was using a system nothing I would know about filings.

The respondents performed tasks largely in the traditional way where they file documents. These employees believed that traditional HR functions was being 'hands on' and getting experience relevant to HR, rather than using electronic systems. The respondents were grateful for employment and for them traditional HR was the way to go for as long as they live.

Some respondents were neither satisfied nor dissatisfied with the status quo but they recognised the need for development. Respondent 6 said:

Yoh! I cannot tell really. I feel like it's okay, although I am lacking here and there. If this system can be brought in, it can help to improve our performances.

Just being employed was no longer enough for the respondents but rather the culture of the organisation, the work itself and challenges they encountered on daily basis seemed to be the determining factors for their future within the organisation and beyond. The respondents were certain on how the system would contribute towards their success at work.

Few respondents were dissatisfied and believed that the only way forward was transformation rather than development. This is supported by Respondent 9 who said:

My perception is that previous management lacked understanding of human resource functions. Now we find ourselves having to correct things which were done wrong in the past and in the process we are being perceived as if we are coming with our own things, maverick.

The respondent believed that the municipality lacked human resource fundamentals and recognised the need for a human resource information system in order to put everything in place for the effectiveness of the municipality to achieve the vision of the organisation.

4.5 Complexity of HRIS at ANDM

4.5.1 How do Alfred Nzo district municipality employees perceive the complexity of a HRIS?

Most respondents perceived a human resource information system to be easy to understand and use. Respondent 6 put it like this:

From my side the system is easy; you just need to know procedures and policies. This HRIS can assist municipality improve performance. Especially in HR it can assist a lot and assist the municipality at large. I am telling you, the system can benefit not only HR personnel but everybody within the municipality.

The respondents have got a background of technology and some of them had used systems before, thus their past experience and knowledge made the HRIS appear easy. Knowledge of the benefits of a HRIS contributed positively to the manner in which respondents perceived the system. The respondents emphasised the need for well-equipped HR personnel through formal qualifications and training for the success of the system.

However some respondents reported change to be difficult by virtue of its nature. Respondent 7 said:

Change is always difficult; I think it is difficult more especially at the beginning. It would create a lot of work for us. These respondents perceived the HRIS to be complex. The respondents believed that the HRIS would add more work to the pile of work they already had. Even though the respondents perceived the system to be complex, they believed that proper training and sufficient time for them to master the system would help if the changes were to be implemented.

Few respondents were unsure about the complexity of the HRIS. Respondent 4 said:

I know nothing about it so I cannot say a word about its complexity. I am not clued-up.

The lack of knowledge about the subject matter left the respondents with nothing to say. Lack of exposure and experience made it impossible for the respondents even to imagine the complexity of the system.

4.6 Trialability of HRIS at ANDM

4.6.1 What do you think would be the impact of introducing a HRIS in phases?

The majority of respondents thought introducing the HRIS in phases would be appropriate for the nature of the municipality. Respondent 6 said this:

Introducing change in phases is a norm for an environment like this institution. There are a lot of documents to be recorded and during the process of migration there might be errors because not all of us are computer literate. There are managers who don't want to read e-mailed documents, they want hard copies only.

The respondents believed that introducing the change in phases would reduce resistance and increase the probability of the HRIS's acceptance. The respondents reported incremental change to be unnoticeable. Respondents believed that introducing the HRIS in phases would ensure quick adaptation and allow organisational development practitioners to access the progress then come up with reinforcement strategies if needs be.

However some respondents reported that introducing the HRIS in phases would have no impact on an employee's resistance to change and adaptation. This is supported by what respondent 7 said:

Dividing the change would make no difference for me. I cannot imagine attending training session now and have last phase implemented a year later, come on!

Respondents believed dividing the HRIS into phases would be a waste of time. The respondents believed that training could only be effective if put in practice soon after a training session.

4.6.2 What do you think would be the impact of having a dummy human resource information system before implementation?

Many respondents reported the dummy phase to have a positive impact towards change. Respondent 7 stated this:

It would be good, to first try. I have to practise in order for mistakes to be minimised and not end up misplacing documents in the system.

Respondent believed that a dummy HRIS would work to their advantage. A dummy HRIS was viewed as a way of mastering change within the municipality. The dummy phase was believed to minimise mistakes and reduce resistance. Most respondents had experienced a dummy phase in their lives during previous changes, although the changes were not really integrated systems. Respondents reported that the longer the time for the dummy phase, the higher the probability for success. The dummy phase was viewed as a trial and error stage where mistakes would be tolerated knowing that the municipality would not suffer any financial losses.

A few respondents could not be specific about the impact of a dummy phase. This is supported by respondent 6:

There is something you need to understand; we are a public institution. We work according to budget. I work five days a week from 8:00 hour to 16:00 hour where would I get the time for trying and trying? Even now you (researcher) delaying me.

The respondents were worried about unavailability of time and resources for the dummy phase and were not willing to sacrifice their spare time to practise on a HRIS.

4.6.3 What is your preferential style of being introduced into HRIS?

Most respondents preferred to be introduced into HRIS through training. Respondent 5 said:

Training would do, because it is practical unlike when you give people a book they would never read it. People are not motivated to read books and you can easily forget something you read from a book. It is easy to learn something practical.

Respondents suggested formal training where a facilitator could train them in a training venue with computers and be given a brochure to remind them when they're back at work from the training venue. These respondents, who were females, were of the view that a person couldn't attend training only and remember everything, for them a brochure is another significant driver for the HRIS success

And some respondents preferred training plus a brochure. This is reflected by what Respondent 8 stated:

I would like training; have a facilitator and be able to ask questions then have a brochure after training.

Respondents suggested formal training where a facilitator could train them in a training venue with computers and be given brochure to remind them when they back to work from training venue. These respondents who are females were of the view that a person couldn't attend training only and remember everything after, for them a brochure is another significant driver for HRIS success

However few respondents preferred presentations or seminars. Respondent 10 said:

A presentation is always good at a professional level. During presentation a facilitator can show some screens using a projector followed by question and answer session.

The respondent suggested presentation where a facilitator could illustrate the HRIS phases, procedures, video clips and examples of computer screens using a projector. Presentation was viewed as a driver for change at a professional level where professionals could engage with the facilitator.

4.7 Relative advantages of HRIS at ANDM

4.7.1 Do you think human resource information system benefits supersede traditional HR benefits?

The majority of respondents could not compare the HRIS benefits with traditional HR benefits hence they couldn't say much. Respondent 3 said this:

It is difficult to say at this stage because there are no full details of the system so for now I reserve my comment on that.

The lack of knowledge about the HRIS seemed to be the main reason for the respondents' inability to compare and contrast. The respondents seemed to be afraid of leaving their comfort zone; maintaining the status quo was significant for them. Unlearning past experience was believed to be impossible by the respondents.

However a few respondents were knowledgeable about a HRIS and they could compare the two. This is supported by respondent 9 who said:

Yes definitely, System is more advantageous it takes away most of the work out of you and save time.

They concluded that a HRIS was more advantageous. Respondents were willing to leave their comfort zone and change to a HRIS. Understating benefits of a HRIS made respondents value learning and believed that nothing was impossible on earth.

4.7.2 To what extent do you think a HRIS would impact information?

Half of respondents reported that information would be accurate. Respondent 8 said:

Information would be accurate because information would be readily available in the system. I wouldn't have to type reports so human errors would be minimised.

Respondents understood the possibility of information being available all the time in the system. They believed that the availability of accurate information would lead to more accurate reports. The respondents weren't into technology, but the need for accurate information to generate local government sector education training authority (LGSETA) reports left them with no option but to see the need for a HRIS.

And other respondents reported that a HRIS would make information available to employees even when they're not at work. This is supported by Respondent 7:

System would make information available to employees and managers at all times. It would help us a lot in the case of documents approval because managers would approve irrespective of where they physically located.

They believed that managers would approve documents even when they're far from the workplace. They believed that availability of information to managers even when they are not around would lead to the effectiveness of the municipality.

However a few respondents believed that information wouldn't be safe at all. Respondent 5: Nothing would be safe. A computer is very easy to manipulate so people would access confidential information those who are hackers, I am telling you. Unlike here in the office information is safe we all have codes (passwords) for the door, without the code you cannot enter.

The respondents believed that information could be stolen and/or manipulated easily. The respondent believed that locking files inside cupboards in the municipality was the safest.

And some respondents couldn't say much. Respondent 1 said:

I don't know

The respondent knew nothing about HRISs and seemed very bored. The researcher reminded the respondent of the right to withdraw but the respondent insisted on continuing.

Few respondents thought that a HRIS would lead to more secure information. Respondent 6 stated this:

Information cannot be lost when you have a system. With HRIS Information is stored kude lee (far away) from workplace that means information even in the event of fire.

The respondents had used a system before and understood the advantages of having a database located outside the offices of an organisation.

4.7.3 To what extent do you think a HRIS implementation would impact on cost of HR functions?

Half of respondents believed that a HRIS would lead to cost effectiveness. This is reflected by what respondent 7 said:

Cost would be effective. A lot of things we would let away with, things like stationery, machineries and printers. My fear is that this HRIS would limit employment opportunities.

They believed that HR would cut costs on stationery and other machinery such as printers. Respondents clearly stated that cost would increase at the beginning and drop drastically once people become familiar. They were also afraid that some jobs would be obsolete and leave them jobless.

And some respondents reserved their comments because they were uncertain as to what the impact would be. Respondent 3 stated this:

Uhmm..... I reserve my comment on that.

Lack of HRIS knowledge left them with no option but to be quiet and hope for effectiveness.

Yet a few respondents believed that cost would increase. This is supported by what Respondent 5 said:

I think the cost would be more, to procure and maintain a system must be very costly.

The respondent focused on the procurement cost of HRIS only. The respondent couldn't imagine a return on investment.

4.7.4 How do you think the HRIS would impact on the time of HR personnel?

All respondents reported that the HRIS would save time because it's technology. Respondent 5 said:

I think it would save time. As you see I have been moving up and down since morning, perhaps if we had the system the interns could have signed probation forms from their respective offices and sent them back electronically.

The respondents couldn't be specific on how effectively they would use the time available had the system be implemented. The perceived availability of time, simply meant more time for their personal needs.

4.8 Observability of HRIS benefits at ANDM

4.8.1 How obvious are the benefits of human resource information systems?

Half of respondents could see the benefits that the HRIS would bring into the municipality. Respondent 6 said:

It has a lot of benefits. It would minimise time usage, minimise cost in terms of employing less staff and minimise cost in terms of time management.

The benefits were observable because of past experience and general knowledge. The respondents were concerned about the effectiveness of the municipality and quick response to audit queries. Reports to the auditor general (AG) were reported to have been a challenge; respondents would like to have a system that can generate accurate reports for them. Some of the benefits mentioned by respondents were as follows: accuracy of information; good time management; municipal effectiveness; paper less environment and cost saving in stationery and employing fewer employees.

However few employees were uncertain about the benefits of a human resource information system. This is reflected by what Respondent 10 said:

I am not happy to answer this one because I don't have specifications of human resource information system.

Lack of knowledge made benefits to be unknown to them. The respondents were willing to learn about a HRIS; the fact that they did not observe benefits didn't discourage them or lead to their developing negative attitudes towards the system change.

CHAPTER FIVE

DATA DISCUSSION, RECOMMENDATIONS AND CONCLUTION

5. Introduction

The findings were presented in the previous chapter. This chapter discusses the findings from a number of viewpoints. It is significant to note that this study was prompted by the realisation that HR functions were performed manually at Alfred Nzo district municipality, however, research shows that the municipality have implemented several systems in HR such as Munisoft, VIP payroll and Payday software systems. Technology is under-utilised in the municipality and systems implemented were neither integrated nor fully implemented.

5.1 Compatibility of HRIS benefits with ANDM needs

5.1.1 Municipal culture

E.M. Rogers (2003) stated that "compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters." The more innovation is compatible with the needs of an individual, the more the level of uncertainty decreases and acceptance of the innovation increases.

Half of the respondents reported that the culture of the municipality was reluctant to change. Employees are believed to be very resistant to change to such an extent that action to reinforce change programmes had to be taken. In some instances however, training sessions were believed to mitigate the resistance, although top management does not support change programmes. A HRIS therefore is inconsistent with the existing values and municipal culture, and more than half the employees perceived the system as being incompatible due to the fact that the municipality is reluctant to any change.

Innovation can be compatible and sometimes incompatible with values and beliefs of a particular culture, previously introduced ideas or needs of clients (Kassim et al., 2012). Despite half of the respondents who reported a culture of reluctance to change, some respondents, who were young females, were confident in themselves and in the municipality to adjust to any change provided proper consultation and engagement activities were initiated prior to change implementation. Again a few respondents clearly stated that they didn't have

a problem with changes per se, but the challenges associated with change programmes seemed to be the real issue. This could mean that the culture of the municipality is compatible but organisational practitioners implement change poorly. Interestingly, the current study shows that females are less reluctant to change compared to males. There is a need for the municipality to change the culture to be conducive to a HRIS; to change the structure to be more flat and recruit more competent organisational development practitioners who know how to effectively implement and manage change.

5.1.2 Past experience

Data collected from in-depth interviews show that more than half of respondents had experienced technological changes at work. Some respondents had been exposed to technological changes by the municipality although only one module would be activated per system introduced. The systems introduced in the municipality are independent. The systems are not integrated amongst departments within the municipality. Other employees had been exposed to integrated systems by their previous employers and they understood human resource information systems as well as the benefits, however few had not been exposed to technological changes.

The majority of employees have been exposed to technological change either by the municipality or by previous employers. Length of service and experience seems to be significant; the more experience employees had, the more technology was perceived as compatible. Lee et al. (2011) also found that compatibility was related to the consistency of technology and the potential adopter's past experience. Thus the municipality needs to close the gap between the experienced majority and inexperienced minority by providing technological trainings prior to the HRIS's implementation.

5.1.3 HR function status quo

The results revealed that half of respondents reported to be very happy and satisfied with their daily tasks. The respondents performed tasks largely the traditional way where they filed documents. These employees believed that traditional HR, rather than using electronic systems, was being hands on and getting experience relevant to HR. The respondents were grateful for employment and for them traditional HR was the way to go for as long as they lived. The study shows that employees' goals determine the willingness to adapt to change;

if a person sees him/herself as a manager or director one day, he/she does everything to get the required skills even if it means changing from one system to another. Unfortunately half of respondents who were at entry level perceived themselves as remaining officers for quite a long time, if not their entire life.

Some respondents were neither satisfied nor dissatisfied with the status quo but they recognised the need for development. Being employed was no longer enough for the respondents, but rather the culture of the organisation, the work itself and challenges they encountered on a daily basis seemed to be the determining factors for their future within the organisation and beyond. The respondents were certain on how the system would contribute towards their success at work. The study found that more experienced employees who have been with the municipality for a long time have accepted performing their jobs manually but these employees do not feel challenged by their work anymore. Most of these employees have reached management positions and they are well experienced, if the status quo remains the same they might leave for other organisations.

A few respondents were dissatisfied and believed that the only way forward was transformation rather than development. The respondents believed that the municipality had lacked human resource fundamentals and recognised the need for a human resource information system in order to put everything in place for the effectiveness of the municipality and to achieve the vision of the organisation. Top managers who have strategic roles in HR and are responsible for the effectiveness of the department were dissatisfied with the current status because of poorly implemented HR practices, implemented prior to their arrival. These individuals have HRIS experience from previous employers.

5.2 Complexity of HRIS at ANDM

E.M. Rogers (2003, p. 15) Argued that "complexity is the degree to which an innovation is perceived as relatively difficult to understand and use". Complexity connects negatively with the rate of adoption.

Most respondents surveyed perceived the human resource information system to be easy to understand and use. The respondents have a background of technology and some of them had used systems before, thus their past experience and knowledge made the HRIS seem easy. The knowledge of HRIS's benefits contributed positively to the manner in which respondents perceived the HRIS itself. The study shows that where adopters are computer literate and have an awareness of a HRIS, complexity lessens as the number of respondents who had experienced technological changes at work is equal to the number of people who perceived a HRIS to be easy to use and understand, thus these respondents are more likely to use a HRIS more and adapt easy. This finding is supported by McConnell et al. (2012) who found that less complex innovations perceived by potential end-users are likely to be adopted more easily. However another view could be that respondents perceived the HRIS to be easy to use because they had been introduced to systems with only one module activated. If this was so then introducing a HRIS gradually reduces the perception of complexity. This finding is supported by Greenhalgh et al. (2004) where they revealed that innovation designed in such a way that its implementation is broken down into small parts, results in assimilation and adoption becoming easy.

Some respondents reported change to be difficult by virtue of its nature and perceived a HRIS to be complex. The respondents believed that a HRIS would add more work to the pile of work they already had and other respondents were unsure about the complexity of a HRIS. The lack of knowledge about the subject matter left the respondents with nothing to say. The study shows that a lack of knowledge, failure to understand benefits, and lack of competence leads to a HRIS being perceived as more complex by adopters. Therefore these respondents are more likely to resist change. This is supported by Bradford and Florin (2003). Organisations that perceive innovation to be complex tend to struggle to adopt and don't fully understand the benefits of innovation, therefore insufficient skills and knowledge will result in resistance to change and increased perceived complexity (Bradford & Florin, 2003). The municipality needs to bring in change agents to help reduce resistance and train employees as Papastathopoulou et al. (2007) mentioned. The need for change agents to effectively deal with complexities that add to the already high workload adopters have, need to be taken into consideration and avoided (Carayon, 2010).

5.3 Trialability of HRIS at ANDM

5.3.1 HRIS introduction phases

Trialability is the degree to which an innovation can be tested and tried by potential adopters prior to full implementation (Lundblad (2003). In the Alfred Nzo district municipality the majority of respondents reported that introducing a HRIS in phases would be appropriate for the nature of the municipality. The respondents believed that introducing the change in phases would reduce resistance and increase the probability of acceptance of the system. The respondents reported incremental changes to be unnoticeable, but some respondents, only 20%, reported that introducing a HRIS in phases would have no impact on employees' resistance to change and adaptation. Therefore dividing a HRIS would definitely work for the municipality as most employees have never been introduced to the system before. This finding builds on Sanson-Fisher (2004) findings that where clinicians are able to try medical interventions on a limited basis, adoption is much faster as they explore procedures of implementation and patient's acceptability as well as results.

5.3.2 HRIS dummy phase

The present study discovered that a dummy phase has a positive impact towards change and that a dummy HRIS would work to the advantage of the municipality. A dummy HRIS was viewed as a way of mastering change within the municipality and was believed to minimise mistakes and reduce resistance. A dummy phase was viewed as a trial and error stage where mistakes would be tolerated knowing that the municipality will not suffer any financial loss. The finding is supported by Al-Jabri and Sohail (2012) where they pointed out that the more innovation is experimented by potential adopters, the more they will feel comfortable and easily adopt. Therefore the dummy phase is important before a HRIS implementation, but it should be noted that this phase needs time and resources.

5.3.3 Preferential training technique

In relation to the preferred training technique for using the HRIS, this study found that most respondents preferred informal training where a facilitator could train them on-the-job using their own workstations. Some respondents preferred training plus a brochure where a facilitator could train them in a training venue with computers, and then be given a brochure to remind them when they're back at work from the training venue. These respondents, who are female, were of the view that a person couldn't attend training only and remember everything afterwards, for them a brochure is another significant driver for the successful adoption of a HRIS. Other respondents preferred presentation and seminars. Respondents suggested a presentation where a facilitator could illustrate the HRIS phases, procedures, video clips and examples of computer screens using a projector. The findings of the study shows that no one size fits all when it comes to introducing people to HRIS, however it is

certain that training is highly recommended especially for low level employees, and presentation can be appropriate for people at a higher level. Interestingly, the study found that females like to read something written down like a brochure, whereas males don't. Thus OD practitioners of change agents might have to consider gender when deciding on the style of training to use when introducing a HRIS.

5.4 Relative Advantages of HRIS at ANDM

5.4.1 HRIS benefits vs. manual HR benefits

The study found that the majority of respondents could not compare HRIS benefits with traditional HR benefits, hence they couldn't say much. The lack of knowledge about a HRIS seemed to be the main reason for the respondent's inability to compare and contrast. Unlearning past experience was believed to be impossible for the respondents. The finding shows a serious problem in the municipality as relative advantage is the first attribute adopters evaluate before they evaluate other attributes, employees are more likely to resist change to a HRIS by all possible means. The challenge is clearly stated by Völlink et al. (2002), who found relative advantage to be the decider to proceed with an evaluation of other attributes, and the evaluation process is stopped as soon as advantage is perceived as minor.

Few respondents were knowledgeable about a HRIS and they could compare the two. They concluded that a HRIS was more advantageous. Respondents were willing to leave their comfort zone and change to a HRIS. Understating benefits of a HRIS made respondents value learning and believe that nothing was impossible on earth. This finding is confirmed by McConnell et al. (2012) finding who argued that relative advantage is found when the adopter's perceived innovation as being better compared with the status quo.

5.4.2 HRIS impact on information

The study found that half of respondents surveyed thought that a HRIS would lead to accuracy of information, availability of information at all times in the system, and also they believed that availability of accurate information would lead to more accurate reports. The respondents weren't familiar with technology, but the need for accurate information to generate local government sector education training authority (LGSETA) reports left them with no option but to see the need for a HRIS. The finding of this study is supported by Ngai and Wat (2006) who found that improved accuracy, the provision of timely and quick access to information, and the saving of costs are the most common benefits cited in many studies. The present study shows that the increased importance of knowledge in organisations today leads to the need for the effective management of employees' records though systems such as a HRIS. Other respondents pointed out that a HRIS would make information available to employees even when they were not at work. They believed that managers would approve documents even when they were far from the workplace. Thus effectiveness of the municipality would increase. One respondent mentioned that information wouldn't be safe at all, yet other respondents knew nothing. The study shows that there is a lack of knowledge regarding the HRIS in the municipality.

5.4.3 HRIS impact on cost of HR functions

The study found that half of the respondents believed that a HRIS would lead to cost effectiveness. They believed that HR would cut costs on stationery and machinery such as printers. The finding is supported by Ngai and Wat (2006). However they were also afraid that some jobs would be obsolete, which would leave them jobless. Interestingly, a HRIS threatens some HR employees who see their jobs at risk when technology is introduced.

The study also found that other respondents were uncertain on what the impact would be yet few of them thought that costs would increase. The study shows that there is a lack of HRIS knowledge in the municipality; it is clear that the respondents do not really think they can work on more strategic issues of HR should the system be implemented.

5.4.4 HRIS impact on time of HR personnel

Findings show that all respondents reported that a HRIS would save time because "it's technology." The respondents couldn't be specific on how effectively they would use the time available had the system been implemented. The study shows that the HR department is not involved in strategic issues of the municipality, such as workforce planning.

5.5 Observability of HRIS benefits at ANDM

5.5.1 Observabilty of a HRIS benefits

Findings show that half of the respondents could see the results that a HRIS would bring into the municipality. The results were observable because of past experiences and general knowledge. The respondents were concerned about the effectiveness of the municipality and its quick response to audit queries. Some results mentioned by respondents were accuracy of information, good time management, municipal effectiveness, paperless environment and cost saving in stationery and employing fewer employees. Thus past experience plays a vital role in the results of a HRIS being observable. However another half could not perceive the results of a HRIS. The study shows that a lack of knowledge and experience leads to results being unobservable

5.6 Recommendations

Finding of this study revealed there is a need for a culture change before the installation of a HRIS is successful. Recommendations are made on how Alfred Nzo district municipality might create the required culture. The results revealed a problem about the way changes are communicated and implemented. Where change is not clearly communicated and information is not disseminated, adopters resist even the technologically advantageous innovations. The results show that employees' goals determine the willingness to adapt to change. The results also revealed a majority of employees do not clearly understand a HRIS's benefits. Thus, the municipality's failure to focus on these areas would set up a HRIS implementation for failure.

Culture seems to be a real challenge for the municipality, and employees are reluctant to change. Management doesn't support change programmes and managers take their time even to sign a document. There is a need for training to change the values of the municipality and change the municipality into a learning organisation. This can be reinforced through rewarding employees who demonstrate the characteristics of the required culture and to punish those who do not attempt to change. A system should be tailored such that it indicates once a person receives a document and indicates once the document is read. Failure to reply or approve on time should be regarded as a delict and have appropriate sanctions.

Once the culture is conducive to acceptance, the first step prior to the HRIS's implementation, or any other change, is open communication. Management needs to communicate change to employees using different communication channels including face-to-face meetings where employees can express their feelings and ask questions for clarity. It is crucial for Alfred Nzo district municipality to involve external organisational development practitioners to get expert advice as the municipality is inexperienced in HRISs. Managers need to communicate knowledge about HRISs even if they have little knowledge themselves, and share the little information with everybody to avoid rumours spreading across the organisation. It is important that changes be communicated by top management as this reassures employees that they will not lose their jobs.

Once employees have assimilated the information, management needs to contact the vendor of the system as they have to negotiate a contract. The system needs to be tailored to suit the needs of the municipality, such as generating Auditor General Reports, and the integration of the system with other subunits within corporate services, or other departments. Negotiations need to be made for another system, with any other vendor, if they are not happy with the current vendor.

Training is vital prior to the HRIS's implementation and a majority of respondents preferred training. It is important to note that training for Alfred Nzo district municipality must be broad, not specific to a HRIS as some employees are computer literate. During this stage employees can even be taken to other organisations with a HRIS to see how the system has made things easy and see the benefits of the system. They can be taken to a nearby municipality, Mzimvubu local municipality, where an integrated HRIS has been installed.

Once the municipality is ready for a HRIS then implementation can begin. R. A. Jones, Jimmieson, and Griffiths (2005), argued the significance of analysing employees' attitudes towards change to determine the level of readiness and the significance of examining the organisation's capability to effectively manage the change required (R. A. Jones et al., 2005). The current study has analysed employee's attitudes and the organisation's capabilities therefore the municipality can implement a HRIS once the identified challenges have been resolved. It is recommended that the HRIS is implemented in phases and results evaluated

5.7 Recommendations for Future Research

Owing to time constraints, the study was conducted at Mount Ayliff only, but its findings concur with other studies conducted in various locations, thus the findings of the study have some qualities of generalisation. The Alfred Nzo district municipality spreads across different geographic areas: Mount Frere; Mount Ayliff; Matatiele, and Bizana, therefore a possible future area of research would be to apply this study's methodology to other locations.

The study used qualitative instruments and interviews only. Although interviewing techniques were developed after critically reviewing the literature, perhaps it would be interesting to use qualitative or mixed-methods to aggregate findings.

The literature reviewed for the study allows Alfred Nzo district municipality to understand the concept of human resource information systems, the advantages of the system, components of the HRIS, benefits of the HRIS, HRIS functions, adoption of a HRIS, implementation of a HRIS and a model related to human resources information systems.

The findings clearly indicate possible resistance to adopt and use the HRIS in Alfred Nzo district municipality, and resistance to technology in general. The study provides useful tools for management to evaluate the likelihood of success with a HRIS, and assist them to understand drivers of a HRIS's success.

5.8 Conclusion

The aim of the study was to generate knowledge about employees' perceptions on the adoption of a HRIS. Although a majority of respondents perceived a HRIS to be less complex, the study concluded that adopters will reject and not use a HRIS based on the following results: A HRIS is incompatible with the culture of the municipality, and there is a need to upskill staff; HRIS benefits aren't perceived as being better than a manual system, nor are they apparent to half the respondents. Therefore, there is a need for the municipality to resolve the above mentioned challenges before implementation of the system.

Only a quarter of respondents was keen to change, the rest of them were either resistant or uncertain. Apart from employees being resistant to change by nature, the manner in which changes had been introduced before led to the employees being even more reluctant. The majority of employees have been exposed to technological changes either by the municipality or by previous employers, although the changes were poorly implemented by the municipality. This led to technology being under-utilised for HR functions. A majority of employees are either satisfied or accepted the way HR functions are performed within the municipality which shows a high level of resistance because they see themselves surviving without change.

Therefore, a HRIS is incompatible with the culture of the municipality and there is a need for technological training. This is not a critical problem for the employees as most of them have already been introduced to technology and organisational development practitioners must be involved during implementation so that they can help to overcome resistance to change.

A majority of respondents perceived a HRIS as being uncomplicated. This is because of their experience in technology, and therefore Alfred Nzo district municipality doesn't have to waste lot of time and resources reducing complexity. However organisational development practitioners must ensure that employees fully understand a HRIS. Being computer literate is not the only requirement for understanding the system.

With regards to trialability, the study found out that employees need be taken to training and be given time to practise after training and prior to the HRIS's implementation. When it comes to actual implementation it is vital to divide the system into phases.

Respondents could not compare the HRIS's benefits with traditional HR benefits. This poses a serious challenge for the municipality because failure to perceive the system as better compared to the current status quo leads to a high level of resistance. Obvious benefits that are clearly perceived by adopters and cited in many studies aren't obvious at Alfred Nzo district municipality. Respondents are certain about saving time as a benefit, but they don't know how they would use the time available, instead they think most jobs would be obsolete.

Benefits are obvious to half the respondents yet not apparent to the other half. There is a need to bridge the gap to ensure results become apparent to everybody in the municipality. It is significant that adopters observe the benefits of innovation, in this instance a HRIS.

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In-depth Interview Guide

> WELCOMING REMARKS (MODERATOR)

I will first greet the participant and introduce myself. Then ask the participant to introduce him or herself by telling me his or her full name and the nature of his or her job.

> PURPOSE OF THE INTERVIEW (MODERATOR)

I will tell the respondent that all issues to be discussed were of great importance for understanding adoption of a human resource information system at Alfred Nzo district municipality. I will encourage him or her to share in these issues and express his or her views. I will remind him or her that there were no right or wrong answers hence his or her views were very important. I will make it clear that this research is meant to collect more information that would enable adoption of a human resource information system at Alfred Nzo district municipality and all information was going to be treated as confidential. All respondents will be informed about expected duration of the interview and a request will be made to record the whole interview

> INTERVIEW

I will set the ball rolling by posing a general question on human resource information system adoption at Alfred Nzo district municipality. I will then move on to more specific questions guided by Rogers (2004) Diffusion of Innovation model. The following are some questions that will be posed:

- 1. How compatible are the benefits of human resource information system with the needs of Alfred Nzo district municipality?
- How is the culture of the municipality in relation to employee's reaction to change?
- Have you had any technological changes in the way you performed your job in the past? If yes, please tell more about the change
- What is your view concerning the status quo of HR function within the municipality?
- 2. How do Alfred Nzo district municipality employees perceive the complexity of HRIS?

- You have heard about HRIS; from your point of view how difficult or easy to understand it?
- What's your perception on the use of HRIS?
- 3. How is human resource information system triable at Alfred Nzo district municipality?
- What do you think would be the Impact of introducing HRIS into phases?
- What do you think would be the Impact of having dummy human resource information system before implementation?
- What is your preferential style of being introduced into new changes?
- 4. What are the relative advantages of human resource information system to Alfred Nzo district municipality?
- Do you think human resource information system benefits supersede traditional HR benefits? And why?
- To what extent do you think HRIS would impact information?
- To what extent do you think HRIS implementation would impact cost of HR function?
- How do you think HRIS would impact the time of HR personnel?
- 5. How observant are the benefits of human resource information system to Alfred Nzo district municipality?
- How do you think HRIS would benefit the Alfred Nzo district municipality?
- What benefits would HRIS bring into the Alfred Nzo district municipality?

> CLOSING REMARKS

I will offer an opportunity for any short final comments participants would like to make.

Thank you very much for your participation

Consent Form

PROJECT TITTLE: EVALUATION OF EMPLOYEE'S PERCEPTION ON THE EFFECT OF HUMAN RESOURCE INFORMATION SYSTEM IMPLEMENTATION AT ALFRED NZO DISTRICT MUNICIPALITY

FULL NAMES

Students' name: Lucky Emmanuel Mazabelana School: SMITG College: Law and Management Studies Campus: Westville Proposed Qualification for a Project: M.com Human resource management

Postal Address: The University of KwaZulu-Natal, Westville Campus Room 25 -Block 'W' Campus Management Services, Durban, South Africa.

Supervisor

Dr Given Mutinta Contact: (031) 260-8854 E-mail: <u>muthinta@ukzn.ac.za</u>

HSSREC Research Office

Ms P Ximba HSS Research Office Govan Bheki Building Westville Campus Tel: 031-2693587 Email: <u>ximbap@ukzn.ac.za</u>

PROJECT LEADER DETAILS

Phone: 0786514518 Email: aya_awe@yahoo.com

My name is Lucky E. Mazabelana and I am a Masters student at UKZN Westville. I am conducting a study on Evaluation of employee's perception on the effect of human resource information system implementation at Alfred Nzo district municipality. The objective of this project is to generate knowledge about employees' perceptions on the adoption of a human resource information system at Alfred Nzo district municipality. Enclosed with this letter is

a brief interview guide that asks a variety of questions about your perceptions about the above mentioned topic. I am asking you to read through the interview guide.

The results of this project will be summarized and appropriate people at UKZN -SMITG will be given a summary report. I guarantee that your responses will not be identified with you personally. Your participation is voluntary and there is no penalty if you do not participate in the study. Please put your signature on the dotted lines to show that you have read and understood the contents of this letter. The duration of the interview will be 15 minutes and if there is a plan to audio record the session, permission will be obtained from the respondents.

I..... (Full names) hereby confirm that I understand the contents of this letter and the nature of the research project has been clearly defined consent to participating in this research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview / focus group discussion	YES	NO 📙
Video-record my interview / focus group discussion	YES	NO 🗌
Use of my photographs for research purposes	YES	NO 🗌

Participants	Signature	Date
1 and parties	Signature	

Declaration Letter

This is to declare that I..... Student Name: Lucky Emmanuel Mazabelana Student Number: 214539832

Will ensure that the respondents' privacy is protected. I will not use his/her name in any of the information we get from this study or in any of the research reports. Any information received in the study will be recorded with a code number that will be secured. When the study is finished, the key that shows which code number goes with your name will be destroyed. Respondents have the right to withdraw without any negative consequences.

I also confirm that respondents' have a right to withdraw from participation without any negative consequences.

Student signature:.....

Date:....

Proposal Approval Letter

UNIVERSITY OF KWAZULU-NATAL INYUVESI YAKWAZULU-NATALI

TO:Mr Lucky E. Mazabelana (Student Number: 214539832)FROM:SCHOOL OF MANAGEMENT, IT & GOVERNANCEDATE:18 June 2014SUBJECT:Approval of Coursework Masters Research Proposal

Title: An evaluation of employees' perceptions on the adoption of Human Resource Information System at Alfred-Nzo District Municipality

Supervisor: Dr Given Mutinta

This memo is to confirm that the Research Proposal Review Committee has accepted your Coursework Masters Research proposal submitted on 27 May 2014.

Good luck with your studies, and we look forward to your successful completion. Please note that you must submit this letter with your application for Ethical Clearance.

Yours sincerely,

Ms HMG Muteswa M.COM Administrator School of Management, IT & Governance College of Law & Management Studies University of KwaZulu-Natal, Westville Campus M-Block, First Floor, Room M1-119 Telephone: +27(0)312607013 Fax: +27(0)312607569 Email: <u>muteswahm@ukzn.ac.za</u>

> UNIVERSITY OF KWAZULU-NATAL WESTVILLE CAMPUS

> > 18 JUN 2014

P/BAG X54001 DURBAN SCHOOL OF MANAGEMENT SELF FUNDED TEACHING PROGRAMME

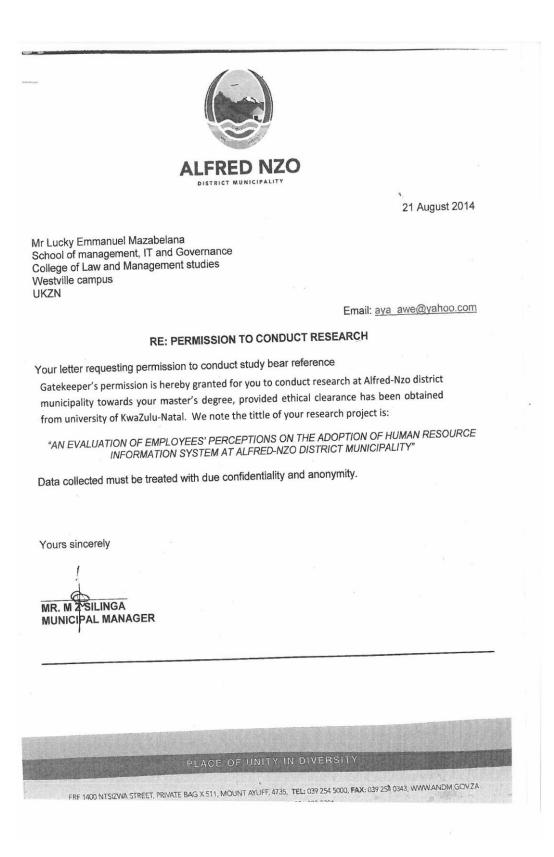
School of Management, IT & Governance- Research & Higher Degrees Postal Address: Room M1-119, 1st Floor, M Block, Westville Campus, Westville, 3630 Telephone: +27 (0) 31 260 7013 <u>Muteswahm@ukzn.ac.za</u> Website:<u>www.ukzn.ac.za</u>



Founding Campuses Edgewood

m Pietermaritzburg - Westville

Gatekeeper's Letter



Ethical Clearance Approval Letter



31 October 2014

Mr Lucky Emmanuel Mazabelana (214539832) School of Management, IT & Governance Westville Campus

Dear Mr Mazabelana,

Protocol reference number: HSS/0910/014M Project title: Evaluation of employee's perception on the effect of Human Resource Information System implementation at Alfred Nzo district municipality

Full Approval – Expedited Application With regards to your response to our letter dated 08 August 2014, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted FULL APPROVAL.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)

/ms

cc Supervisor: Dr Given Mutinta cc Academic Leader Research: Professor Brian McArthur cc School Administrator: Ms Angela Pearce

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