

EFFECTIVENESS OF THE EXTRANET AS A COMMUNICATION TOOL IN HIGHER EDUCATION: A CASE STUDY OF UNIVERSITY OF SOUTH AFRICA

By

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STATEMENT OF ORIGINALITY

With the signature below I, Rendani Sipho Netanda, hereby declare that the work that I present in this thesis is based on my own research, and that I have not submitted this thesis to any other institution of higher education to obtain an academic qualification.

Signed: Date.....

Rendani Sipho Netanda

WRITING CONVENTIONS

The following conventions are used in this study:

The abbreviated Harvard style of referencing was used in this study within the content, for instance Coates, James and Baldwin (2000, pp.17), meaning Coates, James and Baldwin 2000, page 17.

The conjunction ‘and’ is used when authors have collaborated on the article or a book, while ‘;’ is used when two or more sources are cited as an evidence for the same idea or information, for example, (Kallioranta and Vlosky, 2004 ; Koekemoer, 2004).

When referencing the source that consists of more than two authors for the second time, the name of the first author is identified followed by ‘et al’, for instance, Coates, et al. (2000, pp.17).

When referencing the source that has no date or a year of publication the ‘[n.d.]’ is used; [n.d.] means ‘no date’. Example of a reference in the text is *Mphidi (n.d.), pp.3* while in the list of references *Mphidi, H. (n.d.). Digital divide and e-governance in South Africa, Research, Innovation and Partnerships, Tshwane University of Technology, RSA, pp. 1-18.*

When referencing the source that has no name of the publisher ‘[Sn]’ is used. [Sn] stands for sine anno, Latin for “without a name”. In the list of sources consulted the ‘s’ is lower and in the text the ‘n’ is also written in small letter.

Examples: in the list of sources is written as follow: Peter, F. 2000. *Democracy in African countries*. Johannesburg: [sn].

Illustrative tables and figures are all given as Tables 1-27 and Figures 1-11 in their chronological order of appearance. All headings of the tables are written on top whilst all heading are given beneath for figures.

A conscious effort has been made to limit the use of footnotes as far as possible in order to facilitate the uninterrupted perusal of this dissertation.

For commonly used terms, full terms are used headings. Acronyms are used in paragraphs.

The references have been organised alphabetically.

The terms organisation, enterprise, and company are used interchangeably. Other terms used interchangeably incorporate the following: Distance education and Open Distance Learning; teacher and lecturer; learners and students; academic institution and higher education institution; modes and channels/mediums; modes of delivery and communication tools; research design and strategic framework; research and study; results and findings; respondents and participants; as well as sampling method and sampling technique.

The University of South Africa is abbreviated and referred to as UNISA in this study.

ABSTRACT

EFFECTIVENESS OF THE EXTRANET AS A COMMUNICATION TOOL IN HIGHER EDUCATION: A CASE STUDY OF UNIVERSITY OF SOUTH AFRICA

The purpose of this study was to investigate the effectiveness of the extranet as a communication tool in higher education institutions. The study used the case study of myUnisa - an extranet used at the University of South Africa. This was a mixed-methods research and had applied the quantitative and qualitative methods. This was a multistage study which went through two stages. In the first stage the researcher utilised the questionnaire to collect data from the students. Initially, the questionnaire was intended to be self-administered to allow students to complete them on their own, but difficulties to meet some of the sampled students on one-to-one encounter alternatively led to telephonic interviews on which the role of the researcher was to interview, and to tick and write down the responses of the respondents. Four hundred students were sampled using the online randomizer programme available on the internet. Statistical package for social science (SPSS) version 18 was used to analyse qualitative data. In the qualitative phase, in-depth interviews with two key staff members from each of the department sampled were held and an analysis was done using thematic categorization. The study found that myUnisa is used by different UNISA departments and students for communications. However, although many students and staff members considered myUnisa useful, not all regarded it as effective. In-depth interviews with lecturers showed that myUnisa is both a useful and an effective online communication channel for engaging into communications with the students. An analysis of the responses led to the development of an extranet model for implementation in higher education institution. A number of recommendations were made and suggestions for future research considerations were also given.

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ACRONYMS

B2B – Business-to-business

E-business – Electronic business

HEIs – Higher Education Institutions

ICT – Information and Communication Technology

IDL – Internet Distance Learning

IS – Information System

IT- Information and Technology

LANs –Local Area Networks

WANs – Wide Area Networks

LMS – Learning Management System

NMT – New Media Technologies

ODL – Open Distance Learning

PKI – Public Key Infrastructure

SNJ – States of New Jersey

SPSS – Statistical Package for Social Science Research

SS – Student System

UNISA – University of South Africa

USA – United States of America.

U&G – Uses and Gratifications

CHAPTER 1

ORIENTATION

1.1 INTRODUCTION

The rationale behind this study is to determine the perceived efficiency of the extranet as an electronic media and a communication medium on students' mode of learning in higher education. The advancement of New Media Technologies (NMTs) such as the Internet and its applications (intranet and extranet) enables communication to occur swiftly between communicators and the recipients. Academic institutions, especially the ODL institutions, are continually adapting to these changes emanating from the technological environment to provide education and information to its stakeholders. University of South Africa (UNISA) has developed an extranet called *myUnisa* to help students to communicate with its structures such as the Examination Department, Corporate Communication Department, lecturers, Library, and Despatch department. Through *myUnisa* students can submit assignments and receive announcements from any of the university structures or departments. However, it is not known to what extent does *myUnisa*, as a communication channel, an electronic media and source of education-related information impacts on students' performance as technology-based mode of learning. This study focused on the effectiveness of the extranet as a communication tool in Higher Education Institutions using UNISA's extranet (*myUnisa*) as a case study.

1.2 MOTIVATION OF THE STUDY

According to the South African ministry of Higher Education and Training (2011, pp.3), education receives the biggest share of the country's budget, with universities having had received the total amount of R19.4 billion for the 2011/12 financial year. Education is continuously seen as the salient way to eradicate poverty and to contribute to the development of the country through ensuring an educated society. This was reflected in the distribution of 2013/14 South African national budget on education which had been allocated the biggest share amounting to the total of R232.5 billion from the total of R1.06 trillion (SA Government News Agency, 2013). Tertiary education received R28.7 billion which makes up 7.2 percent of the total of R232.5 allocated for education and related functions such as education administration, recreation and culture.

This indicates the extent to which education is considered vital for the country's development. South Africa is still experiencing a problem of digital-divide (Mphidi, n.d., pp.3) while attempting to transform into an educated society. Open Distance Learning (ODL) institutions like UNISA also

promote accessibility of education, information and services to its students across the world. The South African government deploys new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organising and delivering information and services (Tlagadi, 2007). This is made possible through the use of diverse technologies such as the Internet, satellite broadcast, and extranet. E-learning refers to learning through Information and Communication Technologies (ICT) while e-government, according to Kaisara and Pather (2009), is a South African government concept referring to learning, getting information, services online or through information and communication technologies.

Kallioranta and Vlosky (2004, pp.2) discovered that there is a gap in the research concerning the successful implementation of the extranet and suggested that future research on the extranet should be focused at, amongst other goals, investigating extranet impact on performance. In addition to the need for the research about the impact of the extranet on organisation's performance, Kallioranta and Vlosky (2004, pp.2) also proposed other goals that future research should be based on as follows:

Centre the research on defining factors that affect the success of the extranet implementation within the business-to-business landscape;

Focus the research on the exploration of the organisation's internal and external factors that influence the success of an innovative information technology (IT) application; and

Focus the research on the conceptualisation on how extranets should be integrated within the overall business strategy and value chain, as well as exploring if extranets should be considered a competitive advantage.

Their recommendation formed the fundamental basis of this study and became the rationale to conduct this research. However, this study investigated the perceived impact/effectiveness of *myUnisa* as a communication medium on students' mode of learning and their communication with the UNISA structures. Within the context of this research, the focus is on the effectiveness of extranets in HEI, using *myUnisa* as a case study. *MyUnisa* is accessed by both the UNISA staff members and the students who have access to the internet.

The proliferation of the extranet across the world can be attributed to its noteworthy communication between host organisations and its stakeholders. According to Kallioranta and Vlosky (2004, pp.2), the primary reason why organisations are developing extranets is rooted in the need to improve communication with their customers, vendors and partners. Similarly, UNISA developed *myUnisa* to improve communication between students and its variety of structures which incorporate, among others, the Despatch department, Library, lecturers, other students and administration department.

Communication is crucial for the survival of the organisation. If used effectively, communication can help various units of the organisation to interact and to communicate consistent messages about the organisation (Barker and Angelopulo, 2006). According to these authors, organisations need to continuously communicate with its stakeholders. Bovee and Thill (2010, pp.38) describe communication as the process of exchanging information and meaning between the senders and the recipients through oral, written, visual or electronic channels.

1.3 STATEMENT OF THE PROBLEM

McGaghie, Bordage and Shea (2001, pp.923) contend that the problem statement must be clear and well-articulated, identifying the issues or the phenomenon to be investigated and the causes or contexts that lead to such an investigation. This study follows Ellis and Levy (2008, pp.27)'s views on a problem statement and statement of the problem as well as that of Leedy and Ormord (2005). Ellis and Levy (2008) theorise that while a statement of the problem is either one or two sentences that tell the problem that the research want to address, a problem statement has to address what, why, where, when, how and who.

This is a cross-sectional mixed-methods study to determine the perceived effectiveness of UNISA's extranet (*myUnisa*) as an electronic communication medium between the university and students. The aim is to determine the degree to which *myUnisa* helps students meet their expectations in ODL. UNISA is an ODL institution whose mode of teaching requires that students use (in addition to traditional modes of learning) new media technologies such as the internet, intranet and extranet in learning processes. Driven by the technological advancement, UNISA responded to the changes emanating from the technological environment by developing *myUnisa* extranet to facilitate communication between the university and its students. Koekemoer (2004, pp.46) defines communication channel as a formal or less formal route or direction in which the message travels. *MyUnisa* is a two-way communication channel, enabling UNISA and students to share information through interactive online forums. Although the use of technology may help the students in learning, it may presents a number of problems to students if they lack necessary skills to use them and this may negatively affect the students' learning (Emmanuel and Ngiye 2011, pp.230). According to Emmanuel and Ngiye (2011, pp.230), online technology presents a challenge to the students because it requires basic computer literacy skills. Murphy and Cifuentes' (2001, pp.285) study revealed similar findings that acknowledge that Web-based courses present challenges to students who do not know how to use Web tools. This research seeks to answer a core question:

How does the extranet as an electronic communication medium effect on students' learning?

1.4 RESEARCH OBJECTIVES

- To explore the perceived effectiveness of the extranet, as an electronic communication medium, on students' mode of learning at UNISA;
- To determine which extranet applications UNISA students use to communicate with their various University structures;
- To determine how effective is UNISA's extranet (*myUnisa*) as a medium in communicating with UNISA students;
- To establish if UNISA is realising its goals by investing in *myUnisa* as an electronic communication medium;
- To determine the experiences and the satisfactions of the staff members on *myUnisa* as a student-staff member communication medium at UNISA;
- To find out the role of *myUnisa* as an extranet and a communication medium in students' learning process;
- To find out the benefits of *myUnisa* a communication channel, both from students' and staff members' perspectives; and
- To establish problems and challenges of *myUnisa* extranet as a communication channel between students and the university structures.

1.5 RESEARCH METHODS

This study uses a mixed-methods approach - application of both quantitative and qualitative methods. Johnson, Onweugbzie and Turner (2007, pp.122) describe mixed methods research as a type of research in which the researcher or group of researchers integrates aspects of quantitative and qualitative approaches for the purpose of breadth and depth of understanding and corroboration.

1.6 context of the study

The study was conducted in the University of South Africa (UNISA) which is situated in Pretoria in Gauteng Province. UNISA is one of the six comprehensive universities in South Africa, offering both theoretically and practice oriented degrees and diplomas. The concept target population is used in this study synonymously to refer to the population. The target population in this study refers to all UNISA students. The results are, therefore, generalised to these students. According to Babbie and Mouton (2001, pp.174), population refers to the overall group of elements from which selection of participants is derived. The sample of this study was selected from UNISA students who were registered for the year 2012, and who were at the second and/or third year level. The selection of these students was mainly because they had gained the experiences on how *myUnisa* extranet

functions. The sampling procedure was based on the following units of analysis, also known as sampling units:

- Registered students in the year 2012;
- Students who use *myUnisa* - UNISA's extranet medium of communication;
- Second and third year students (since they would have gained insight into how *myUnisa* works); and
- Only students located in South Africa.

Babbie and Mouton (2001, pp.174) refer to this as characteristics of the elements that the researcher bases the selection of the elements on. This means that students who were selected had to include degree candidates, non-degree candidates and undergraduates. This research drew from both quantitative and qualitative approaches and methods. For example, the self-administered questionnaire consisted of quantitative (close-ended) and qualitative (open-ended) questions even though quantitative questions were predominately used over qualitative ones; the theory from the literature review was generated from quantitative and qualitative research to reflect multiple epistemological stances towards studying the same or related phenomenon, inferences were drawn from the quantitative and qualitative findings derived from phase 1 and 2, with phase 1 being quantitative-based and phase 2 being qualitative-based. The survey (self-administered questionnaire) and interviews were used to gather data. Two types of the interviews were done to generate data. Firstly, telephonic interviews were conducted with the students selected to participate in the study. Secondly, personal interviews were conducted with selected UNISA staff members such as the librarian, Despatch administration officer, Information and Communication Technology staff member, a staff member from the Registration Department, a staff member from the Examination Department, a staff member from student support and a lecturer. In-depth interviews with the staff members were done in order for the researcher to understand the effectiveness that *myUnisa* as a communication channel has on students' performance.

The reason for the integrated use of these traditional contrasting methodological paradigms is to provide different worldviews to study the effectiveness of *myUnisa*, and to provide the basis for the development of the second phase. Hesse-Biber (2010, pp.457) refers to such rationale behind the implementation of mixed methods as "triangulation" in which the aim of the mixed methods design is to validate the quantitative statistical findings with qualitative findings.

1.7 DEMARCATION (DELIMITATION) AND LIMITATIONS OF THE STUDY

In this section, the delimitation (also referred to in this study as the demarcation) and the limitation of this study is explained. The delimitation is explained in terms of aspects of study upon which it

is based and which defines its scope. Such aspects incorporate the units of analysis, the context of the study, the timeline and the main focus of the study. The focus on the limitations of this study will be the weaknesses of this study, which thwarts the generalisation of the results to the target population impossible.

1.7.1 DEMARCATION

The demarcation or delimitation of the research refers to the characteristics and units of analysis that the researcher chooses to define the scope and focus of the study and also indicates the boundaries of the study (Simon 2011, pp.2). This study views the demarcation as generally the scope of the research. The study is conducted in a South African context making use of UNISA as an educational context and using *myUnisa* extranet as a case study. The units of analysis of this study included UNISA's students who are learning and residing in South Africa and who are already doing their second and third year level in their studies. The time dimension of the study was between 2011 and 2013. The focus the study was on the effectiveness of the extranet in higher education institutions.

1.7.2 LIMITATIONS

According to Simon (2011, pp.2), the limitations of the research refers to the potential weaknesses of the study under investigation and are usually out of the researcher's control. Limitation is understood in this study as characteristics of the methodology, research design, paradigms or epistemological stance that influence interpretations of the findings and the shortcomings of the research on the application of such findings, both internally and externally. It also refers to the constraints on the generalisation of the findings to the target population.

Owing to the fact that the context of the study – UNISA- is a mega and an ODL institution, the validity and utility of the findings of this study should be applied with cautions to contexts other than ODL landscape. The sample size (350 participants) of the study is small and not really reflects a fair representativeness of the population targeted. One of the sampling traits considered for the sampling of the participants (students) was that the participants should be learning and residing in South Africa and should be, at least, the second and third year level because they would have gained an hands-on experience in utilising *myUnisa* as extranet used in UNISA. As the perspectives and experiences of the first year students are not incorporated in this study, it is difficult to generalise the findings to all UNISA's students.

The other limitation relates to the way the data were collected. At the time the measuring instrument (questionnaire) was being developed, the researcher was not aware of the establishment

of the Department called *myUnisa* which was purposed for the management of issues that deal with the functionality and maintenance of *myUnisa* extranet. As a result, the questionnaire did not incorporate questions to be addressed to this specific core area from which relevant information can be obtained. An attempt to avoid this drawback was done by conducting a telephonic interview with a staff member from *myUnisa* Department get their core functions and their experiences about the *myUnisa*.

The paucity of the related prior studies on the topic made conducting this study difficult. Much of the gathered data from the review of the related literature were focused on extranets in commercial business organisations, and not Higher Education Institutions as in the case of this study.

1.8 ETHICAL REQUIREMENTS

Guillemin and Gillam (2004, pp.263) assert that ethics in research consists of two main dimensions, namely:

Procedural ethics – that deals with requiring approvals from the relevant units, such as the research committees and research directorates, for conducting a study that involves humans.

Professional codes of ethics/conduct – this is a documented procedure that the researcher has to follow in conducting research using as particular institution as the context of the study. Guillemin and Gillam (2004, pp.263) argue that professional codes of ethics are usually salient aspects of the constitution of organisations and professions. “In terms of usefulness in addressing ethical issues that arise in practice, professional ethical codes are largely not practical or applicable and can serve only as general guidelines” (Guillemin and Gillam 2004, pp.263). This study followed ethical principles and procedures deemed substantial and appropriate by the contexts involved, and not general guidelines existing in the national constitution.

The researcher applied for ethical clearances, both from the University of Zululand (UNIZULU) and the University of South Africa (UNISA)’s Ethics Committees and were eventually granted towards the end of the year 2012 and in the early January 2013. An application to collect data was also made to UNISA’s SENRIC. An approval to conduct a study was granted in the SENRIC meeting held on the 14 of February 2013. Following communication on this resolution, the final data was collected through in-depth interviews with the two key staff members from the sampled UNISA’s departments (namely, the Despatch, Library, Registration, Information and Communication Technologies, and lecturers). Participation of the respondents was done voluntarily. Furthermore, an information sheet detailing the rationale of the research, and consent form to declare permission to participate were prepared and distributed with the questionnaire. When reporting the findings of the study, confidentiality and anonymity was assured and maintained.

Moreover, the declaration that this study is the researcher's original work is provided and plagiarism was avoided by recognising and acknowledging sources of information and ideas used to support various views contended in this study.

The next tabled section provides chapter outlines and their descriptions. The main purpose is to provide an overview of what each chapter discusses. This study consists of eleven chapters. These chapters and their headings are on the left column whereas the descriptions are on the right column of the table. Following chapter outlines, the role of communication within the organisation is discussed by looking at different fields of communication.

Chapter outlines	Descriptions
Chapter 2: Historical background and the of definition an extranet	This chapter provides an overview of the historical background of the extranet. It discusses how it has evolved until its application into higher education institutions. It also discusses various definitions of the extranet.
Chapter 3: Uses and perceived effectiveness of the extranet	Chapter 3 gives detailed information about how an extranet is used and the extent to which users consider it effective. It contains perspectives from students and staff members of the University of South Africa.
Chapter 4: Extranets' benefits and their classifications	This chapter presents detailed information about the benefits an organisation derives from using an extranet. It also gives an overview of individual users' motivation and benefits to use extranet. Furthermore, the chapter discusses different classifications of an extranet as gathered from the literature review.
Chapter 5: Types and models of extranets	Chapter 5 talks about the various types of the extranets and models of extranets. The models of extranets help provide explanation about the functionality and the specific purpose for which extranets are developed in organisations.
Chapter 6: Delivery systems for distance-education materials to the students	This chapter provides a discussion on ways in which educational contents are transmitted or exchanged between academic institutions and their students. Its specific demarcation is on distance education institutions and looks at pedagogical modes used for teaching and learning purposes.
Chapter 7: Communication	This chapter locates the discussion of this study into the context of communication as a field of study. Different worldviews on what communication entails are given and various fields of communication are discussed.

Chapter 8: Conceptual framework: uses and gratifications	This chapter deals with the theory used to inform the study. The media theory, as well as uses and gratifications theory, was used. Theory helps provide explanation about the phenomenon under an investigation.
Chapter 9: Methodology and research design	Chapter 9 talks of the procedure followed in conducting this research, the research paradigms as well as the epistemological stance held in this study. The study employed an integrated approach in which both the quantitative and qualitative methodologies were used. Such an integrated approach is referred in this study as mixed-methods.
Chapter 10: Analysis of the data	Here, the focus is on the analysis of the data, both found from the quantitative phase and qualitative phase of this study. The results of the quantitative phase were arrived at using the SPSS version 18. The analysis of the findings from the qualitative phase is arranged in themes, and as a result, thematic categorisation was used.
Chapter 11: Conclusion and recommendations	In this chapter, the discussion of the entire study is concluded. The main points discussed in each chapter are summarised and suggestions and recommendations to improve how the extranet should work are given. The gaps in the research relating to the effectiveness of the extranet are shown and directions for future research are outlined.

1.9 THE ROLE OF COMMUNICATION IN THE ORGANISATION

The role of communication in the organisation is hard to discern and various academic terms which are used make it difficult to establish universal comprehension (Kalla, 2005, pp.303). Communication has been described as the inevitable part of the organisation at all levels and it is

central for different parts of the organisation to interact (Tourish and Hargie 2004; Barker and Angelopulo 2006, pp.3; 2013, pp.133). There is high level of competition amongst organisations that are in the same industry. To differentiate the organisation from the other and to position it in a competitive edge, organisations use communication to disseminate information regarding their services or products. Communication is pivotal between the organisations' internal (for instance, the staff members) and the external environments (such as the clients, customers, government, media, and its competitors). Communications of the organisations include marketing communications, corporate communications, advertising, public relations, management communications, and business communications.

The survival of the organisation is largely dependent on the communication applied by the organisations. If the organisation wants to increase sales of the products, advertising products sold could serve as an appropriate form of communication. If building the image and the identity is the objective of the organisation, corporate would be a suitable form of communication. However, research indicates that the integration of various forms of communication leads to effective ways of organisational communication. To communicate a message or to deliver information pertaining to an organisation's services or products, distinguished mediums of transmission are utilised, of which they include, to mention a few, press release which could either be online or off-line, the internal newspaper or magazine, telephone, face-to-face (for instance, meeting with the staff members) and the internet. The latter encompasses other online modes of information sharing or transmission of information about the organisation such as the intranet, extranet and World Wide Web (www).

According to Miller (2003, pp.2), productive organisations communicate effectively with employees and the customers. In higher education institutions, communication is significant between the academic institutions and the students. It takes various forms such as words exchanged between the lecturers and the students in a face-to-face situation, through the telephone, faxes and online technology such as e-mails, online forums, and blogs. The role of communication has been widely recognised over the years, and different conceptualizations have led to various academic fields of communication, existing to serve different functions. Of these diverse fields of communication, some serve to build and maintain the good relationship with stakeholders. Some are to create a positive perception about the organisation and others are more on increasing the sales of the products. The section to follow looked at various academic fields of communication, or what Kalla (2005, pp.305) calls communication domains, in order to show the disparities amongst them as well as their communication roles within the organisation. The discussion is on business, management, organisational, corporate, public relations and marketing communication.

1.9.1 BUSINESS COMMUNICATION

Business communication refers to communication that is used to achieve business objective (Angelopulo and Schoonraad, 2006, pp.12). Business writing such as report writing, preparation of PowerPoint presentations, and taking of minutes in organisational meetings are some of the examples of business communication. The essence is to communicate effectively and professionally to create and maintain a quality interaction within and outside the organisation.

More recently, the use of technology such as the intranet and extranet, provide online sending, storing and receiving of information. Sending information through such online channels in a business environment requires the sender to have certain etiquette and to follow a particular organisational procedure. Often, organisations follow certain pattern in writing documents such as the letter, e-mail and reports. Business communication nowadays incorporates oral communication, as Krapels and Arnold (1996) postulates that in 1960s, much of the attention on business communication became written communication. In 1980s business communication incorporated presentations, oral communication, and interviewing (Krapels and Arnold 1996). Business communication is used to improve communication skills of the organisation's employees, which is believed that it will in turn help the organisation to attain its objectives.

1.9.2 ORGANISATIONAL COMMUNICATION

Defining organisational communication, Miller (2003, pp.1) regards it as a communication that relates to the comprehension of the manner in which communication processes can be influenced by the context of the organisation as well as how the symbolic nature of the communication can distinguish it from other organisational behaviours. According to Angelopulo and Schoonraad (2006, pp.14), organisational communication refers to as the transmission of meanings and information within and outside the organisation. This definition identifies some of the role of organisational communication, namely, disseminating meanings and information. These meanings and information may be on product, and services undertaken by the organisation. In their discussion of organisational communication, Angelopulo and Schoonraad (2006, pp.14) articulated that organisation communication refers to all communication of the organisation, which could either be formal or informal, and which can occur either in or outside the organisation. The use of advertising to market a service or products are some of the means by which organisations communicate with its stakeholders outside the organisation. The role of communication through advertising may vary, but often the organisation's objective could be to make improvement in sales volume, influences positive perception towards the product or the organisation and many other distinct rationales.

1.9.3 MANAGEMENT COMMUNICATION

Management communication is the use of languages, symbols and signs for the effective and profitable management of the business organisation (Angelopulo and Schoonraad, 2006, pp.13). It is important in communication relating to planning, organising, leading and controlling functions of the management. For instance, during organisational activities such as policy formulation, organisations may engage their employees in participating into the development of the policy by giving their views on the need for current and/or proposed policy. Management communication also relates to dissemination of information such as salary issues, procedures to execute certain responsibilities, seminars and events organised as well as training and workshops focused on the provision of skills to the organisation's workforce. Moreover, it is within the management communication category that employees are kept on reminded on the vision, mission and the goals of the organisation. Thus, the role of management communication is dissemination of informative messages about the organisation within leading, controlling, managing and organising functions of the organisation. Management communication is the outcome of the integrated business and organisational communication (Krapels and Arnold, 1996, pp.336).

1.9.4 CORPORATE COMMUNICATION

Corporate communication is the “technical information system of the corporation; the interactive, human resource aspects of organisational efficacy; the marketing of an organisation's products and image; the development and maintenance of the corporate image through design; and as strategic communication that is aimed at achieving the overall objectives of corporate strategy” (Angelopulo and Schoonraad, 2006, pp.16). Evident from this definition is that corporate communication serves different roles such as marketing of the products or services or the organisation. It also helps in creating an organisation's identity and positive image for positive perceptions by the stakeholders. In so doing, it is anticipated that corporate communication will lead to attainment of the overall corporate objectives. Example of communications undertaken within corporate communication ‘demarcation’ incorporates crisis, financial and employee communication.

1.9.5 PUBLIC RELATIONS

Public relations as a field of communication creates and maintains a good relationship between the organisation and its ‘publics’, referred to as stakeholders in this study. Public relations, according to the South Africa's Institute for Public Relations and Communication Management (www.prisa.co.za), is the management of perceptions and strategic relationships between the organisation and its internal and external stakeholders.

It is important to build good relationships with the organisations' customers or clients. Angelopulo and Thomson (2013, pp.18) argue that public relations is a fundamental type of field of

communication that can be used for generating publicity and interest in the product, service or a particular event. Green (2010, pp.7) and Holtzhausen (2005, pp.407) contend that public relations become crucial in creating and managing changes in the organisation. These changes include introducing a new product or rebuilding the image of the company after a particular crisis.

1.9.6 MARKETING COMMUNICATION

Marketing communication is the communication element in every aspect of relationship between the organisation and the customers or clients (Angelopulo and Schoonraad, 2006, pp.18). Marketing communication refers to any type of communication for marketing of the organisation's services or products. Communication for marketing includes, inter alia, advertising, personal selling, direct marketing, sales promotion, and public relations. Thus, the role of marketing communication includes an engagement to promote the products in order to increase sales of such products, to create a relationship between the organisation and the customers.

When looking at the communication roles that each field of communication plays in the organisation, it is clear to note that these fields of communication overlaps. Each is capable of serving different communication functions. As such the disparity amongst them is blurred in terms of the roles they play. Whatever role communication plays for the organisation, it has to take place through a particular channel, which in this study is referred to as modes of communication.

1.10 MODES OF COMMUNICATION DELIVERY IN AND OUTSIDE THE ORGANISATION

The transfer of information from one place to the other within the organisation, either between the staff members working at the same hierarchical level or between the subordinates and the management or between the organisation and its external stakeholders, is carried out using a specific channel (also referred interchangeably as a medium in this study). Communication modes of transmission of information varied from conventional (such as the use of Radio or television, newspaper or magazine) to modern forms (such as, most notably, the internet, World Wide Web, intranet and extranet, CD ROM, broadcast, videoconferencing, e-mail, chatrooms, and online discussion forums (Moore and Kearsley 2011, pp.7).

1.11 COMMUNICATION THROUGH ONLINE TECHNOLOGY (INTRANET, INTERNET AND EXTRANET)

Online technology has become a powerful communication mode, and as such, many organisations have, until recently, developed their websites to be their major sources for the organisation's information about what they do. Online technology offers opportunity to communicate in real time and non-real time. Non-real time communications are those forms of communication whereby the communicator can send the information which the recipient may access it at any time he or she likes

and responds to it time convenient to him or her. Non-real time communications are described as asynchronous communications only take place through online technology. Paulus and Phipps (2008, pp.461) reported that whilst asynchronous communication is most appropriate for academic discussions, synchronous communications are better suited for socialising. An example of non-real time communication is communication through the e-mail and discussion forums, and blogs. Using an e-mail, for instance, one can send a message to another person who can decide to read the message at time suitable for her or him and send the feedback, perhaps, a month later. In addition to the websites which organisations are building in order to provide the opportunity to share the expertise and knowledge, and other information between or amongst staffs or directed to the organisations' clients or customers and other stakeholders, organisations are creating online communication channels such as the intranet and extranet. As the preface 'intra' denotes inside, intranets are online communication channels built and controlled by the organisation to facilitate communication taking place within the organisation. Intranets are secured organisational internet taking place through local area network (LAN) and are accessed by the internal members of the organisations hosting such mode of communication.

Extranets, as communication channels within organisations, imply that they are accessed and used by the internal members of the organisations. According to Tan, Shaw and Fulkerson (2000:45), the extranet encompasses four types of communication and these are individual, two-way, one-to-many and many-to-many communications. As communication channels between the organisations and their external stakeholders, extranets are internet-based mode of communication that can be accessed by the clients or customers or external stakeholders of the organisations. Such organisation's partners can access certain information about the organisation which include product- or, service-focused, or in general, the organisation's information such as the policies and procedures.

Owing to its unique nature that characterises elements of the intranet and internet, the extranet is becoming a useful communication channel in the business sector, facilitating communication between the organisation and its business partners. Flanagan (1997) is one of the communication scholars to realise that the organisations implement extranets to communicate with their customers, suppliers, business partners and other target population of the organisation which have direct impact on the operation of the organisations. In essence, extranets were developed to create and maintain relations between the organisations and its business partners. Unlike intranets, extranets use wide area network (WAN), connecting the host and its suppliers, clients and other partners for the purpose of exchanging information. While intranets are private, the internet is public; extranets are both private and public. However, the users of extranets only access certain information about the

organisation. This means that there are some securities imposed which help forbid access to certain information of the organisation by an authorised user.

1.12 EFFECTIVE ONLINE COMMUNICATION

In order for the organisation to realise its communication objectives, such communications, discussed in the previous section as fields of communication, must be effective. When they are effective, it means they should enable the organisation to achieve its goals or objectives. Bovee and Thill (2000, pp.4) consider effective communication as one that occurs when participants in a communication encounter arrive at a mutual understanding and encourage participants to be active as they change roles in the communication process. Since the study is about the extranet, the discussion of effectiveness of communication had to be on the online communication. This related to communication through the organisation's extranet. Effective communication should be characterised by what Ranchhod, Gurau and Lace (2002) call pillars of effective communication. According to these authors, such pillars are the dialogue, borderless communication, inclusive communication and continuous communication.

1.12.1 DIALOGUE

Communication is the process wherein messages are exchanged between two or more people. In discussion or online forums taking place through online channel such as the extranet, dialogue is an imperative element of such communication. Extranet can be one-way or two way communication depending on the information. Dialogue is experienced when communication is a two-way process such as in the case of sending messages and receiving feedback through an e-mail. According to Ranchhod, et al. (2002), communication usually becomes effective when there is an exchange of information, and not just a one-way communication process in which feedback does not exist.

1.12.2 BORDERLESS COMMUNICATION

The power of online technology is its ability to transmit information everywhere in the world. This enables the online technology such as the extranet to have a high reach. Companies using extranet are able to provide access of organisation's information to its stakeholders, be its employees working from another branch or its customers who might be geographically dispersed. Online communication online can be effective in that it can reach the broader target population of the communicating company.

1.12.3 INCLUSIVE COMMUNICATION

According to Barker, Du Plessis and Hanekom (2006, pp.302), inclusive communication is realised when all internal and external stakeholders of the organisation are able to access organisation's communication. Such communication should be integrated to create synergy in an organisational

communication strategy. Such communications are therefore effective when considered consistent and directed to every organisation's stakeholder in the same time.

1.12.4 CONTINUOUS COMMUNICATION

Organisational communication is also labelled effective when all stakeholders are continuously informed of the new developments on the products, services and the operation of the organisation and other decisions that can influence them.

1.13 KEY CONCEPTS

This section provides an explanation of key concepts which are relevant to this study. A brief overview of effectiveness, extranet, organisational communication, communication tool and higher education is provided below.

1.13.1 EXTRANET EFFECTIVENESS

Organisations have adopted and begun to use the online technology to gain the competitive advantage and to maximise their effectiveness (Anandarajan, et al., 1998; Vonderwell, 2003, pp. 78; Harrigan, DeFilippo, Pratt, Beverly, Bachman and Moran, 2009; Spralls, Hunt and Wilcox 2011, pp.59). The most vital alterations and strategies in organisations recognise the significance to utilise the internet applications such as the intranet and extranet (Baker, 2004, pp.41). Effectiveness is the degree to which a particular thing is able to generate the desired outcome. Poljanowicz and Latosiewicz (2010, pp.160) define effectiveness of education as the degree to which educational goals set are fulfilled. Spralls, et al. (2011) theorise that the extranet effectiveness is when partners using extranet connections are able to meet their expectations and goals. The extranet as a communication tool must be able to function as intended and fulfil the role for which it was established to meet the expectations of the end-user. The application of the extranet is considered effective when important information about the organisation, its products or services is presented as objects which may be integrated with those of other organisations in ways that may have not been possible before (Panian and Kennedy, n.d., pp.6). According to Panian and Kennedy (n.d., pp.4), an effective application of the extranet must contain aspects such as management, reliability, scalability and security. The use of extranet must be manageable through monitoring, controlling and measuring its performance. The use of such an online tool must find it comfortable to use or user-friendly. It should enable the user to realise the aim behind using it. The use of extranet must be exercised by those with access such as the username and passwords in order to access the organisation's system. In addition, the extranet have to be scalable, providing the possibility to grow from being small into a huge, high performance tool. The next section provides an explanation of the extranet concept, contextualising it within the demarcation of this study.

1.13.2 EXTRANET

Proponents on the extranet as a communication tool and a channel reflect that there is no universal definition of the extranet. However, there is wide accepted consensus that the extranet depends on the functionalities of the public internet to function. Similarly, the intranet does not function in the absence of the internet. Baker (2000, pp.42; Diks, 2001, pp.1) asserts that the extranet is an extension of the intranet which gives external customers of the organisation a secured access to an organisation's information. The State of New Jersey (2009) describes the extranet as a private network connection which utilises the internet technology and the telecommunication system to share certain information of the organisation with the customers, vendors and business partners. This study used the case of University of South Africa's extranet to investigate the effectiveness of the extranet. UNISA developed a learning management system called *myUnisa* in 2006 to enable its students to communicate with the various departments, and to communicate with fellow students registered for the same modules. It comprises applications that serve different purposes which relate to study fees quotations, financial tracking, examination time table, examination results, edit registration, change password, bibliographical details and academic records. All these applications were established to support students in the communication with the university and can be generally referred to as organisational communication which is explained in the next section.

1.13.3 ORGANISATIONAL COMMUNICATION

Organisational communication is a vital component of the organisation's survival. The term communication refers to the symbolic and transactional process in which parties in a communication encounter are able to reach mutual understanding through sharing information (Barker and Angelopulo, 2013, pp.4). In an organisation, communication is described as an organisational communication. Such communications of organisation usually take place between the organisation and its different stakeholders, both internal and external. In higher education institutions, communications occur between the academic institutions and the students, students and the content, amongst the staff members and between the institution and other external stakeholders with direct or indirect interests in the operation of the institutions (Vonderwell, 2003). Barker and Angelopulo (2013, pp. 19) define organisational communication as the diffusion or sharing of information and meanings in and outside the organisation. The communication aspect of this study is focused on communication between the UNISA students and its various structures through *myUnisa* extranet. Such structures are, to name them, the department of information and communication technology (ICT), academics, Library, registration department and Despatch department. The next key concept explained is the communication tool. This is a broad concept which serves to provide an overview of tools used for the transmission of communication. In this

study the communication tool focused on is the extranet, of which *myUnisa* is used as a case study to determine how effective the technology can become in higher education institutions.

1.13.4 COMMUNICATION TOOL/MODE

Communication tool is a means by which people communicate with each other, such as through telephone, fax, internet, intranet, and extranet. Communication tools can be grouped as synchronous and asynchronous communication tools and can be very useful if applied correctly and effectively. The study conducted by Essex and Branon (2001, pp.36) reported that 35% of distance educators have plans to encourage their students to use synchronous communication tools such as online forums, chat rooms, and video conferences while 65% of them are planning to encourage and ultimately rise the use of asynchronous communication tools, such as e-mails, list-serves, blogs and Usenet. Whereas synchronous communication occurs when all parties in a communication encounter are online simultaneously, in a synchronous communication, participants are not required to be online at the same time (Harrigan, et al., 2009). In this study the University of South Africa's extranet known as *myUnisa* is a communication tool under investigation.

1.13.5 MYUNISA

MyUnisa is a learning management system or a student portal which was developed by the University of South Africa to enable its students to manage modules they are registered for and to participate in student-student, student-content, student-lecturer, and other forms of communication with the variety of university structures (University of South Africa, 2013). The implementation of the learning management system is crucial in the era of online technology (Brown and Cooke). Lecturers are also able to use it through entering their staff usernames and passwords to log in. In order to access *myUnisa* portal, students need to have usernames and passwords.

1.14 CHAPTER SUMMARY

This chapter served as an introduction to the research project, highlighting the need and rationale to conduct the study. It reflected the problem statement of the research, its objectives, the theory that informs the study, research methods used, the scope and shortcomings of the study as well as critical issues relating to ethics in research. Following this, the next discussions in this chapter are on the role of communication in the organisation, modes of communication delivery in and outside the organisation, communication through online technology, effective online communication and the clarification of the key concepts. The next chapter begins by discussing the historical background of the distance education. Following this, the discussion is focused on the evolution of the extranet. The last section of this chapter discusses the definition of the extranet.

CHAPTER 2

HISTORICAL BACKGROUND AND THE DEFINITION OF AN EXTRANET

2.1 INTRODUCTION

The previous chapter provided an orientation to this study. It discussed the motivation that led to the need to conduct this research. This was followed by the statement of the problem, identification of the objectives that the study strives to meet. The last two sections provided an explanation of the demarcation and limitations of the study as well as the ethical requirements.

The advent and the promulgation of the new media technologies (NMT's) or Information and Communication Technologies (ICTs) had impacted on the organisations in many different ways. Many of these organisations have altered their structures and the way they operate. Although these ICTs have some disadvantages in the running and management of the organisations, their widespread presence across the world have been attributed to the benefits they offer to organisations. Of these diverse ICTs, the internet is one of the most popular media and information sources preferably used in organisations. Its applications such as the World Wide Web, intranet and extranet have become very essential in serving as sources of organisations' information, and as communication channels playing a role in disseminating information and enabling various structures within the organisation to share knowledge, expertise and exchange information.

The chapter starts by providing a brief overview of the history of distance education. The essence is to show traditional delivery modes of education applied prior to the advent of online technologies within the distance education landscape. The online technology which is the cornerstone of this study is the extranet. The discussion around it begins by looking at how it has evolved over the past years. Following this, the concept of 'extranet' is defined with some of various views from related literature by different scholars incorporated in the discussion around its definition. The discussion continued by explaining the classifications of the extranet in terms of its benefits, and other benefits it offers to the organisations, types and models of extranets. These benefits are categorised according to those considered to be for commercial organisation and those seen to be for higher education institutions. The study also detailed the use of extranet in an ODL environment and perceptions around it from students' and academic institutions' perspectives as drawn from the literature review.

2.2 BRIEF HISTORICAL BACKGROUND OF THE DISTANCE EDUCATION

This study draws from research on distance education and e-learning, with a particular focus on learning through online technologies for effective learning. Distance education mode had existed for

many years. Its inception can be traced back to the year 1966 (Chifwepa, 2008). Students opting for distance education varied, with many of them employed and seeking to further their studies. Companies investing in quality human resources encouraged their employees to continue studying without leaving their confined workplaces. In other higher education institutions, such as the University of Zambia, distance education was the implemented mode of learning to serve as a response rooted from the country's need to develop its human resources and the employed citizens' need to improve their educational statuses at tertiary level (Chifwepa, 2008, pp.51). To these employees, distance education became the alternative to learn while employed. Siaciwena (1988) found that distance education was also the result of the universities' need to expand student enrolments.

There were doubts in the quality of education received through distance education. It was believed that on campus classes in which both instructors and the students are together in real time is the best pedagogy. The study conducted by Shea, et al. (2001, pp.115) on internet-based distance education from the administrative perspectives reported that students studying in distance education perform the same and sometimes better than those in traditional face-to-face classrooms. As technologies are developed and continuously improved, the landscape of distance education is changing too. Tools for delivering education to geographically dispersed students across the world are changing as academic institutions attempt to adapt to changes emanating from the technological environments saturated by vast number of Information and Communication Technologies with which to deliver educational materials swiftly and to any place in the world. The advent of the internet was originally meant to enable communication among universities and government groups (Sharp, 1998, pp.2). The use of extranet- an extension of the intranet - in communications with students in higher education institutions is currently essential. Depending on the tools and channels for delivering educational contents, distance education can take the variety of forms. Gerbasi (2002, pp.2) refers to the distance education making use of the internet to offer training to the diverse students as internet distance education (IDL). Today the internet makes learning, instruction-giving and communication between the students and the lecturers simpler and faster than it was during the traditional distance educations.

Almost all universities across the world are seeking to use the internet to teach and to receive queries from their stakeholders through the internet. As a result, colleges and universities developed or are developing their websites to keep the contents about their operations to the specific segmented group of people.

Conceptualisations of distance education tend to differ in the literature, but most commonly distance education was defined as the delivery of education to students who are separated geographically

from each other as well as from their instructors, who are also referred to as lecturers in this study. In academic landscape, technology is commonly and widely adopted and used in the delivery of educational materials which include online technology, which encompasses the internet, intranet and extranet. Owing to the fact that this study focuses on the value of extranet as a communication channel and an information source on matters pertaining students' learning activities and progress, the section to follow looked at the origin of the extranet and what it was purposed for during its inception.

2.3 EVOLUTION OF THE EXTRANET

The origin of the extranet has been through a need identified by the commercial organisations to efficiently engage them into a business-to-business electronic commerce. Oppong, Yen and Merhout (2005, pp.417) are of the view that the extranet technology evolved from the intranet as a business-to-business (B2B) communication tool. Similar to this view, Maier (2013, pp.1) posits that the extranet originated from different business entities that needed to adopt an e-commerce approach in conducting their activities. It is a result of a combination of local area networks (LANs) and wide area networks (WANs) (Maier 2013). According to Oppong, et al (2005), the intranet evolved from the public internet. By its very nature an extranet was designed to promote open, interactive and collaborative working environment between a partnership of different businesses (Healy and Iles, 2002, pp.120).

Commercial organisations needed to share certain proprietary information with the clients, customers and suppliers or businesses in partnerships. Extranets, referred to as extended intranets that use the internet technology, provide access to those external clients such as contractors, distributors, customers and business partners of the organisations to a range of information such as the available products, their prices, and how to order them online (Angeles, 2001, pp.168 ; Vlosky, Fontenot and Blalock, 2000, pp.438-439). Angeles describes extranets as the use of intranets to connect two businesses in order to foster communication and transactions between them. Viewed from the commercial context, Cameron (1998) deduces that extranets are e-commerce branches through which corporations share information with business partners, distributors, or customers.

The evolution of the extranet had been through what Mills (1998, pp.1) call "waves". Mills believes that the extranet is the third wave which followed the second wave, referred to as the intranet. The first wave was characterised by the internet and the World Wide Web (www). The internet is capable of providing the public with wide range of information on any topic. The information accessible through the internet can be any types of text, documents, images, pictures, video, animation and sound.

Using the internet and World Wide Web protocols, organisations realised they could benefit from developing their own internal internets, which then became known as the intranets to refer to organisations' internets for the dissemination of information to and communications with distinct internal employees and other structures of the organisation. Mills (1998, pp.3) believes that the intranet became efficient and effective in the management of the organisation. The need by companies to use web-based technology as a business strategy, marketing tool and for operations resulted in the 'birth' of the extranet. Mills called the extranet the third wave, referring to the third stage in the developmental process of online technology which became a pivotal communication channel for the dissemination of the information relating to the organisation's products or services. This third wave in the evolution of the extranet is synonymously called the 'extended intranet' (Mills, 1998, pp.3) which tended to extend the access of organisation's information to the authorised trading partners and customers located outside the corporate firewall. The extranet evolved because of certain anticipated function of importance to the functioning and the running of the business organisations. Since the discussion of this study is around the extranet, it is fundamental to scrutinise what it is.

2.4 DEFINING THE CONCEPT OF EXTRANET

There is no clear and universal definition of the extranet. There are different definitions for extranet suggested in the literature, of which some are discussed next. The concept of 'extranet' has been assigned many definitions over the past years. Until recently, there is no clear definition for the extranet (Boddendyke and Williams, 2002, pp.365). The extranet is regarded in numerous articulations in literature as an electronic communication channel that enables business partners, customers and other organisation's stakeholders to communicate and to get certain organisational information. The term extranet was first coined by Ethernet inventor Bob Metcalfe. Until recently, the extranet is an elusive term to define and, according to Vlosky, Fontenot and Blalock (2000, pp.439), there is some confusion over the exact definition. Hence Vlosky, et al. (2000) contend that the extranet definitions seem to concur with each other on that the extranet is a kind of network that connects trading partners to each other over the public internet. One could infer that the internet is the electronic environment within which the extranet exists and functions.

Towards the end of 1990s, the extranet was viewed in its simplest form. For instance, Bernard (1998, pp.363) contends that the extranet is the use of the public internet to access an organisation's intranet. Other scholars such as Turban, Lee, King and Chung (2000) see the extranet as an 'extended intranet'. This suggests that the extranet is the intranet that provides certain external organisation's stakeholders access to certain information. More recent definitions of the extranet

have altered from their simplistic view to a more specific description of the extranet. For instance, the extranet refers to any network linked to another network in order to allow the sharing of information and data, and they exist when two business partners link their intranets to each other for business communication and transactions (Hannon: 1998). Rainer and Cegielski (2009, pp.344) and Tilwaldi, Takahashi, Takata and Koizumi (2010, pp.36; 2010, pp.36) believe that the major reason for extranet creation in the organisation is to promote collaboration, either between or amongst business partners. Angeles (2001, pp.168) argues that an extranet is organisation's intranet which provides access of information to the outside stakeholder of the host.

The functioning of the extranet is dependent upon the existence of the intranet and the internet. While the internet exists independently of the intranet and extranet, the intranet use the internet protocols, and therefore, cannot exist without the internet. The extranet draws from intranet's and internet's strengths and that contribute to making extranet one of the most valuable electronic tools for relationship building and its maintenance, collaboration, information sharing, and business communications between or amongst business partners. Anandarajan, Anandarajan and Wen (1998, pp.122) describe the extranet as an electronic computer-to-computer business information which can be exchanged amongst an organisation's departments or units and between the organisation and its potential customers, suppliers and other trading partners. Reviews on the extranet showed that the extranet's definition in the higher education institution is quite different from definitions of extranet in the non-academic environments. Extranets are created within the organisations for some reasons. Some of the significant uses of the extranet that influenced its development and improvement are discussed in the next section with a focus in extranets within the ODL environments.

2.5 CHAPTER SUMMARY

This chapter focused on the historical background, evolution and the definition of the extranet. The chapter discussed the history of the distance education, looking at what it is and how it was carried out. It also looked at channels which were used in distance education for the delivery of the education to the students. Thereafter, the chapter discussed how the extranet has evolved until its recent status as a communication channel. It became clear in the literature review that the extranet was originally developed and applied in private businesses and not in higher education institutions. Owing to its various benefits, it was soon adopted and developed in higher education institutions as well.

Lastly, the chapter also discussed distinct definitions of the extranet. The literature showed that there is no universal definition of the extranet, mainly because of the purpose for which it was

originated and how organisations want to use it. The next chapter discusses uses and perceived effectiveness of the extranet from the commercial organisations', higher education institutions' and specifically open distance learning institutions' and students' perspectives.

CHAPTER 3

USES AND PERCEIVED EFFECTIVENESS OF THE EXTRANET

3.1 INTRODUCTION

Extranets are developed in different organisations for different purposes (Rainer and Cegielski, 2009). Owing to this, extranets' effect on the user is different. Perceived effectiveness of the extranet is two-fold. It can be from organisation's perspective or rather from the customers', clients', suppliers' and other business partners' perspective. In the academic environments, the effectiveness of the extranet can be determined both from the students' subjective views and experiences, and the degree to which the academic institution hosting the extranet is able to be productive subsequently from the application of the extranet. Extranets may be considered effective if it meets the students' expectations, while in the academic institution it may be deemed effective if the organisation is able to achieve its objectives for which it was developed. Owing to the diversity of organisations, in terms of their services and the nature of the businesses, extranets are developed for different uses and to serve multiple functions. The section to follow provides the details of uses and effectiveness-based perceptions of the extranet in business enterprises, which is also called commercial organisations in this study.

3.2 USES AND PERCEIVED EFFECTIVENESS OF EXTRANET IN COMMERCIAL ORGANISATIONS

Discussing the effectiveness of the extranet using the tourism information system, TIScover, as an epitome of extranet, Proll, et al. (n.d., pp.1015) assert that the contents contained in the system should be of quality and be measured in terms of accuracy and of such contents and actuality if the system is to be viewed as effective. Thus, tourism information providers have access and control over their information and are able to actualise, change and extend their tourism information any time. Tourism information provider can also customise information to the customers kept in the database.

Within the commercial organisational contexts, perceived effectiveness of extranets relate to the extent to which organisations in business partnership consider them to be worthwhile and productive (Vlosky, et al., 2000, pp.438). As a result, organisations with extranets and which had found them beneficial to their relationship with other partners would regard them as effective and helping them to realise organisational goals. Vlosky et al., (2000, pp.438) indicate that measures of extranet effectiveness should incorporate the capability to enable the organisation to be productive and worthwhile. In addition, Bort (1998) believes that the effectiveness of the organisation's

extranet can be best measured using different performance metrics such as the number of connected customers it can handle, time saved when it is used for processing transactions as well as the number of transactions which can be processed in a particular timeframe which has to be as short as possible.

The HealthTex business-to-business extranet called HealthTexbtob.com, which connects the VF Playwear with its customers, enables customers to get information about the organisation's products (Angeles, 2001, pp.167-168). VF Playwear is a subsidiary company of VF Corporation and a manufacturer of children clothing. VF Playwear customers are able to place orders for particular children clothes they need through the HealthTexbtob.com extranet and to search for information such as products' prices (Angeles, 2001, pp.167-168). Review of literature done for this study showed that extranets are useful and perceived in positive light either from the organisations' perspective or from the customers' perspective. According to Angeles (2001, pp.167), Forrester Research reported an estimation of \$2.7 trillion increase by 2004 from an amount of \$406 million in 2000 that could feasibly be achieved through business-to-business transactions occurring through the organisations' extranets. Owing to the fact that extranets are used in higher education institutions differently from extranets in commercial organisations, perceptions around their effectiveness in higher education institutions also differ from perceived perceptions on extranets in commercial organisations. The next discussion focuses on extranet uses and perceived effectiveness in higher education institutions.

3.3 USES AND PERCEIVED EFFECTIVENESS OF THE EXTRANET IN HIGHER EDUCATION INSTITUTIONS

From the literature review done for this study, there was little information found relating to the effectiveness of the extranet as a learning tool or a communication channel used for learning in higher education institutions. However, studies on the Internet such as the one conducted by Shea et al. (2001), of which the extranet is an important aspect, revealed that learning through the ICT/internet is as effective as learning through traditional classrooms (Verduin and Clark (1991). Comparing the outcomes of learning through the internet and on campus traditional classrooms, Verduin and Clark (1991, pp.213) found that distance learners and those attending traditional classes achieve similar learning outcomes. Shea, et al. (2001, pp.115)'s findings support Verduin and Clark (1991)'s results that learning through an internet is as effective as on campus traditional classes. Similarly, Bian's (2011, pp.2) study found that online technology mode of learning is effective as compared to traditional learning modes. According to Shea, et al. (2001, pp.115), 90% of their sample reported students as performing the same or even better than those studying on campus traditional classes. Extranets' effectiveness can be measured on two levels, namely, at an

organisational level (whether the organisation is able to achieve its objectives that led to the development of an extranet) or individual level (whether extranets are positively perceived as worthwhile).

At an individual level, in order for extranets to be considered significant and effective the expectations of the customers or clients should be met. Poljanowicz and Latosiewicz (2010, pp.160) define effectiveness of education as the degree to which educational goals set are fulfilled. Thus, on the students, their expectations in preferring a particular education delivery channels or tools, both in terms of information transmission and storage, must be met. Rye (2009, pp.17) argues that the application of Information and Communication Technology such as the internet, particularly in the remote areas of the developing country, is also a symbol of the acceptance of modernisation and an indication of progress which in turn adds a symbolic power to the current distance education.

On the organisational level, Shea, Motiwalla and Lewis (2001, pp.112) regard the administrators' views as imperative to investigate issues and problems encountered in the management of online technology like the extranet. Shea, et al. (2001) focused on issues such as media used; student profile information; administrative, technical and financial support; evaluation processes used to determine student satisfaction and outcomes; and the role of instructors. McCartan (2000, pp.193) believes that any study on the students' experiences is not complete if the views of the major stakeholders such as the University's Library, Information Service personnel and academic staff are not incorporated.

Researching the strengths and weaknesses of, generally, online learning from the experiences of the students, Song, et al. (2004, pp. 61) found that extranets help them to profoundly ponder about the content of module/course which they are doing which, in turn, helps them to comprehend the content better. This benefit was attributed to the fact that students' responses online is in writing (Song, et al., 2004, pp.61), and as compared to verbal responses, writing encourages them to scrutinise the content sent to them or any information available online about which they want to enquire. Petrides (2002, pp. 72) also found results that highlight the extent to which writing online benefits the students from their perspectives. Other benefits were shown in numerous studies focusing on experiences of students online. Flexibility and convenience were reported in the literature as other imperative extranets benefits in which students indicated that they like to learn and collaborate with others at times appropriate for them. This incorporated the ease of access to study materials and participate in study-oriented discussion by asking questions and responding to bulletin boards or through an e-mail at any time they deem convenient to them to do so.

Online technology impact the success of the students in many ways. Students' comfort with online technology, and their ability to manage time and as well as being motivated to learn impact their

success of learning online (Song, et al., 2004, pp. 65). Of these three influential factors in the success of learning online, comfort with the technology was reported the most influencing factor in comparison with the other two factors. This suggests that the design of the online technology is essential and the technology itself should be user-friendly. However, no matter how user-friendly online technology might be, the success of the students is also a result of motivation they possess. Hill (2002) posits that online dialogue should be frequently engaged in between the students and the lecturers, and amongst students themselves if education institutions are to realise that online technology can have an impact on the success of online learning.

In the study to provide Information Communication Technology-based Support to distance education students in the University of Zambia, Chifwepa's (2008, pp.52) findings revealed that communications between the students and the university's structures were encouraged and promoted through administrative support, academic support and counselling to the distance education students. In their study on how information technology affect business relationships, Leek, Turnbull and Naude (2003, pp.124) projected that the usage of new methods of communication, referring to internet, extranet and intranet, will increase as the users perceive it is useful and effective. Leek, et al. (2003, pp.124) went on to project that the increased use of new communication technologies may later replace the traditional methods of communications such as the landlines and facsimile. In contrast to this view, Emmanuel and Ngiye (2011, pp.223) argue that only when traditional communication tools and new communication technologies are used in integration, can an increased learning be realised. According to Emmanuel and Ngiye (2011, pp.223), measures to determine if the combination of these communication tools works incorporate evidence that students learn quickly, are able to demonstrate greater retention, and are being motivated to learn. The latter measure concurs with one of the reasons identified by Song, et al. (2004, pp. 65) on why online technology impacts on students' success. According to Poljanowicz and Latosiewicz (2010, pp.160), the effectiveness of delivering educational contents through online channels like the intranet, internet and extranet, helps to improve the study and makes it effective.

3.4 THE USES AND PERCEIVED EFFECTIVENESS OF EXTRANETS IN ODL INSTITUTIONS

In ODL institutions, a variety of Information and Communication Technologies (ICTs) are used as channels for communication between the institutions and their students, amongst the students themselves, and between/amongst the staff members. Without the exception of extranets, Emmanuel and Ngiye (2011, pp.223) consider the ICTs to be intrinsic in extending opportunity to learn to people from disadvantaged backgrounds who do not afford costs associated with attending traditional classes in which learning and teaching take place through face-to-face form of

communication. Emmanuel and Ngiye (2011, pp.226) continued to discuss the ICTs as a powerful mode of communication, learning and teaching and which proved successful in ‘wiping off’ social and cultural constraints. To these authors, ICTs became a means (for the disabled people, girls and women who might be culturally oppressed and the elderly who see attending physical classrooms as an inappropriate and uncomfortable learning mode for them) to learn and communicate with lecturers via the computer-mediated tools.

Students in an ODL institution can access a range of information, from teaching staff members involved in a particular registered modules or course to contents of such modules. Depending on diversity of ODL institutions, extranets can be developed to include biographic information about the students, registered modules, assignments, study materials for modules registered for, results for assignments and examination, time tables and the database of modules already passed and/or failed.

Although extranets are, for various reasons, important communication and learning mode for many students, Emmanuel and Ngiye (2011, pp.226) believe that if different ICTs are used in integration, they can result in the provision of quality education and teaching to students. Thus, although ICTs such as the extranets are useful and effective in delivery of education to geographically dispersed students, other modes of learning and communication are still of a paramount importance in serving as communication channels. Arguably, the benefits of conventional learning and communication which involve face-to-face learning situations in which both the lecturer and the students are physically present, contribute to the overall effectiveness of online learning. Kenya Institute of Education (KIE) adopted an integrated approach, in its usage of the ICTs in learning and teaching. Some of the technologies used in KIE are the satellite, the internet, intranets, DVDs, CD ROMs, radio, television, video and various mass media as well as the extranets (Emmanuel and Ngiye 2011, pp.229). Review of the related literature showed that extranets are used to serve diverse purposes and are perceived differently in terms of their effectiveness in organisations, both in higher education institutions and business enterprises.

3.5 CHAPTER SUMMARY

Chapter 3 presented a discussion on uses and perceived effectiveness of the extranet. It discussed perceptions of the extranet’s effectiveness from the commercial organisation’s and customers’, clients’ or suppliers’ perspectives. The study also discussed how extranets are used in different organisations, both commercial and non-commercial. Carrying on with the discussion on uses and perceived effectiveness of the extranet as a communication channel, the chapter went on to discuss it within the context of higher education institutions. The researcher looked at the uses and

perceived effectiveness of the extranet from the students' and academic institutions' views. Thereafter, the discussion was narrowed down to the context of open distance learning institutions. In the next chapter, the researcher focuses the discussion of the benefits of the extranets and how they are classified. At the onset of the chapter, three classifications, identified by Anandarajan, et al. (1998, pp.122), of the extranet are mentioned and explained, namely strategic, tactical or marketing and the operational benefits. Following the benefits' classifications of the extranet as a communication tool and a channel, the discussion is on some of the extranets' benefits, namely: customisation, technological convergence, interactivity, cost-effectiveness and improved information flow. Lastly, the benefits of the extranet in facilitating communication between lecturers and students were discussed.

CHAPTER 4

EXTRANETS' BENEFITS AND THEIR CLASSIFICATIONS

4.1 INTRODUCTION

Extranets are online technologies that use the internet protocols to function. Thus, many of the advantages of the internet and intranet are the same to that of the extranets. Extranets are electronic modes of communication capable of overcoming time and geographical constraints. Information exchanged between organisations that are partners can travel faster in a matter of seconds. It does not matter where they are geographically situated during the communication process. The significance of the extranet can be attributed to the benefits it offers. Anandarajan, Anadarajan and Wen, (1998, pp.122) identify three classifications of the extranets based on their benefits and applications in the organisations.

4.2 CLASSIFICATION OF THE EXTRANET'S BENEFITS

According to Anandarajan et al. (1998, pp.122), the benefits of the extranet can be categorised into three groups, namely the strategic, tactical (marketing) and operational considerations.

4.2.1 STRATEGIC BENEFITS

Anandarajan et al. (1998, pp.122) list three company's strategic extranet's benefits which incorporate swifter trading cycle, providing an opportunity to attract new customers, clients, or business partners and to retain existing potential trading partners or customers. The third strategy-based benefit of the extranet is that it enables the organisation to respond to competitive new businesses entering the marketplace (Anandarajan, et al., 1998, pp.122).

4.2.2 TACTICAL (MARKETING) BENEFITS

The use of extranet for quality services and provision of information to the potential customers help to promote good corporate identity and image of the organisation. Moreover, the successful use of extranet can help the organisation gain the competitive edge (Anandarajan 1998, pp.122). This could in turn contribute to accrued products' sales. When extranets are well applied by the host organisation, they can contribute to the positive relationship building and maintenance, from which trading partners can opt to remain loyal to the organisation.

4.2.3 OPERATIONAL BENEFITS

Operational benefits include all activities of the organisation taking place at the operational level and which expedite the execution of the services or duties insomuch that efficiency relative to costs can be realised. According to Anarandajan et al. (1998), the organisation can benefit from extranet

by spending little cost or, at all, none for papers and postage bills and for manual processing costs such as those associated with manual filing systems. As argued by Rainer and Cegielski (2009, pp.344), other benefits of extranets pertains to physical delivery of the mails to the customers as well as to perform business activities in overall.

Different from Anandarajan et al. (1998, pp.122) view of the classifications of the extranet based on their benefits, Baker (2000) argues that the opportunities that comes with having implemented the extranet in a company can be grouped into four categories, namely, enhanced communication, collaboration between business partners involved, knowledge management and process redesign. According to Baker (2000), the chief aim of all these categories is to generate superior information resources in order to attain a competitive edge (Boddendyke and Williams, 2002, pp.361).

4.3 BENEFITS OF THE EXTRANET

Owing to the fact that the extranet is the result of an integrated intranet and internet; its benefits vary depending on the purpose for which it is developed within the company. However, the benefits of the internet and the intranet are quite substantial to be discussed within the extranet framework since it does not exist independently of the intranet and the public internet.

4.3.1 CUSTOMISATION

The extranet is a powerful electronic tool which when used appropriately can enhance the quality of service offered by the organisation. The use of extranets enables the organisation to tailor information to the customers by directing such information of interest to such customers or clients. This, in turn, symbolises that the organisation cares for its customers or clients. Customisations are feasible through extranet communication channels as Proll, Retschitzegger and Wagner, (n.d., pp.1015) state it, in their study to give an overview of TIScover extranet: “extranet allows the tourism information provider to customise complexity as well as presentation of tourism information for his peculiarities”.

4.3.2 TECHNOLOGICAL CONVERGENCE

One of the reasons for wide acceptance and utilization of the online technology such as the extranets by the organisation is the technological convergence. Technological convergence refers to the ability of the technology to offer multiple functions or services. As one of the online technologies with variety of functions, extranets can deliver various forms of contents such as texts, images, audio, audio-visual, and/or video. Recorded videos for demonstration of the products or for presentation of the particular content serve as an example. Extranets are the integration of the intranet and the internet, and this reflects a technological convergence (Banerjee, 2008, pp.114).

Online technology such as the extranet can provide a platform to exchange information in an interactive manner.

4.3.3 INTERACTIVITY

Some extranets are interactive in that communication can take a form of two-way in which information can be exchanged. Information can be transmitted to the customer or feedback may also be send to clients. Extranets provide the link and enable organisations to share information and processes which in turn enhance the interactivity (Buhalis, 2007, pp.749).

4.3.4 COST-EFFECTIVENESS

According to Angeles (2001, pp.169), extranets are developed because, other than the benefits they offer, not only to the organisation developing it but also to the customers, clients and other businesses in partnerships such as the suppliers and distributors, it saves costs. Rainer and Cegielski (2009, pp.344) also assert that the extranet reduces costs for communication and administrative overhead. Discussing some of the benefits that come with having implemented the extranet, Hannon (1998) points out that the extranet can lead to the reduction of costs associated with executing business duties. In her study entitled, “creating a digital market space presence: lessons in extranet implementation”, Angeles (2001, pp.169), reports that a New Orleans communications equipment distributor called Communication 2000 used the extranet to replace mailing of product material to its 1 100 dealers, a move that resulted in huge cost saved per month. There are indeed a number of articles and books on the application and usefulness of the extranet which indicate that the extranet as a communication channel and information tool can help the organisation achieve a competitive advantage and reduce costs (Anandarajan, Anandarajan and Wen 1998, pp.120).

4.3.5 IMPROVED INFORMATION FLOW

One of the advantages of online technologies such as the extranet, (one of the web-based communication channels and information storages) is that it is quick in transmission of information about the organisation’s services and products and their prices. For instance, the United States of America’s automotive industry developed and implemented an extranet called Automatic Network Exchange (ANX), to serve, amongst the purposes for its development, speedy delivery of information to all suppliers (Anandarajan, et al., 1998, pp.120). ANX connects automobile manufacturers and their suppliers (Rainer and Cegielski 2009, pp.344). Rainer and Cegielski (2009, pp.344) see the benefits of extranets as faster information flow, faster processes, improved order entry and customer services and lower costs.

4.4 BENEFITS OF THE EXTRANET IN FACILITATING COMMUNICATION BETWEEN STUDENTS AND LECTURERS

Paulus and Phipps (2008, pp.459) contend that research on how students communicate with each other through computer-mediated communication tools has not yet been investigated thoroughly. According to Song, et al. (2004, pp.61), few studies were done on students' perspectives of the strengths and weaknesses on online learning environment. However, studies show that internet is the widely accepted online technology and commonly utilised by higher education institutions to transfer and disseminate educational materials to the students. The study conducted by Tilwalidi, et al. (2010, pp.36) confirms that students can benefit from group learning or cooperative learning occurring through online technology in which the role of the lecturer is to provide guidance. Although students learning through the internet are geographically dispersed, exchanging opinions, asking questions and answering them improve their understanding of the content of the subject (Tilwalidi et al., 2010). Kear, Williams, Seaton and Einon (2004, pp.17) assert that the use of ICT can help distance learners study without feeling secluded from the physical academic institution and its traditional face-to-face classrooms. Kear et al. (2004, pp.17) further noticed that through communication links, students can communicate with tutors, lecturers and other institutions' structures such as the libraries and administration departments.

Owing to the benefits the Information and Communication Technology offer both to the students and the higher education institutions, different education-based institutions are continuously changing how they operate and how they are manage their activities. This makes education accessible to everyone across the globe. The UK Open University is one such epitome in using the ICT to support its distance learners (Kear et al., 2004). In addition, Shea, Motiwalla and Lewis (2001, pp.112) report that over 1.4 million students were enrolled in the Internet-based education classes from 1997 to 1998 in the United States. There are several reasons why students choose to learn through online technology. Many of these are attracted by the wide range of extranets' benefits that outweigh their disadvantages. This means higher education institutions can attract students by implementing extranet to communicate with their students. These benefits differ from one to the other by the purpose for which they are designed or forms in which they take, often called extranets models.

The study done by Vlosky and Fontenot (1999) found and listed 12 benefits of extranets, both from the perspective of the end-users for whom it is targeted and the organisations for which it should improve quality of services and communicate information to the users. Vlosky and Fontenot (1999) found that extranets' benefits are as follows: they reduce costs for the customers; reduce costs for the organisations' promotion of the offerings; reduce costs of conducting the business; they are the

preferred way to sell products; lead to high sales rate of the offerings; provide access of information on the offerings and the organisation; they improve delivery; provide the competitive edge to the host organisation; lead to an increased value to the customers; and lastly, timeliness of information exchange between the host organisation and its customers or clients. Furthermore, Vlosky and Fontenot's (1999) study found that timeliness of information exchange was the leading benefits in attracting the customers and clients to use an extranet in their partnership with the organisation. Angeles (2001, pp.169) confirmed the benefit of the reduction of costs for conducting the business by revealing that a company manufacturing snow blowers and outdoor landscape equipment managed to save \$300 000 by delivering product documentation to its dealers.

4.5 CHAPTER SUMMARY

In this chapter the study discussed the benefits of the extranet, classifications of the benefit of the extranet, and benefits relating to the facilitation of communication between the students and their lecturers. It was revealed that the extranet is important in private companies as well as the higher education institutions. Its widespread adoption is the result of the benefits it has to various organisations and their stakeholders.

In the next chapter, the different types and models of extranets are discussed. With regard to the types of the extranets, the study discusses Rainer and Cegielski's (2009) three types of extranets which they identified as follows: company and its dealers, customers, or suppliers, joint venture; an industry's extranet and other business partnerships. It also discusses Reggins and Rhee's types of extranets, namely: Intronet and Supranet. The second part of this chapter deals with models of extranet, such as secured intranet access, specialised application, electronic commerce, and simple password-protected site model.

CHAPTER 5

TYPES AND MODELS OF EXTRANETS

5.1 INTRODUCTION

Extranets differ from one to the other depending on the organisation's objective to set them up. Angeles (2001, pp.169) lists some of purposes for which the extranet can be developed to serve and they include the following: supply chain management, database of knowledge, information about the products, inventory management, collaborative research and development, project participation, policy and standards maintenance, e-mail and chat, billing and account history database management.

There are distinct views on the types of the extranet. Riggins and Rhee (1998) consider that there are two types of extranets, namely, the Intronet and Supranet. Rainer and Cegielski (2009, pp.345) identified the following three major types of extranets:

5.2 Rainer and Cegielski's types of extranets

5.2.1 COMPANY AND ITS DEALERS, CUSTOMERS, OR SUPPLIERS

This type of the extranet is developed, implemented and controlled by the host organisation (Rainer and Cegielski 2009, pp.345). Access to this type of extranet is given to those customers and suppliers as well as dealers who are in partnership with the organisation. According to Rainer and Cegielski (2009, pp.345), because FedEx extranet allows customers to track the status of the delivery, it exemplifies this type of extranet, company and its dealers, customers, or suppliers. Similarly, UNISA's extranet – *myUnisa*, is also a good example of this type of extranet as it enables the students to track for their study materials, amongst other functions.

5.2.2 AN INDUSTRY'S EXTRANET

This type of the extranet is developed by different companies in the same industries who team up to create an extranet from which every company in the team benefits (Rainer and Cegielski, 2009, pp.345). Rainer and Cegielski (2009) gave an example of Automotive Network Exchange (ANX) extranet which is a team-based extranet for motor manufacturing companies.

5.2.3 JOINT VENTURE AND OTHER BUSINESS PARTNERSHIPS

According to Rainer and Cegielski (2009), a type of the extranets that a company opts to develop for business depends on the purpose of such an extranet as well as the business partners involved. In this study, the focus is on *myUnisa*, which is an extranet for communication between the different

UNISA's structures. This makes *myUnisa* a "Company and its customers" (learners) to use Rainer's and Cegielski's (2009, pp.344) words. "A Joint venture and other business partnerships" is the extranet type wherein partners in joint venture utilise the extranet for communication and collaboration (Rainer and Cegielski 2009, pp.345).

5.3 Riggins and Rhee's (1998) types of extranets

5.3.1 INTRONET

According to Riggins and Rhee (1998), the Intronet is a type of the extranet that permits the organisation's external stakeholders controlled access behind the organisation's firewall into the intranet. Through the Intronet, the organisation has control over the content placed into this type of the extranet, whilst the external stakeholders have control of the usage of the system. Since the extranet is a business-to-business communication tool and a communication channel, it can be regarded as a web-based system allowing an inter-organisation exchange of information whereby the business partners can access another organisation's information through the intranet.

The Intronet is focused on information product and is designed to foster relationship between the organisation initiating the intranet and the external potential customers or trading partners. Riggins and Rhee (1998) see the Intronet as appropriate for promoting one-to-many relationships. This could be a situation where the organisation wants to communicate messages or provide information about itself or its products to its various external stakeholders, such as its customers, clients, suppliers, distributors and other trading partners.

5.3.2 SUPRANET

Williams and Boddendyke (2002, pp.366) define the Supranet as the consortium and controlled network for inter-organisational collaboration aimed at efficiency and reduced time for marketing business-to-business team deliverables, such as new product design. For Supranet to exist there should be a group of organisation joining forces in the same industry and who have common goals to achieve. The purpose of the establishment of the Supranet is to strengthen their positions in the marketplace. Supranet is the extranet serving as a communication channel and through which relationships takes a form of many-to-many (Riggins and Rhee, 1998).

The Supranet is common to the intranet on aspect that communication and relationships must be inter-organisational. Their disparities lie on the fact that in the Intronet, inter-organisational exchange of information and the relationships is between the organisation and its customers, suppliers, distributors and other existing trading partners. In the case of the Supranet, the exchange of communication and building of relationships occur amongst the consortium members. Another

similarity between the Intranet and Supranet is that they are all serving as communication channels whereby information of another company can be accessed by another company.

5.4 MODELS OF EXTRANET

There are various extranet models in general practices which were suggested in the related literature. Angeles (2001) and Bort and Felix (1997) identified three models of extranet, namely, secured intranet access model, specialised application model, and electronic commerce.

5.4.1 SECURED INTRANET ACCESS MODEL

This model provides business partners a direct secured access to the organisation's intranet through a direct dial-up connection or the public internet (Tan, et al. 2000, pp.45). It is developed for integral business partners who are important for the survival of the organisation. These may incorporate the suppliers, customers or clients of the organisation. VF Playwear's HealthTex (a business-to-business extranet) in collaboration with MERANT (an e-business solution provider), is a good example of the secured intranet access model (Angeles, 2001, pp.170). The VF Playwear specialises with the production of clothing, producing brands such as Lee, Vanity Fair and Wrangler, amongst others (Angeles, 2001, pp.167).

5.4.2 SPECIALISED APPLICATION MODEL

In this model, business partners do not only access an organisation's intranet but are part of the intranet. The TIScover extranet, a tourism-based extranet, can best be an epitome of the specialised application model of the extranet. Different Australian tourism companies provide their information in TIScover extranet. According to Tan, et al. (2000, pp.45), a specialised application model is developed for important stakeholders who are not key partners for the survival of the organisation.

5.4.3 ELECTRONIC COMMERCE MODEL

Tan, et al. (2000, pp.45) assert that an electronic commerce model of an extranet utilises methods of an e-commerce to service a partner segment, such as related transaction processing and architecture developed for serving security purpose. This model enables customers to access information about the products and purchases them online. Tight security measures must be implemented to ensure trust between the corporate and its partners, especially when financial transactions are made.

5.4.4 SIMPLE PASSWORD-PROTECTED SITE

Bort (1998) suggests the fourth extranet model known as a simple password-protected site. Angeles (2001, pp.170) contends that when compared to other extranet models discussed earlier the simple password-protected site is the easiest to create but its security measure is weak. Although the

extranet can present numerous benefits to organisation implementing it, it can also have some drawbacks. In the next section, the risk profiling, and regulatory policies are discussed.

5.5 Risks for using extranet and how to mitigate them

Not only does the extranet offer the organisation benefits to use it for conducting business activities, but also has some drawbacks. Maier (2013, pp.1) points out that the extranet expose its internal network connections to security risks as well as performance risks. According to Diks (2001, pp.1), the extranet can pose risks to the information system of the organisation if it is not securely protected, carefully thought-out during the strategic planning of its architecture, or if it is not well monitored during the implementation. Several types of risks exist associated with the use of extranet by business partners, or an organisation's customers, clients, and suppliers. Diks (2001, pp.2) identified the following possible risks an organisation can be exposed to if it is implementing the extranet:

The provision of an access to the organisation's firewall in order to enable its customers, suppliers, clients and other business partners to access certain internal information can be risky for the organisation undertaking such action. Diks (2001) believes that the possibility for intruders to access an internal information system of the organisation escalates when the organisation try to have more openings in its firewall.

The extranet with many connections can be easily attached by computer viruses which may cause damage to the information systems or certain organisation's information.

An organisation with the extranet which provide access to the organisation proprietary information can also be attacked by unauthorised users.

Lack of appropriate and enough security measures can lead to the extranet crash which may cause negative effect of the operation of the organisation.

If business partners with access to a particular extranet have no controls over the access or do not thoroughly understand policies on security related to the extranet, the organisation can be prone to unauthorised penetration into the networks.

There is a possibility for unauthorised users to gain access into the extranet network and utilise war diallers to dial into the network if modems are utilised. Such unauthorised users can ultimately either damage the network connection or access information deemed sensitive or secret.

In order to preclude risks associated with the implementation of the extranet as a communication tool, stringent securities to thwart malicious third party from intruding into the organisation's networks are put in place. Organisations establish extranets for different purposes and as a result different security preventive measures are applied. Carayannis and Turner (2006, pp.847) posit that many organisations are now using public key infrastructure (PKI) to prevent unauthorised users

from accessing organisation's information. The PKI technology enables organisations that use web-based technologies to conduct their businesses in a secured manner thereby making it possible to verify users attempting to access networks. Carayannis and Turner (2006, pp.847) describe the PKI as a technology that serves as a panacea to security risks associated with the internet and web-based technologies (intranet and extranet) and which foster trust between users of a particular online technology who exchange information without fear of exposure to the hackers. In addition, the PKI technology enables the organisation to manage, monitor and control the exchange of encryption keys as well as to authenticate the identity of the malicious third party in order to secure an exchange of information between partners in business. According to Carayannis and Turner (2006, pp.847), the PKI is an infrastructural framework that has a software, hardware, policies and standards to secure information exchange by means of identity validation and verification using the digital certificates and encryptions. Maier (2013, pp.1) suggests that in order to mitigate an intrusion into the extranet networks by malicious third party, information system (IS) managers must first identify security and performance risks which the extranet poses before developing its architectures. In addition to this preclusion, Maier (2013, pp.6-7) postulates that in order to minimise vulnerability of the intranet, organisations must put in place the extranet architecture in which the Web server is authenticated outside the firewall and be programmed to identify, verify and validate the user through a firewall rule that permits one external resource to access the internal resource.

5.6 Regulatory policy the use of extranet

The former South African Minister of Communications, Dinah Pule postulated that the advancement in the technological environment has reformed the way people access media, such as radio, television and online media as well as the way they access information, education and entertainment (Government Gazette, 2013b, pp.7). South Africa does not have a specific policy to regulate the access and use of the extranet, but it is currently in the process to formulate an ICT policy within which an extranet forms part. This process to develop an integrated ICT policy for South Africa was launched in April 2012 (South African Government Gazette, 2013a, pp.7). Because the internet, over which the extranet operation depends, is a national communication tool that is not owned by anyone, crisis exists worldwide to regulate content transmission and access to certain information particularly information that is considered to be against the morality of the society.

However, some states in the First World countries such as the USA have managed to develop extranet-focused policies to regulate an establishment and the implementation of the extranet

networks for Business Entities and Sponsoring agencies that need to do e-business with the State of New Jersey (SNJ). Although integrated regulatory policies on information and communication technology, such as an internet, at a national/governmental and international level is still a challenge, within the organisation extranet can be regulated. For instance, the SANS institute – a United States company which is concerned with issues relating to the internet, developed a policy on extranet which can be adopted and tuned to meet the expectations of the adopting organisation (SANS Institute, 2009). Further typical examples of extranet policies developed within the organisation include the Faegre and Benson's privacy policy on the extranet which explains what the company does to secure authorised users (Faegre and Benson LLP, n.d). Faegre and Benson LLP is a law private company operating internationally and which has offices in China and USA. The China Stone Ltd company operating in Thailand serves as an epitome of an organisation that has successfully established the extranet policy known as the Extranet Access Agreement and which is controlled by the company's Privacy policy and legal information (China stone Ltd, 2012). To limit access to the site, the China Stone Ltd company provides users with passwords and digital certificates. Solarlab Green Power -a South African company which specialises with installation of solar geyser, also have the extranet policy which defines users to be regarded as authorised users and subscribers as well as what qualify them to be authorised users. Solarlab Gree Power's policy also provides restrictions to use its extranet. Maier (2013, pp.3) considers the development of the extranet policy to be a significant thing to do and which must clearly articulate how the organisation will assess its security risk for each level of network vulnerability.

5.7 Chapter summary

This chapter focused on the types and models of the extranets. It also discussed the security risks for using the extranet and how to mitigate the vulnerability of the extranet from unauthorised users. The final section of this chapter focused on the regulatory policy on the use of the extranet.

In the next chapter the study focuses on the delivery systems for distance-education materials to the students. It further looks at the traditional, online and hybrid delivery systems of educational contents. Following this, the study discusses some of the online information systems that employ extranet, the rationale for the organisations' and students' adoption of online technology as learning and teaching pedagogy. The section also discussed students' satisfaction on the extranet as a communication channel through which to study, and its problems in the learning process.

CHAPTER 6

DELIVERY SYSTEMS FOR DISTANCE-EDUCATION MATERIALS TO THE STUDENTS

6.1 INTRODUCTION

Several studies have identified different Information and Communication Technologies that are used for communications amongst the students, and between the students and their lecturers or various structures of the academic institutions. With the diffusion and widely usage of online technology, enabling information accessible to anyone anywhere and anytime through online channels such as the internet, extranet, and intranet, many universities and colleges and other educational higher education institutions are using online technology to disseminate information to their prospective students. According to Bain (2011, pp.1), higher education institutions use three different modes to deliver educational content. Bian (2011) mentioned the traditional, hybrid and the use of online technology.

6.2 TRADITIONAL DELIVERY SYSTEMS OF EDUCATIONAL CONTENT

Bain (2011, pp.1) asserts that traditional delivery mode is a face-to-face meeting between the students and the lecturers in classrooms where they come together in the same location and the same time. In distance education the use of technologies were imperative in the delivery of educational content. Prior to the advent of the internet, educational contents were delivered using telephone in which verbal communications take place. Other forms incorporated delivery of study materials through postal means of communication for assignments, feedback as well as sharing other kind of information (Chifwepa, 2008, pp.52). In distance education characterised by traditional systems of educational content delivery, should the students wanted to utilize certain books for their studies available in the library; they had to go physically to the library. Radio and televisions also played a pivotal role in delivering educational contents and other types of educational-oriented information. These traditional delivery systems of information and study materials to the students take a bit more time to deliver the information, especially the use of posts. This view was supported by the study done by Siaciwena (1988) who then described it as unsatisfactory owing to the fact that study materials delivered through posts could take approximately two weeks to reach the students and about a month for a turn around. They are not interactive and information was one-way to the students.

In contrast, new information and communication technologies are two-way and interactive. According to Nfila (n.d. pp.7), communication technologies have changed how academic libraries

refer services to the students and faculties. Students receive e-mail communication regarding overdue materials such as borrowed books, CDs and DVDs.

6.3 ONLINE DELIVERY SYSTEMS OF EDUCATIONAL CONTENT

Online technology as a mode of delivering educational contents to online students refers to the use of Web-based tools to deliver educational contents to geographically dispersed students (Bian 2011:1). Today, new media technology, also called New Information and Communication Technology, are used almost by all organisations, whether education-based or business-focused, to deliver information. New Information and Communication Technology such as the internet, CD ROMs, fax, phone, satellite broadcasts, podcasts, videoconferencing, websites, blogs, online forums, online chat rooms, e-mails and other similar applications that may be available on the internet or the academic institution's website for the purpose of information dissemination and sharing are used. Today, there are so called e-learning programmes which Nfila (n.d. pp.1-2) refers to as Information and Communication Technology used to enhance learning by delivering contents and activities through the internet, intranet, extranet, audio, video, satellite broadcast, interactive TV and CD ROM. Anderson (1999, pp.259) postulates that the internet technologies, such as an e-mail, chat lines, World Wide Web and newsgroups are modern modes which are used to deliver distance education to online students. When these new communication tools and channels are applied in the academic environment, they lead to what Emmanuel and Ngiye (2011, pp.224) call "digital/virtual/e-campus or e-varsities for learning online".

Kesley (2009) found that in the United States of America alone, there are over one million students learning online and that the trend escalated by 65% between 2002 and 2005. However, the importance of traditional delivery systems is still recognised and used in many academic institutions along with the online channels. In their article: "The effectiveness of e-learning in the context of selected medical subjects, Poljanowicz and Latosiewicz (2010, pp.159) articulates that traditional delivery systems of education are in many ways replaced or supplemented by modern interactive distant methods which are internet, intranet and extranet. They further state: "Educational content is transmitted via the internet or locally via intranet or extranet" (Poljanowicz and Latosiewicz, 2010, pp.159).

6.4 HYBRID DELIVERY SYSTEMS OF EDUCATIONAL CONTENTS

Bian's (2011:1) view of hybrid delivery systems of educational contents reflects them as the amalgamated use of traditional and online technologies to deliver educational content to students. The University of South Africa's extranet – *myUnisa* - uses this type of delivery system. UNISA's traditional delivery systems of education include, inter alia, the discussion classes, tutorial classes,

and postings of study materials (for instance, tutorial letters and study guides) in hardcopy formats through South African Post Office. The discussion classes and tutorial classes require that both lecturers and students or tutors and students gather in one location for discussion and lectures. UNISA's students can also access their study materials online within *myUnisa*, which is the extranet under investigation in this study. According to Bian (2011, pp.1), although there is an accrued use of online technology for learning worldwide, the traditional delivery system is still the most preferred mode for transmitting education in higher education institutions.

6.5 ONLINE INFORMATION SYSTEMS THAT EMPLOY EXTRANETS

Upon reviewing the related literature, there had been a discovery of the range of available online information systems that characterize some facets inherent in the extranet as a communication channel for information provision to the specific target group of the organisation, and which are used for the provision of functions carried through the use of the extranet. However, such systems were developed to be used in diverse specific demarcated environments. A few of these information systems incorporate the TIScover which is applied in tourism field and Moodle which is used in educational environments. However, though the area of applications vary, these online information systems are integral in the explanation of the use and functioning of the extranet and serve as examples of extranets in a variety of environments.

6.5.1 TISCOVER

The study done by Proll, Retschitzegger and Wagner (n.d. pp.1014) which focused on the TIScover showed that TIScover is a Tourism Information System based on extranet and Intranet technology. Proll et al. (n.d. pp.1015) describe TIScover as a Tourism Information System designed to conveniently provide information and products to the tourists and it employs the internet, intranet and extranet component which enable the tourism service provider to maintain and customise tourism database. TIScover has an online booking facility through which a customer/tourist can make bookings for visits to tourism attractions they feel interested in at any time and being anywhere where tourists have an access to this system (Proll, et al., n.d). TIScover originated in Austria to market the facilities of Tyrol region and has since been employed in other countries such as Germany and continent like Asia (Proll et al., n.d., pp.1014).

6.5.2 MOODLE

Moodle is a Course Management System (CMS) that provide lecturers and students access to information regarding a particular course students are registered for (Cole and Foster, 2008). Just like the extranet, Moodle allows students and lecturers to have online discussions, chats and share information (Cole and Foster, 2008, pp.1-2).

6.6 REASONS FOR THE ORGANISATIONS' ADOPTION OF ONLINE TECHNOLOGY AS A TEACHING MODE

There are various studies which examined the degree to which extranets have been adopted and how they are used (Anandarajan, Anandarajan and Wen, 1998, pp.120). The advent of online technology presents many opportunities, not only to the individual persons but also to the organisations opting to use them for the variety of reasons. There are many motives behind the adoption of online technology. Coates, James and Baldwin (2000) believe that organisations go online because they strive for quality provision of the services, products and “assurance procedures”. Online technology, more especially the internet, intranet and extranet, are thought of as fundamental for the operations of the organisations, and for the delivery of course material. Online technology also facilitates the interactions between the academic institution and the online students (Emmanuel and Ngiye, 2011, pp.225).

Organisations developing extranets believe that these tools will enhance access to the organisation's information as well as to enhance knowledge management (Coates, et al., 2004). In the educational environment, extranets are developed to entice students to look for information on their studies and to communicate with the academic institution as well as to improve the levels at which services are provided to them (Savarese, 2004). Discussing further on the reasons why academic institutions develop extranets, Savarese (2004) asserts that organisations seek to create and maintain good relations with the students and to customise information. Concurring with Savarese's view, Brown and Cooke (2005, pp.2) assert that both commercial and higher education institutions had widely accepted online technology such as the extranet because it provides a means for organisational change in terms of acquiring, creating and distributing information and knowledge. According to Brown and Cooke (2005), there is concomitant escalation on the number of organisations that are beginning to teach and support students online through the development and implementation of learning management systems (LMS), particularly in higher education institutions. With the competition in the education marketplace continuing to escalate to a higher level, higher education institutions are striving to achieve a positive share of the student enrolments through identifying and meeting the students' expectations by attuning services to the students' needs. Students expect educational information to be delivered online and accessed any time they need it (Song, Singleton, Hill, Koh, 2004, pp.59). These demands made by the students compel the education institutions to use online technology to position themselves as the student-centred institutions, which do not only impart educational information, but also care for them.

From the organisations' perspective, as articulated in Brown and Cooke (2005), organisations consider extranets as playing significant roles in managing assessment of courses, and recording

results of the students. Organisations may also want to operate with a low workforce because delivery of study materials may, for example, be delivered online and may reduce operational costs (Angeles, 2001, pp.169) that may have been spent on, perhaps, physical transportations. As a communication channel, extranets are utilised to communicate information to staff, students and external agencies. Brown and Cooke's (2005, pp.5) study found that an extranet may also be aimed at improving the staff productivity as it enables them to keep track of the students' performance and to monitor progress (2005, pp.3) as well as to gather student information, analyse and communicate it to the students.

6.7 Reasons for the students' adoption of online technology as a learning mode

According to Coates, et al. (2000), irrespective of the perspective from which organisations opt to make use of the online technology for service provision, their study indicated that there is a wide adoption of the online technology by the students in Australian universities. Literature review revealed that there are several reasons for students to choose learning through the use of online technology. To some ICT scholars studying on extranets, there is a relationship between the choice students make and their ages. Some students choose to study online because they do not have time to attend traditional classes, either because they are employed (McCartan, 2000, pp.192) or that they committed to something else like running their businesses. Others opt for online learning because they are immersed into ICTs that attending classes become important when they personally want to meet their lecturers or teachers.

A huge number of studies on online technology revealed that online technology is a fast delivery system through which educational contents are stored and capable of being delivered to the students in few seconds, irrespective of their geographical location. Students want to access study materials and other information on their studies whenever they need them. They also want to receive and send information to wherever structure of their education institutions which incorporate the libraries, lecturers, registration department and many other structures. Web-based learning give reduction in costs such as transport fares to and from physical classes. These have been articulated many times in the literature as the strengths of the online technology, particularly the internet and the extranet.

6.7.1 STUDENT SATISFACTION

There was very little related literature that focuses on students' communication, through the extranets as a communication channel, with higher education institutions in which they are studying. The use of extranets as a communication channel for the exchange of information between students and their academic institutions' departments is not common. As a result, this study also incorporated the employees' perceived perceptions or views regarding organisation communication satisfaction

as it exist in the literature. Upon reviewing the literature to lay down the basis of students' satisfaction on the use of extranet as an electronic communication channel, it was discovered that the concept 'satisfaction' is a very elusive term and difficult to define. Sinclair (Sa, pp.3) also explored the same results and deduced that many studies on the satisfaction of the students did not define satisfaction. According to Sinclair (Sa, pp.3), student satisfaction can be defined as an "outcome of learning process and a requirement for successful learning, improved academic performance and the continued learning".

From the literature review, it was found that students are satisfied with using ICT/internet to study. For instance, in their exploratory study of internet-based distance education programmes to investigate the effectiveness of distance education model on student satisfaction, Motiwalla and Tello (2001) found that students were generally satisfied with distance education. These results are attributed to the fact that students are able to access study materials on the internet anytime and anywhere.

The study conducted by Akkirman and Harris (2004, pp.397) to compare levels of satisfaction between people working in virtual workplace and traditional workplace revealed that virtual office workers are more satisfied with organisation communication than those working in traditional workplace.

6.8 Problems posed by extranets in students' learning process

Even though online learning presents numerous advantages to commercial organisations, education institutions, and the students, there are noted problems in the related literature from studies focused on the same phenomena which come with learning through extranets or online as a virtual environment, serving as communication channels and information sources. Song, et al. (2004, pp.62) found that students were unhappy of faculty-student, lecturer-lecturer and student-student isolations. In addition to this shortcoming of online learning, students reflected in Vonderwell's (2003) study that lecturers take a great amount of time to respond to the students on specific questions on particular subjects or assignments.

Emmanuel and Ngiye (2011, pp.230) found that online technology presents a challenge to the students because it requires basic computer literacy skills. Murphy and Cifuentes's (2001, pp.285) study on using Web tools, collaborating and learning online, supports Emmanuel and Ngiye's (2011, pp.230) view of lack of computer skills. Murphy and Cifuentes state that Web-based courses cause challenges for students who do not know how to use Web tools and/or who do not know how to collaborate in online groups. Although Murphy and Cifuentes (2001) did not become specific as to what Web tools are problematic for the students with little or no skills to use them, the

demarcated area to look at these tools ranges from synchronous to asynchronous mode of communication. These Web tools include e-mail, posting on bulletin board, the use of blogs, and participation on online forums.

In circumstances where students are geographically isolated from their lecturers, Tilwaldi, et al. (2010, pp.36) assert that their concentration in learning tends to waver. This suggests that learning through online technology, such as the extranet results in low students' concentration on the educational content.

Boddendyke and Williams (2002, pp.361-362) reported that the extranet increases the possibility of hacking attack which demands that companies create and implement security measures to protect their information and systems.

6.9 CHAPTER SUMMARY

In this chapter, the different delivery systems for distance education materials were discussed. Firstly, the chapter discussed the traditional systems, online and hybrid delivery systems of educational contents. Secondly, the chapter dealt with certain online systems that make use of or apply the technological facets of the extranet tool. Thirdly, the chapter highlighted about motives and the variety of reasons that eventually lead to the adoption of the extranet technology by different organisations, the academic institutions and their students. Then, the final section of the chapter discussed the satisfaction of the students in using the extranet as a communication tool and a channel as well as the problems emanating from this technological landscape.

CHAPTER 7

COMMUNICATION

7.1 INTRODUCTION

Communication, both internal and external is vital for the functioning and the survival of the corporate enterprise. Communication exists in every institution. Within the institution, communication (referred to as an internal communication) assists in the functioning of the institution in various ways, where employees share knowledge and expertise, talks for production purposes, meetings of the employees with the management, and dissemination of the information about the organisation. Communication outside the organisation, also called external communication, contributes to the survival of the organisation through, amongst other reasons, building a good image of the organisation, an organisational identity, and good relationship with the stakeholders; market products or services to increase the sales of the products or influences the use of the services by the potential clients; and to keep the clients or customers abreast of the advancements, procedures and new processes taking place in the organisation.

In the academic environments such as higher education institutions, communication is important between students and lecturers, amongst students themselves. This can be facilitated through discussion forums established for students' participation on a particular course they are registered for. Communication can also take place amongst lecturers themselves (for sharing expertise, for instance), students and the librarian (for matters relating study materials available in the academic library), students and administrators (for matters relating to registration, enquiries on study materials and other administrative issues).

In this chapter it is quite essential to define the concept of communication, both from the academic and practitioner's perspective. Then, the discussion continued by explaining communication models and theories, the role of communication in the organisation, domains of communication (referred to in this study as communication fields), modes of communication delivery within and outside the organisation, and online communication and its effectiveness.

7.2 DEFINITION OF COMMUNICATION

There is no single definition to the concept of 'communication'. As Kalla (2005, pp.302) puts it: "There are various interpretations of the term communication(s)". For example, Verwey (2008, pp.57) defines communication as a process whereby two or more people share meanings deliberately. Barker and Angelopulo (2006, pp.74) and (Miller, 2003, pp.6-7) describe communication as a transactional and symbolic process in which messages are exchanged and

interpreted with the aim of establishing mutual understanding between parties. Communication is an elusive and difficult term to define. As (Verwey, 2008, pp.58) states: “no consensus has been reached in the way communication should be defined”. Review of the related literature revealed that conceptualizations of communication are different amongst communication scholars. Some of the historical definitions evident in the literature and which serve as distinct perspectives by various communication scholars towards communication are as follows:

Weaver (1949) viewed communication as all procedures out of which one mind can affect that of the other person.

Miller (1951) sees communication as the transfer of information from one place to the other.

Hovland, Janis and Kelly's (1953) defined communication as a process in which an individual transmits stimuli to change the behaviour of other individuals.

Communication is the transmission of ideas, skills, emotions, information, messages, and so on, by using symbols such as spoken and written words, pictures, figures, graphs, and etcetera (Berelson and Steiner, 1964).

Gerbner (1966) considers communication to be a social interaction through symbols and message systems.

From an interactive model, Barker and Angelopulo (2006) define communication as the process by which meanings are shared and associations are built up in the formation of groups and cultures.

At its simplest definition, communication is described as the social interaction through messages (Tourish and Hargie, 2004).

From a transmission model, Craig (1989, pp.125) defines communication as the process in which messages are sent and received or information is transferred from one mind to another.

Koekemoer (2004, pp.46) defines communication channel as a formal or less formal route or direction in which the message travels.

A relevant definition of communication is the results of various factors which may include the context within which it is viewed, various fields of communication, the discipline from which the scholar comes, and the purpose of the undertaken research, to mention a few. Littlejohn (1992, pp.8) believe that the definition of a particular concept such as communication should be assessed in terms of how well it will help the scholar to accomplish the goal of the research.

Within the context of the organisation, communication is referred to as ‘organisational communication’. According to Rensburg and Cant (2003, pp.114), organisational communication refers to a process wherein people create and exchange messages, and interpret and negotiate meanings in order to realise mutual understanding towards common purposes and goals. It is vital

for the functioning and the survival of the organisation. From the public relations perspective, if used effectively, communication can help the organisation build and maintain the relationship with its stakeholders, both the individual and organisations interested in the services and/or products of the organisation communicating (Rensburg and Cant, 2003, pp.115). From the marketing perspective, communication (often called marketing communication) contributes to the survival of the organisation by enabling the organisation to realise marketing objectives such as a need to experience increased sales of the products. Although the distinct definitions of communication exist in the literature, the common element in the definitions is that communication is a process. Scholars writing on communication also hold differing views in explaining the communication process. As such there are many communication models and theories that serve to provide the communication process and are discussed in details next.

7.3 MODELS OF COMMUNICATION PROCESS

There are many communication models that explain the process of communication between or among people striving to reach a mutual understanding through exchanging messages. These communication models differ in the aspects they emphasise. While some of them, such as the mechanistic model of communication process have its emphasis on identification of components of the communication encounter, others such as the interactional and transactional models of communication are more holistic in their nature and tend to view communication as a social phenomenon which cannot be assessed as the sum of the constituent parts.

In the section to follow, the mechanistic view to communication process and the interactional models, also called an interactive model, are discussed. Because of the limited scope of this study, this chapter is vital for the purpose of contextualisation of the study and does not dwell much on aspects falling outside its scope. As a result, while it is hugely believed in this study that all communication models are of equal significance in explaining communication process, this study discussed only the mechanistic and interactive model of communication process.

7.3.1 A MECHANISTIC MODEL

The mechanistic model of communication view communication encounter as constituted of parts that altogether make up a communication encounter. Barker and Angelopulo (2006) identify the source, signal and destination as parts of the communication encounter. Barker and Angelopulo (2006) argue that these parts can, apart from being identified, be explained, measured and predicted. During communication, the communicator is the source, the communication channel is the signal, and the destination refers to the person receiving the message. This model implies that the communication process is a one-way process from the communicator to the recipient.

The proponents of a mechanistic view to communication process define communication as the transfer of signal from the source to the desired destiny (Angelopulo and Schoonraad, 2006, pp.6). In an organisation, the instruction to do a particular task serves as an epitome to a mechanistic model. The direction of communication is usually a top-down process wherein an organisation's top staff member gives instructions or orders to the subordinates at a lower hierarchical level of authority. The recipient of such order-based messages does not have an opportunity to send feedback to negotiate meanings. According to Barker and Angelopulo (2006), such one-way communications are task-oriented and the communicator and the recipient do not hold communication for socialisation. The mechanistic model was largely influenced by the information theory. Provision for social communication is made by the interactive model which is explained in the next section.

7.3.2 AN INTERACTIVE MODEL

Unlike the mechanistic view which focuses on the data transfer, the interactive is focused on sharing of meanings between parties involved in the communication. In the interactive model, both participants exchange roles. They all become communicators and recipients as the process of exchanging messages continue in order to reach agreement (Barker and Angelopulo 2006). In this model, the communicator encodes the message from the thoughts into a form such as spoken or written words which will be received and decoded by the recipient. Once the recipient has decoded the message, he or she will encode and transmit it to the initiator of the communication. The proponents of an interactive model view communication as a two-way process in which messages may go beyond a mere instruction-giving to sharing of meaning inherent in the messages exchanged. In terms of this model, communication is defined as the process by which meanings are shared and associations are built up in the formation of groups and cultures (Barker and Angelopulo, 2006). With the organisational context, an interactive model makes provision for different directions of communication which incorporate downward, upward, lateral and grapevine communications. The interactive model of communication has been influenced by distinct theories such as symbolic interactionism, information, transactional theory of perception as well as the system theory (Barker and Angelopulo, 2006).

7.8 COMMUNICATION THEORIES

Numerous studies on communication have taken communication theories into account to help provide seamless and explicit explanation of communication phenomena. According to Miller (2005:1), there are various worldviews to look at communication, leading to different filters and eventually to different ways to understand the communication process and communication theories.

Communication theories such as the system, information and contingency theory have been applied over the decade to inform communication research. In this section, the researcher discusses only the system and contingency theories.

7.8.1 SYSTEM THEORY

The system theory holds that the organisation consists of parts that are interdependent and which interact with each other for the survival of the organisation (Barker and Angelopulo 2006:118). Organisations communicate with its internal and external environments in order to survive. Internal environments are understood in this study as the stakeholders available within the organisation. These stakeholders incorporate employees, the management and supervisors of the organisation who have the direct influence over the operation of the organisation. Contrary to the internal stakeholders, the external environments are those stakeholders such as the customers, suppliers, clients and other trading partners.

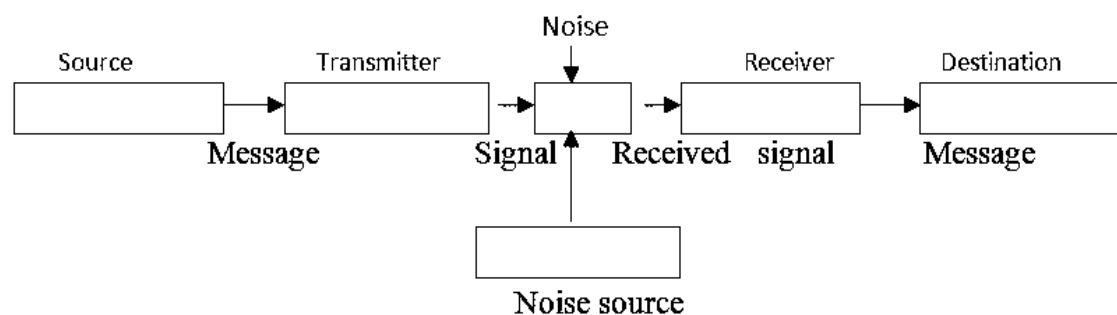
The system theory holds the view that organisation parts such as the functional, operational, business, corporate units must continuously communicate for the consistence of message or information delivered to the stakeholders. According Verwey (2008, pp.57), the system theory believes that communication is a two-way process whereby the aim is to negotiate meanings between two or more people. In a tight marketplace in which completion is high, organisations need to strive to survive the competition through using the variety of communication strategies and communication channels. Environmental changes impact on communication with stakeholders. According to Verwey (2003:2), communication managers must know the local and global trends in order to develop strategic communication management within the organisation.

The development of the strategic communication management is a response to the internal environment to ensure effective internal communication. Commercial organisations do not survive in the absence of customers or clients who purchase the company products or use its services. As such commercial organisations continue to plan a communication message and deliver it to the target audience through selected channels of communication such as the newspapers, radio, television, and electronic media. The advent of online technology such as the internet, intranet and extranet have come with many advantages to the organisations. In order to communicate successfully, organisations use the variety of channels to realise the communication objectives. In non-commercial organisations such as the government and universities, the intranet and extranet are developed to serve as the sources of information and communication channels for the delivery of study material and other education-focused information. In doing so, these organisations attempt to communicate with their stakeholders including the employees and the students who study online.

As for communication encounter, the system theory explains communication process in a holistic manner, viewing it as comprising components that together constitute a communication process. Verwey (2008, pp.57) identifies communication components such as the source, channels, receivers, message, medium, feedback, and the physical and the cultural environment. In a communication process, the system theory holds that there is an interaction amongst communication components. In terms of this theory, each component is a key contributor to the communication. For instance, communication is not possible without the source or the receiver. In a business environment, the organisation can decide to market the product through an advertisement which needs to deliver a particular message through channel like the billboard. The message may be on the quality and functioning of the product to persuade customers to purchase the product. In this kind of marketing, the ultimate goal is to realise increased sales of the products. The significance of this advertisement, from the source (communication planner) to the receivers (target group), is to reflect the interconnectedness of the communication components and their interdependency in leading to communication from the system approach's perspective.

7.8.2 INFORMATION THEORY

Information theory was introduced by Shannon and Weaver and is viewed as a measure of the entropy – a measure to determine how much information was lost during the transmission of the information sent (Barker and Angelopulo, 2006). In the information theory, components of communication process are the source, channel, message and the receiver (Cover and Thomas, 2006). The source produces a message that has to be transmitted to the receiver through a particular channel. After receiving the message, the receiver interprets the message. The information theory was developed by Shannon and Weaver (1949) and was intended to be applied in mathematics and engineering, focusing on the data transmitted (Barker and Angelopulo, 2006). The idea is to determine if information sent is lost or if intended meaning is distorted during transmission. According to Cover and Thomas (2006), the bandwidth of the channel affects the communication. The bandwidth determines how much information should be sent at a time.



Reference: Brown (2003, pp.127)

Figure 1: Shannon-Weaver's Model of Communication

Shannon-Weaver model of communication is also known the mathematical theory or information theory of communication (Barker and Angelopulo, 2013; Brown 2003, pp.127). In terms of the information theory, communication is one-way from the communicator to the receiver through a channel. Information theory was developed in physics, engineering and mathematics and is used to explain the distinct individual elements of the communication process (Van der Walt, 2013, pp.132). Individual elements in the communication process are for example, the sender/communicator (message source), channel, message and the recipient of the message.

7.9 CHAPTER SUMMARY

Communication as a concept was discussed in this chapter, as an elusive non-universal concept with different interpretations. The discussion showed that the survival of the organisation is hugely dependent upon effective communication. Discussing the role of communication in the organisation, it was also evident that communication is practiced in different ways – termed fields of communication in this study which in turn serve to indicate diverse roles communication play in the organisation. Moreover, the coming of the online technology, particularly the internet, intranet and extranet altered how communication is described and practiced as well as how information is disseminated to the organisation's internal and external stakeholders.

It is important to deduce that organisations need to know the importance of communication for the realisation of its goals. It should also be noted that whilst ineffective communication can become detrimental to the survival of the organisation, organisations need to strive to communicate effectively with their stakeholders for various purposes which includes, depending on the organisation's objectives, a need to realise increased sales, attracting new customers and clients, create and manage a good identity and image of the corporate, create and maintain a good relationship with stakeholders and many other reasons.

CHAPTER 8

CONCEPTUAL MODEL FOR IMPLEMENTING AN EDUCATIONAL INTRANET

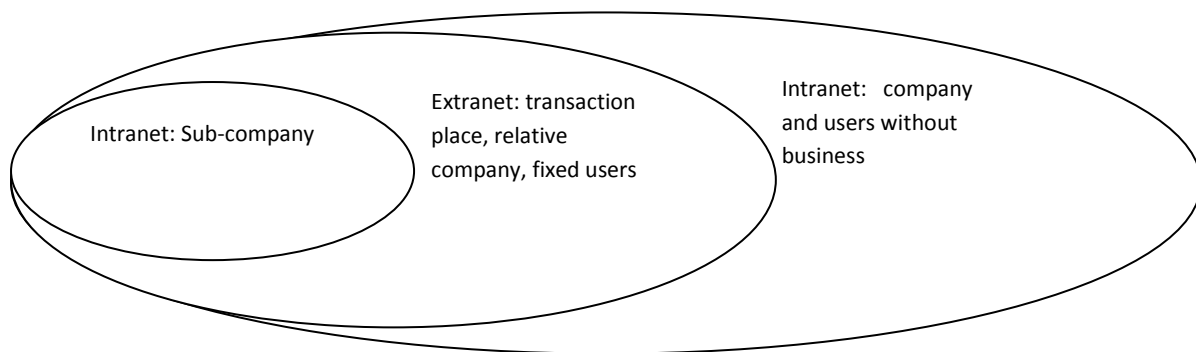
8.1 INTRODUCTION

The extranet in higher education institution opens new frontiers redefining a communication approach in teaching and learning. This chapter provides a conceptual framework of this study to help understand and conceptualise the purpose of the research as well as to widen the understanding of the research problem articulated in this study. It uses the media theory – uses and gratifications theory- to explain the use and the effectiveness of the extranet in higher education institution, focusing on what students and staff members use the extranet for, and perceived effects in them. The gratification element of this theory is used to help explain the kind of affections that UNISA students and the staff members derive from using the extranet as a new media technology for exchanging communications in teaching and learning.

8.2 EXTRANET IN HIGHER EDUCATION INSTITUTION

Over the past few decades, the adoption and the use of an extranet as a communication channel in higher education has been escalating. The extranet was initially developed as a source of organisational information to be accessed by organisations and individual people working as partners. These include the suppliers and clients of the organisation. Hudgins and Chang (n.d., pp.1) assert that an extranet extends an organisation's information across geographical frontiers. It exists in the public internet and it is an expansion of the internet meant to be used by the micro-environments of the organisation concerned. Extranet connects together different suppliers, distributors, clients/customers and other supporting organisations, and promotes exchange of knowledge and information amongst them (Zongyan and Rui, n.d., pp.2). Owing to the fact that both partners in a business found the extranet useful in the provision of services and the selling of company's products, several academic institutions soon followed the 'footsteps' and began to develop and apply the extranet to help communicate with their suppliers and students. Until recently, extranet is still dominantly used by commercial organisations as opposed to academic institutions. In response to the challenges provided by the swift advancement of the technological environment and people's demand to study and improve the educational level at a distance, HEIs had to consider the use of distinct technologies such the extranet, internet and the public internet as technology-based pedagogy for teaching and learning. UNISA is one of the HEIs which had adopted the use of extranet to enhance communication with students. It had therefore developed

myUnisa extranet which became effective from the year 2006. Since then, *myUnisa* had been used by both the students and the various university structures. Extranet is described in many different ways. Zongyan and Rui (n.d., pp.1) define an extranet as a transaction place, cooperative place, relative enterprises and a selling shop which exists between the intranet and the public internet.



Reference: Zongyan and Rui (n.d., pp.1)

Figure 2: Conceptual Analysis of Extranet

It is clear that an extranet is partially private and public. It gives access to certain information of the organisation to specific people and organisations that are outside the organisations. It is considered private because it is owned, controlled and maintained by the organisation for which it was developed. Its users are fixed and access to certain information is normally gained using a password.

8.3 EFFECTIVENESS OF AN EXTRANET

Technology has redefined and altered the way an organisation operates and communicates with their stakeholders. Extranet, as one of these technologies, is used to gain a competitive advantage because it can lead to efficiency and effectiveness in the organisation (Maier 2013, pp.3; Spralls, Hunt and Wilcox 2011, pp.59). Spralls, et al. (2011) argue that the ability of the extranet to help realise what it is designed for leads to three relationship capital resources, namely, trust, information exchange and the quality of communication. According to Spralls et al. (2011) such relationship capital resources will in turn lead to responsiveness, efficiency, innovativeness, financial performance and effectiveness. The latter is therefore the focus of this study. Effectiveness of the extranet is degree to which it becomes able to achieve the stated goals. This study will examine the extent to which *myUnisa* as an extranet is able to achieve its goals.

8.4 USES AND GRATIFICATIONS THEORY

The theory of uses and gratifications had been widely recognised and used since from the early 1950s and later 1960s and was basically rooted from the need to address the effects media have on people after they have been exposed to the mass media campaigns (Leung and Wei, 2000, pp.4). According to Cummings (2008, pp.2-4), uses and gratifications theory was first coined by Jay Blumler and Elihu Katz in 1974 and examines why people choose certain media and disregards others.

The uses and gratifications theory is widely recognised in the field of communication, particularly in media studies. Several studies proved that the uses and gratifications theory is crucial in explaining how people use their different media and how such media meet their expectations and needs. Research done by Raacke and Bonds-Raacke (2008, pp.171) on the application of uses and gratification theory to explore friend-networking sites about MySpace and Facebook found that 90% of the respondents uses MySpace and Facebook to keep in touch with their old friends. It also found that 13.9% of the respondents use MySpace and Facebook for academic-focused communications.

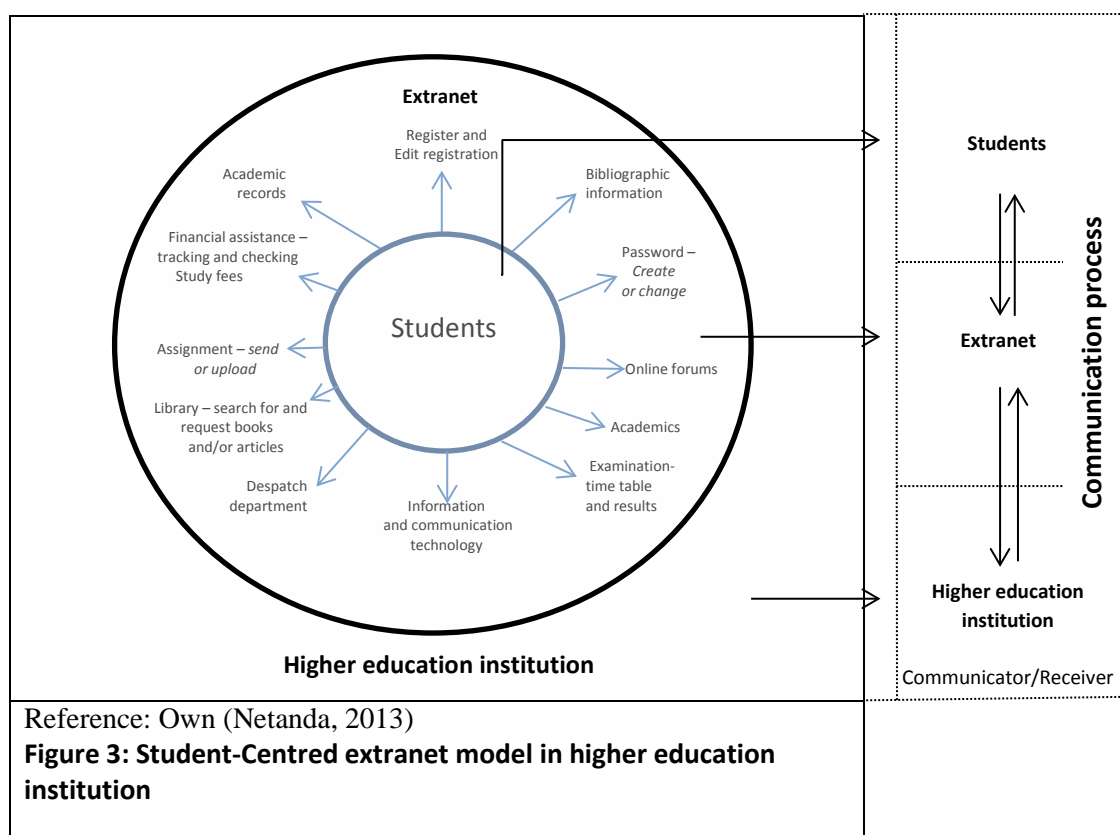
The review of the literature revealed that the uses and gratifications theory have been applied by media and communication scholars to both the traditional media (such as newspapers, magazines, televisions and radios) and to the modern media technologies (such as the internet and its applications like intranet and extranet) (Shao, 2009, pp.9).

8.5 APPLICATION OF USES AND GRATIFICATIONS THEORY IN EXTRANET

Extranet is a communication channel in which information between partners can be accessed and exchanged. It is an epitome of the new media technologies or the so-called information communication technologies, and can therefore be regarded as a media. It is therefore appropriate, though borrowed from media studies, to use it to explain how *myUnisa* extranet is used and experienced by the students and the different UNISA structures as a communication channel. UNISA uses different delivery modes of the study materials and transmission of certain information to its students. It delivers books in electronic and hard copy formats as well as other information in the form of podcast, DVDs and CDs. This study examines *myUnisa* extranet as a communication channel, looking at how students and staff members use it and the degree to which they perceive it effective for learning and teaching purposes.

Since its inception, uses and gratifications (U&G) theory had been used to explain why people use a particular media. People use different media to meet certain personal interests. It is therefore important to discuss some general reasons for the application of this theory in the use of internet

and its applications (extranet and intranet). Papacharissi and Rubin (2000), proposed an interpersonal communication gratification. This implies that intranet, extranet and the public internet works like chatrooms, e-mail and even discussion forums. In addition to this gratifications, Flanagin and Metzger (2001, pp. 162-173) identified other dimensions of gratifications as the need to solve problems, gain status, build and maintain relationship, acquire personal insight into something and to persuade others. Extranet had been widely used to sell products and persuade customers to buy or use the organisation's services. In HEIs, extranet is used to for communications with the students and subsequently becomes a channel to build and maintain a good relationship with the lecturers.



The study analysed the UNISA's extranet known as *myUnisa*. The seven key components of *myUnisa* extranet which were analysed in this study were edit registration, examination results, examination time table, financial tracking, bibliographic details, study fees quotations, academic records and change password. This proposed model in figure 14 postulates that in order to successfully implement an educational extranet in higher education institutions, consideration should be made during the development stage of the extranet to include aspects or hyperlinks shown in the extranet sphere of the model.

There are three elements of the communication process as postulated by the module in figure 14. The first element (the outer sphere) is the higher education institutions as a participant in the communication process. The second element (the middle sphere) in the model is the channel or a communication tool through which information is shared between the students and the higher education institution. The third element (the York or most inner sphere) is the student. The model suggests that HEIs's extranets are to be effective if communication between the institutions and their students is two-way. Both the HEIs and their students must exchange roles in the communication process. Each of them can either fulfil a role of a communicator or a receiver or both during a particular time in the process of teaching and learning. The model further suggests that it must be student-centred, implying that both the development and the implementation of extranet in HEIs must be executed with students in mind to ensure the betterment in learning. This own depicted extranet model believes that students should have a range of hyperlinks to access information significant to know when learning in HEIs. This conforms well to the core stance of the uses and gratification (U&G) theory which informed this study, that people use a particular media for different purposes, for serving different interests and for meeting different expectations. In this study, the results also revealed the relevance of the U&G theory when the larger group of students responded that their usage of the UNISA's extranet depends on what they want (refer to figure 7 – Pie Chart showing the frequency of use of *myUnisa*).

The proposed student-centred extranet model in HEIs can be classified as what Riggins and Rhee (1998) refer to as an Intronet because it permits the organisation's external stakeholders to have a controlled access behind the organisation's firewall into the intranet. Similarly, this model holds the view that students have to be granted permission to access information related to what they are learning or information applicable to them as students. Furthermore, this model has a trait of a type of extranet which Rainer and Cegielski (2009, pp.345) named a 'company and its dealers, customers, or suppliers'. Organisations implementing a 'company and its dealers, customers, or suppliers' must provide dealers, customers and suppliers with an access to the organisation's information. The uniqueness of the student-centred extranet model in terms of its characteristics, nature and applicability in higher education institution suggests that in addition to the types of extranet identified by Rainer and Cegielski (2009) and Riggins and Rhee (1998), a new type is required to reflect the context of its application, its purpose and for whom they are implemented. This type of extranet (figure 14) is the 'higher education institution (HEI)-student extranet'. It is specifically for higher education context, and it is designed for the communication with the students.

8.6 CHAPTER SUMMARY

This chapter discussed the conceptual framework of this study and the uses and gratifications theory applied to explain the phenomenon investigated- *effectiveness of the extranet in higher education institutions*. It provided a contextual analysis of the extranet in HEIs and the model (conceptual analysis of the extranet) to explain the functionality of the extranet and what it is. The chapter was concluded by the discussion about the appropriateness and applicability of the uses and gratifications theory into this study. The last section provided the proposed model referred to as the student-centred extranet in higher education institution and all the elements that constitute the model were explained. It is believed that the proper implementation of this model in higher education institution will result in an effective student-institution communication.

CHAPTER 9

METHODOLOGY AND RESEARCH DESIGN

9.1 INTRODUCTION

A researcher's methodology determines the way in which research methods will be used and it is derived from the assumptions of the researcher about the phenomenon under investigation (Hesse-Biber, 2010, pp.456). In her attempt to distinguish a methodology and a method, Hesse-Biber describes methods as tools and a methodology as the design which serves to inform the researcher how such methods will be used. In this chapter the focus is on the research methodology and the design followed in this study.

The quantitative phase of this research was conducted between 25 May 2011 and 30 September 2012. In this study, research methods are aspects of the research, such as qualitative and quantitative; positivist and interpretive paradigms; as well as a survey (self-administered questionnaire) and interviews. In this study, research methodology refers to designing the study in two phases in which the first phase is quantitative, meaning it is positivist-oriented and collects data using survey whilst the second phase becomes qualitative, meaning it is interpretive-oriented and collects data using interviews. As part of the research design to be followed in this study, two types of interviews were conducted, with the first one being telephonic interviews with the students and the second interviews was conducted with the relevant and key informants who are the staff members of the University of South Africa.

The research methodology followed in this study was mixed-methods. Mixed-methods is a research that has a purpose of providing a better understanding of the phenomenon under investigation by emphasizing integration of quantitative and qualitative methods which include collecting and analysing data using quantitative and qualitative methods (Ivankova, Creswell and Stick, 2006, pp.3).

Various authors on mixed-methods use different concepts to refer to mixed-methods. For example, Johnson, et al. (2007, pp.112-133) call it mix research, Thomas (2003) prefers to call it a blended research, and Johnson and Onwuegbuzie (2004) refer to mixed-methods as an integrative research. However, all these different concepts emphasise mixing of different quantitative and qualitative techniques and methodologies in research (Bazeley, 2009, pp.203 and Netanda, 2012). There is still no consensus amongst the community of practice regarding the definition of mixed methods research (Truscott, Swars, Zhao, Dooley, Williams, Hart, Matthews, Swars, Smith, Thornton-Reid, 2009, pp.318). For the purpose of this study, mixed methods is understood from Johnson,

Onwuegbuzie and Turner's (2007, pp.123) perspective as they describe it as a research in which an investigator or group of investigators combine methods of quantitative and qualitative research approaches for the purpose of collaboration, breadth and depth of understanding the problem under investigation within a single study.

9.2 RESEARCH METHODS

This research drew from both quantitative and qualitative approaches and methods. For example, the self-administered questionnaire consisted of quantitative (close-ended) and qualitative (open-ended) questions even though quantitative questions were predominately used over qualitative ones. The theory from the literature review had been from quantitative and qualitative research to reflect multiple epistemological stances towards studying the same or related phenomenon. Inferences were drawn from the quantitative and qualitative findings derived from phase 1 and 2 with phase 1 being quantitative-based and phase 2 being qualitative-based. The survey (self-administered questionnaire) and an interviews were used to gather data. Two types of the interviews were used to generate data. Firstly, telephonic interviews were conducted with the students selected to participate in the study. Secondly, personal interviews were conducted with selected UNISA staff members such as the librarian, Despatch administration officer, Information and Communication Technology staff member, a member from the Registration department, a member from the Examination department, and a lecturer. Interviews with the relevant staff members were expected to reveal the understanding of them about the impact or effectiveness *myUnisa* has on students as a communication medium and an electronic tool as well as a technological mode of learning.

The reason for the integrated use of these traditional contrasting methodological paradigms (Quantitative and a qualitative) in this study is to have the results of one methodology complementing that of the other; to provide different worldviews to study the perceived impact of *myUnisa* as an electronic communication medium on students' mode of learning; and to provide the basis for the development of the second phase. Hessen Bibber (2010, pp.457) refers to such rationale behind the implementation of mixed methods as "triangulation" in which the aim of the mixed-methods design is to validate the quantitative statistical findings with qualitative findings.

9.3 RESEARCH DESIGN (STRATEGIC FRAMEWORK)

This study employed mixed-methods sequential explanatory research design. Mixed-methods sequential explanatory research design is one of the six types of mixed-methods (see Creswell, Plano Clark, Gutmann and Hanson, 2003) which has been considered to be a third methodological movement (Truscott, et al. 2003, pp.317 & Johnson, Onwuegbuzie and Turner, 2007, pp.113, 117).

It is described as the research process in which quantitative data is collected and analysed prior to collecting and analysing qualitative data within a single study (Ivankova, et al. 2006, pp.3-4).

The study went through two phases. The first phase was quantitative-based and had employed a positivist paradigm. It was through this phase that the researcher was able to determine secondary purposes of this study. The second phase was qualitative-based and had employed an interpretive paradigm. The collective interpretation or conception of the integrated use of positivist and interpretive approaches within a single study lead to the philosophy of 'pragmatism' that places an emphasis on the use of different perspectives to seeing, knowing and interpreting a phenomenon under investigation within a single study (Green, 2007; 2008).

The interview guide or schedule was developed based on findings found from the first phase. This makes 'development' one of the reasons for choosing Mixed-methods sequential explanatory research design. In this study, the mixing of quantitative and qualitative techniques overlapped, with the first phase predominately quantitative. For example, the survey comprised of predominately close ended-questions (quantitative) and fewer open-ended questions (qualitative). In the second phase, the interview guide comprised fewer close-ended questions and more open-ended questions. This was done to explore more on the research problem leading to an in-depth description of the phenomenon.

The integrated use of these two different research methodologies makes the study mixed (Bazeley, 2009, pp.203) and the purpose of this mixed method sequential explanatory design which begins with quantitative approach is 'development' – which allows the development of the interview guide from the findings of the phase of the study.

Another purpose to use this design was 'complement'- which allows the results from the two consecutive phases to validate the results determined through each of the methodology. The rationale for choosing this design stems from the need to use multiple perspectives for development and complementary purposes (Green, 2008) and to draw from strengths of quantitative and qualitative techniques and reduce their limitations (Johnson and Onwuegbuzie, 2004).

9.4 SAMPLE AND SAMPLING METHODS

9.4.1 PHASE 1: QUANTITATIVE-BASED

A list (sampling-frame) of the 2012 registered students at second and third year levels was sought from the university (UNISA) after which students were selected to complete the self-administered questionnaires.

The reason for choosing participants from the 2012 second and third year is that they would have gained experience in the functioning of *myUnisa* as an electronic media, mode of learning and a communication medium. Because UNISA is a large academic institution with various faculties,

schools and departments, the stratified sampling technique was used to select participants (students) and to ensure representativeness. As Terre Blanche, Durrheim and Painter (2006, pp.136) assert, in order to ensure that a sample adequately represents relevant strata, the selection should be done from each strata independently. Stratified sampling helps to reduce the probable sampling error and leads to a greater degree of representativeness (Babbie and Mouton, 2001, pp.191).

Once the list of the second and third year 2011 registered students is determined, systematic sampling technique was applied to select the students to fill in the questionnaires. To get the sample of this proposed study which is 375 students, the total number of the students was determined first and divided by 100. Systematic sampling requires that every k^{th} element in the list of the total population be selected (Babbie and Mouton, 2001, pp.190).

The first student was sampled randomly between 1 and 1000 using online program called Randomizer. Babbie and Mouton (2001, pp.190) believe that such action helps prevent any bias in using systematic sampling technique.

The sequence of the sampling design in phase 1 of this study was as follows:

Stratified → Systematic ($100\ 000/100 = 1000$) → Random (selecting the first student) → Systematic (selecting other students at every 1000th position in the total list).

9.4.2 PHASE 2: QUALITATIVE-BASED

Sampling participants (students) who were not selected through stratified sampling were selected using purposive sampling technique. Telephonic calls were made to the participants. A maximum of 400 participants for the survey were sampled, but 350 participated in the study. The reasons for choosing to sample 400 students include the following: mixed-methods research requires an ample time for data-collection, analysis and interpretation; too much of collected data may lead to confusion during analysis and interpretation of the results. However, mixed-methods methodological approach was chosen in this study to reflect validity of the results using quantitative and qualitative approaches, and to provide different epistemological stances to seeing, collecting data, analysing and interpreting results (Green, 2008). Interviews with the students took place through telephones with only participants who had given consent to the researcher and agreed to participate voluntarily.

Other interviews were conducted with the key informants and who are the staff members from UNISA. Babbie and Mouton (2001, pp.168) refer to informants as members of the group (for instance, staff members) “who can talk directly about the group *per se*”. In this study, key informants are the staff members who usually interact with students through *myUnisa* and have experiences on how it works. The study had engaged only those staff members from a group that has at least two or three years’ experience in interaction with the students through *myUnisa*. An

identified areas in UNISA from which these key informants were accessed incorporate Registration department, Examination department, Despatch department, Library, Information and Communication Technology as well as lecturers.

9.5 TARGET POPULATION

Population refers to the overall group of elements from which selection of participants is derived (Babbie and Mouton, 2001, pp.174). The concept target population was used synonymously to refer to the population. The target population in this study is the UNISA students. The results were generalised to these students.

9.6 ACCESSIBLE POPULATION

The accessible population is the UNISA students who are registered for the year 2012 and who are at second and/or third level. The selection of these students is mainly because they would have gained the experience on how *myUnisa*, as the electronic communication medium, works as well as its importance and weaknesses in learning.

9.7 UNITS OF ANALYSIS

Units of analysis, also known as sampling units, refer to those characteristics of the elements that the researcher bases the selection of the elements on (Babbie and Mouton, 2001, pp.174). The following are sampling units taken into consideration for the selection of the students to participate in the research:

- Registered students in the year 2012;
- Students who use *myUnisa*, UNISA's extranet medium of communication;
- Second and third year students since they would have gained insight into how *myUnisa* works; and
- Only students located in South Africa in 2011/2012.

This means that the students selected include degree candidates, non-degree candidates, undergraduates, postgraduates, part-time and full-time.

The following sampling units were used to select the staff members:

- The librarian who communicate with students through *myUnisa*;
- The ICT personnel;
- The personnel from the Despatch who communicate with the students using *myUnisa*;
- A lecturer; and
- The personnel from the Registration Department.

9.8 DATA-COLLECTION METHODS

The (survey) self-administered questionnaires which were distributed online to the selected students, telephonic interviews and face-to-face in-depth interviews with the key staff members (from the Administration, Library, Despatch and Registration, Corporate communication department) were used to collect data. To test the relevance of the questions asked in the questionnaire and whether it is be comprehensible to the sampled population, the questionnaire was piloted to a group of students similar in all respects to those sampled for the study, in terms of units of analysis mentioned (see section 4.5). Following this, the questionnaire was edited to ensure unavailability of repeated, double-barrelled and ambiguous questions and general mistakes. In the case of telephonic interviews, the study employed outbound interviewing method. Bradley (2010, pp.118) describes an outbound interview method as a telephonic interview in which the interviewer makes calls to the respondents. According to Bradely (2010, pp.118), the benefits derived from using this interviewing technique include, inter alia, the following: it provides quick results; it is cost-effective (for instance, it reduces costs related to travelling to access respondents physically); it enables the researcher to reach respondents who would not avail themselves for face-to-face interview; and it makes it possible to record data for later analysis.

The shortcomings of the telephonic interview are as follows: usually, respondents do not want to stay for so long on the phone, which may deny an interviewer the opportunity to ask substantial or get other essential information for the study; and non-verbal cues such as facial expression, and body posture are not available to the interviewer and could be important during interpretation and analysis of the data (Bradely, 2010, pp.118). The data were collected as from January 2012 to April 2010. At that time, the permission to conduct this research already granted. An application was made on September 2011 and the permission was expected to be granted between September and December 2011. As a result, the interviews with the selected students and the key staff members, an interview guide was prepared for the in-depth and unstructured interviews. Telephonic interviews lasted between ten and twenty minutes, while one-to-one interviews with the key staff members lasted up to 45 minutes, and the computer-assisted questionnaire took 25 minutes to complete.

9.9 ANALYSIS AND INTERPRETATION

Descriptive and thematic analyses were used. Interpretation was based on findings obtained through using quantitative approach in phase 1 in integration with those obtained from qualitative approach in phase 2. Qualitative analysis is essential for this study to validate and complement the results of the quantitative phase. As mentioned in section 5, *methodology (designs) and methods*, this study is predominately quantitative.

With the exception of question 7 and 20, figure 1 below links questions from the self-administered questionnaire to the research questions, assumptions and sub-problems of this study. About 20 questions made up the questionnaire. Questions 7 to 10 were planned to measure students' use of *myUnisa*. Questions 6, 10 to 14 and 17 are planned to measure the experiences and satisfactions of the students on the use of *myUnisa*. The last theme in the self-administered questionnaire is about values/benefits of the *myUnisa*, as a communication channel to the students as is measured by question 6, 9, 10, 15, 18 and 19. Questions 20, 23 and 24 were not theme-specific and responses pertaining to this question were analysed once it was clear under which of the three themes does it fall in.

9.10 CHAPTER SUMMARY

This chapter discussed the methodology and the research design followed in this study. While the research design (strategic framework) used in this study is Creswell, et al.'s (2003) mixed-methods sequential explanatory design, the methodology employed in this study is the integrated use of quantitative and qualitative methodology referred to in this study as mixed-methods. The chapter also detailed the research methods used for sampling the respondents/participants and for the collection of data. In the quantitative phase, different sampling techniques incorporated stratified, systematic and random sampling (using the online programme known as the Randomizer). The chapter also shown that quantitative data was collected using the questionnaire and analysed using statistical package for social science (SPSS) research - version 18 software. The method used for the collection of the qualitative data was the in-depth interviews with key informants and an analysis of such data was performed using thematic categorisation. The chapter also pointed out and discussed the sampling technique -purpose sampling- applied for the selection of the sample. It also dealt with the population, units of analysis and how interpretations of the findings/results are to be done.

The next chapter presents the data as per how it was found from the analysis and what it means when interpreted.

CHAPTER 10

ANALYSIS OF THE DATA

10.1 INTRODUCTION

This chapter presents findings from the survey used for students as well as findings from the interviews with the relevant and segmented staff members. Up to 375 students were contacted through the telephone. Forty seven candidates could not be reached merely because their phones were off, dysfunctional, lost or no longer used. However, the turnaround was positive, with 350 students who managed to participate in the research. The response rate was 93%.

There are two broad categories of data presentation and analysis in this chapter. Each category has five sections. The first category is the presentation and analysis of quantitative results whereas the second category presents and analyse the qualitative findings. Presentations of the results from the first phase: quantitative results are structured as follows:

Section A presents quantitative results and interpretations of demographic traits of the respondents.

Section B presents results and interpretations on the students' uses of *myUnisa* as a communication channel for communications between the students and the university structures.

Section C presents quantitative results on the role of *myUnisa* as a communication channel and an online tool as well as its benefits to the students.

Section D presents quantitative results on students' experiences and satisfactions on *myUnisa*.

Section E is the last section of qualitative phase and it presents qualitative results about general comments on the functionality and usefulness of *myUnisa* student system.

The second category of presentation of the results deals with findings from the qualitative phase and is arranged in terms of themes as follows:

Theme 1: Uses and roles of *myUnisa* as a communication channel;

Theme 2: experiences and satisfactions of the staff members on *myUnisa* in their communications with the students;

Theme 3: challenges and problems on *myUnisa* as a communication medium; and

Theme 4: effectiveness of *myUnisa* in communications with the students.

10.2 DATA PRESENTATION AND ANALYSIS: RESULTS FROM THE QUANTITATIVE PHASE

10.2.1 SECTION A: DEMOGRAPHIC INFORMATION

There were 31 respondents in the Eastern Cape. The lowest number of respondents was from an age group of 36 years and older was only 4 (12.9%) which was the contribution to the total number of respondents in the region. The same number of 4 respondents made up a proportion of 6% to the total age group of 36 years and older and 1.1% to the entire group of respondents in the study which is 350.

The 26-30 and 31-35 years age groups had 8 (25.8%) respondents each which were the highest score within the Eastern Cape regional hub. However, the 8 respondents in the category of 26-30 years amounted to 9.4% of the total of 85 respondents from all the regional hubs. Respondents from this age group made up to 2.3% of the 350 respondents of all the age groups. Within the category of 31-35 years, the same number of 8 respondents contributed 8.8% of the total number of respondents within the age group, of which is 91 respondents in number. Respondents in the age group of 31-35 years contributed to the total number of respondents (350) across the various age groups with 2.3%.

In Western Cape, the combined number of respondents was 41. The highest number of respondents came from the age group of between 26-30 years which is 34.1% of all the respondents within Western Cape regional hub, 16.5% of all the respondents (85 counts) in age group of 26-30 years, and 4% of the 350 respondents. It was interesting to note that the lowest number of respondents was 3 (7.3%) within the region and contributed 4.8% to the age group of 21-25 years and 0.9% to the total of 350 respondents who participated in this study.

KwaZulu-Natal regional hub was found to be the second largest regional hub from which many participants came, amounting to a total of 87 respondents. There were 28 (32.2%) respondents who represented the highest number of respondents within the regional hub, contributing 30.8% to the total number of respondents in the age group of 31-35 years, and 8% to the entire 350 number of respondents in the entire study. Interestingly, the lowest number of the respondents was found to be within the age group of 15-20 years and contributed 5.7% to the total number of respondents within the KwaZulu-Natal hub. Whereas five respondents who participated in KwaZulu-Natal hub made up to 11.4% of the respondents in the age group of 15-20 years, they contributed 1.4% to the total of 350 respondents.

Following the KwaZulu-Natal regional hub, in terms of the number of respondents who participated in the study, the results of the study shows that Limpopo was the third regional hub with the highest number of respondents in this study with a total of 50, of which 14 (28%) of these respondents made

the highest representation within the Limpopo hub. The study also revealed that the 14 respondents make up 20.9% of the respondents in the age group of 36 years and older, and 4% contribution to the entire number of 350 respondents of all regional hub combined. The category of 21-25 years contributed to the total number of respondents within Limpopo regional hub with only 6 respondents (12%), 9.5% of the total number of respondents in the entire age group consisting of 63 respondents, and 1.7% proportion to the total of 350 respondents of all hubs in combination.

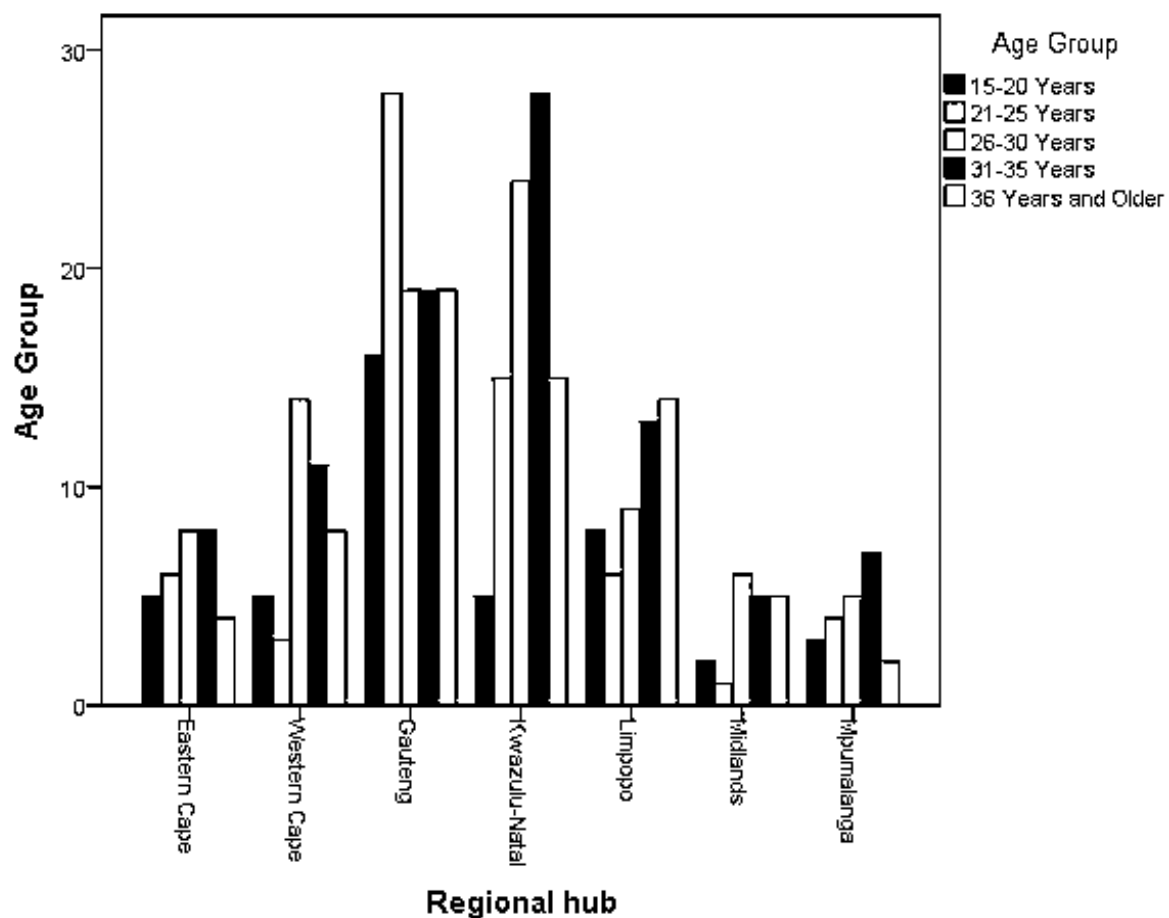


Figure 4: Distribution of respondents' age groups across regional hubs

Many respondents came from an age group of between 31-35 years and contributed 91 (26%) to the total number of respondents from all regional hubs combined. Gauteng regional hub had 101 (28.9%) contribution to the total of 350 respondents. This is the highest contribution when compared to those from other regional hubs. Gauteng's age groups with the highest number of

respondents were 26-30 years, 31-35 years and 36 years and older. Each of this age group contributed with 19 counts (18.8%) to the total number of respondents in Gauteng regional hub. Gauteng's total number of respondents from the age group of 15-20 years contributed with 16 (15.8%) to the Gauteng's total number of respondents which is 101 (28.9%). There were 44 (12.6%) respondents in total who fell within 15-20 years age group from all regional hubs. Of the total of 44 respondents, Gauteng regional hub had a contribution of 36.4% to the total number of those respondents in the age group of 15-20 years. The total contribution from only Gauteng in the age group of 15-20 years was 4.6% to the total number of respondents (350).

Midlands regional hub had a total number of 19 respondents, six of which fell in the category of 26-30 years and was the highest counts of respondents. The six respondents who were aged between 26 and 30 years contributed to the total number of respondents in the Midlands hub with 31.6%, and to the total number of all the respondents within the age group of 26-30 years with 7.1%. Moreover, the contribution of the six respondents to the total number of respondents of all individuals who participated in the study became 1.7%. Contrary to these findings in Midlands regional hub, the lowest number of respondents fell in the age group of 21-25 years. There was only one respondent in the age group of 21-25 years who made up 5.3 % contribution to the number of respondents within the Midlands region, 1.6% contribution to the total number of respondents in the age group of 21-25 years, and only 0.3% contribution to the total number of respondents across all regional hubs.

The lowest number of respondents was 1 (5.3%) and represented contribution from Mpumalanga regional hub which came from the age group of 21-25 years. This proportion made 1.6% to the total number of respondents who are from Mpumalanga and 0.3% to entire group of respondents in the age group of 21-25 years. The highest number of respondents in Mpumalanga was 7 which comprise 33.3% of the total respondents within the regional hub and 7.7% within the age group of 31-35 years. Such a high number of 7 respondents contributed to the total number of respondents from all regional hubs with 2%.

Distribution of respondents' Gender across Regional Hubs

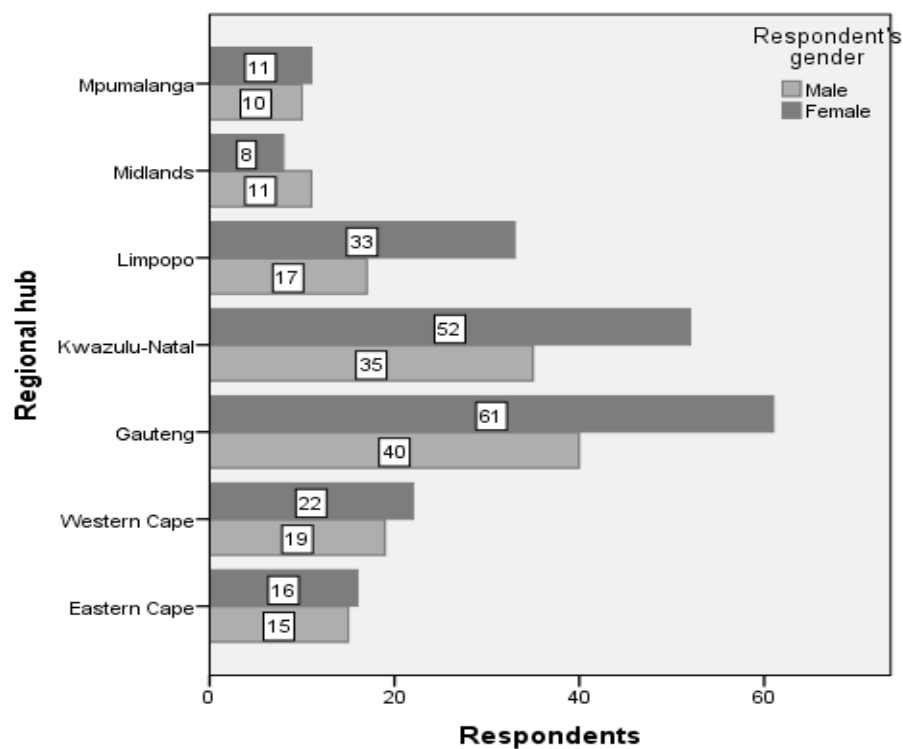


Figure 5: Distribution of respondents' gender across regional hubs

The results of the study also revealed that out of 350 respondents, there were a total of 147 males and 203 females. Males contributed to the total number of respondents with 42% while the females contributed with 58%. It was interesting to note that many of the respondents were Blacks which amounted to a total of 195, whilst Whites were 75, Indians were 47 and Coloured were only 33. Of the 195 blacks, 107 respondents were found to be females whilst only 88 represented male respondents. Black male respondents contributed 45.1% to the total number of the black respondents, and black female respondents contributed 54.9% to the total number of black respondents. In addition, black male respondents had a contribution of 59.9% to all black respondents which counted to a total of 195.

Black female respondents were represented by 52.7% within 195 black respondents. Black male respondents contributed 25.1% to the total respondents of 350 while black female respondents contributed 30.6%. The combined percentage of black male and female respondents had a contribution of 55.7% to the entire number of the respondents in the study. Of the 195 black

respondents, 26 (13.3%) were of the age group of 15-20 years of the total black respondents, 37 (19%) were aged between 21 and 25 years, 35 (17.9%) were aged between 26 and 30 years, 53 (27.2%) were aged between 31 and 35, and 44 (22.6%) were 36 years and older.

This means that amongst black respondents, there were many respondents from the age group of 36 years and older, contributing 65.7% to the total number of respondents (67) in the whole age group of '36 years and older' and 12.6% to the total number of respondents who participated in the study. However, many of the respondents across all the age groups were found to be within the 31-35 years category with a count of 91 and 26% contribution to the total of 350 respondents.

Table 1: Representation of respondents' gender from ethnic groups

Ethnic Group			Respondent's gender		Total
			Male	Female	
Total		Count	147	203	350
		% within Ethnic Group	42.0%	58.0%	100.0%
	Black	% within Respondent's gender	100.0%	100.0%	100.0%
		% of Total	42.0%	58.0%	100.0%
		Count	88	107	195
		% within Ethnic Group	45.1%	54.9%	100.0%
		% within Respondent's gender	59.9%	52.7%	55.7%
Ethnic Group	White	% of Total	25.1%	30.6%	55.7%
		Count	32	43	75
		% within Ethnic Group	42.7%	57.3%	100.0%
		% within Respondent's gender	21.8%	21.2%	21.4%
		% of Total	9.1%	12.3%	21.4%
	Indian	Count	18	29	47
		% within Ethnic Group	38.3%	61.7%	100.0%
		% within Respondent's gender	12.2%	14.3%	13.4%
		% of Total	5.1%	8.3%	13.4%
		Count	9	24	33
	Coloured	% within Ethnic Group	27.3%	72.7%	100.0%
		% within Respondent's gender	6.1%	11.8%	9.4%
		% of Total	2.6%	6.9%	9.4%

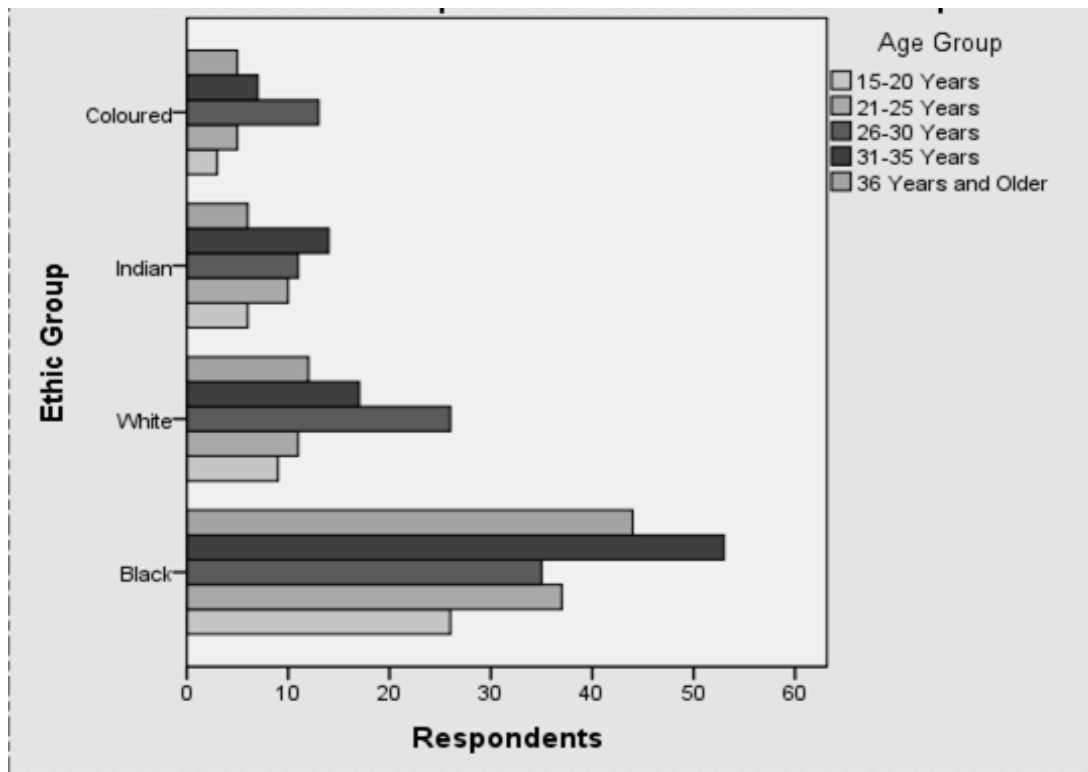


Figure 6: Distribution of respondents across ethnic groups

While many of the black respondents (53) were within the age group of 31-35 years, many of the white respondents were within the age group of 26-30 and had counted to a total of 26. As in the black ethnic group, the highest number of Indian respondents came from the age group of 14 (29.8), contributing 15.4% to the total number of the respondents in the age group of 31-35 years and only 4% to the total number (350) of the respondents. Contrary to this finding, the number of Coloured respondents were high (13 = 39.4%) in age group of 26-30 years, contributing 15.3% to the total number of respondents within the same age group and 3.7% to the total number of 350 respondents in the survey. It is interesting to note that all ethnic groups, with the exception of Indian ethnic group which have lower number of respondents in the age group of '15-20' and '36 years and older', had few respondents from the age group of 15-20 years.

The ethnic group with the lowest number of respondents was the Coloured people. These respondents were 33, 9 of which were males and 24 were females. The total number of Coloured male respondents contributed 27.3% to the total number of Coloured respondents irrespective of their gender, and 6.1% to the total number of 147 male respondents. Going further, the male coloured respondents contributed 2.6% to the total of 350 respondents irrespective of an ethnic group, regional hub, age group and gender. Coloured female respondents contributed with 72.7% to

the total number of 33 coloured respondents, 11.8% to 203 female respondents, and 6.9% to all the 350 respondents.

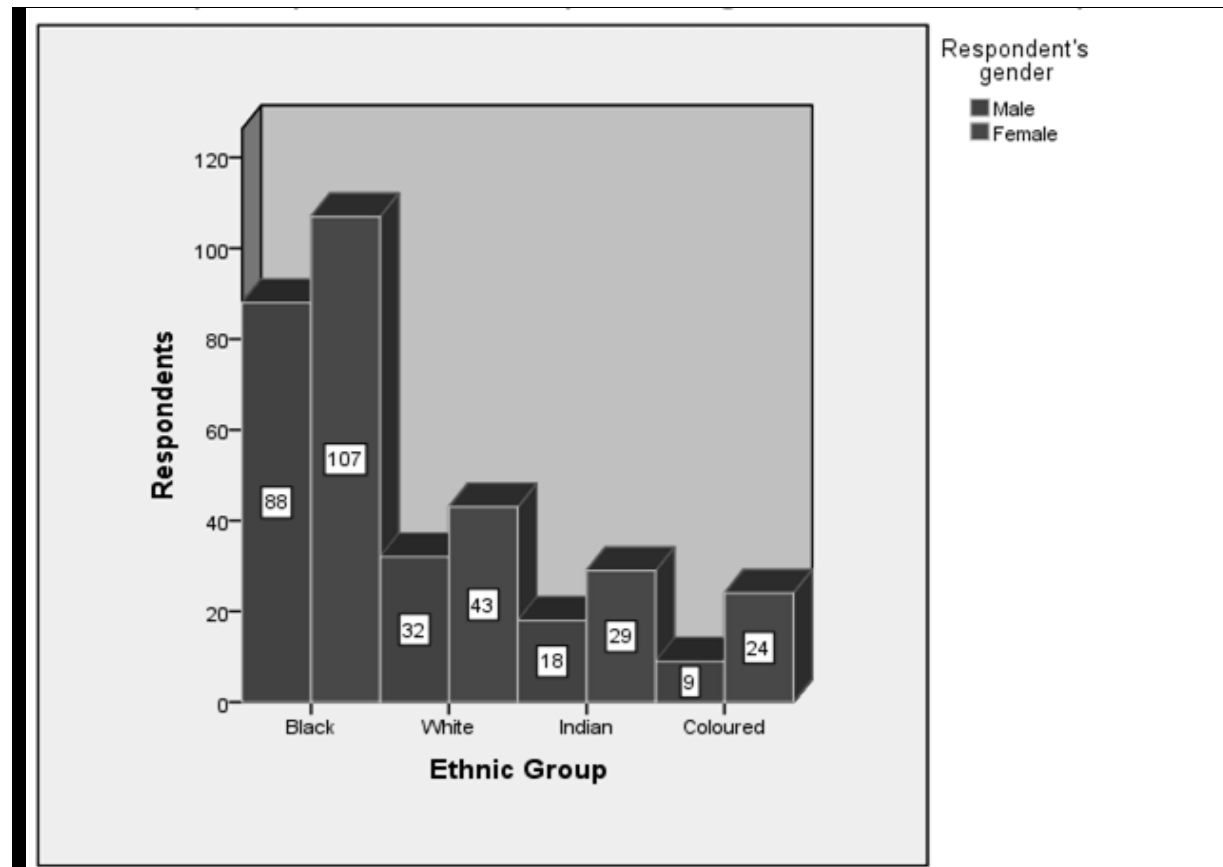


Figure 7: Graphic representation of respondents' gender from ethnic groups

10.2.2 SECTION B: STUDENTS' USES OF MYUNISA

This section dealt with the students' use of *myUnisa* and its applications. The table below contain information relating to the use of *myUnisa* and is intended to show the distribution of the respondents' responses, as to whether they use or do not use *myUnisa*. All other tables in Section B are intended to explain the respondents' responses on which applications of *myUnisa* do they use most.

Table 2: Uses of *myUnisa* as a communication channel

Respondent's gender			Use of <i>myUnisa</i> as a communication medium		Total
			Yes	No	
Male	Educational Level	2 nd Yr	52	34	86
		3 rd Yr	41	20	61
	Total		93	54	147
Female	Educational Level	2 nd Yr	79	36	115
		3 rd Yr	56	32	88
	Total		135	68	203
Total	Educational Level	2 nd Yr	131	70	201
		3 rd Yr	97	52	149
	Total		228	122	350

The question that sought to determine whether students use *myUnisa* or not revealed that a larger number of the students amounting to a total of 228 (65.1%) used *myUnisa* as a communication medium and 122 (34.9%) did not. Of the 228 respondents who used *myUnisa*, 93 (40.7%) were males while 135 (59.2%) were females. Of those male respondents who used *myUnisa*, 52 (55.9%) were at their second year level whilst 41 (44%) were at third level. It was interesting to note that out of the 135 female respondents who indicated that they used *myUnisa*, 79 (58.5%) of them were doing their second year while 56 (41.5%) were at third year level.

Male respondents who reported that they do not use *myUnisa* amounted to a total of 54 which contributed 36.7% to the total male respondents, that is, 147. The 131 second year respondents showed 65.1% contribution to the total number of 201 second year respondents. Similarly, respondents from the third year level showed the same percentage of 65.1% contributing to the total number of 149 third year respondents.

Question 8 sought to find out what *myUnisa* applications students use and respondents were asked to indicate which of *myUnisa* applications they use. The *myUnisa* applications which were listed in the questionnaire were academic records, bibliographical details, change password, edit registration, examination results, examination time table, financial tracking and study fees quotation.

Table 3: Use for academic records

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Use	215	61.4	94.3	94.3
	Do not use	13	3.7	5.7	100.0
	Total	228	65.1	100.0	
Missing	No answer	122	34.9		
Total		350	100.0		

Out of 228 respondents who indicated that they used *myUnisa*, about 215 (94.3%) of them also showed that they use *academic records* application of *myUnisa* and only 13 (5.7%) respondents indicated that they do not use academic records application. The 215 respondents contributed 61.4% to the total of 350 respondents while 13 respondents who said they do not use *myUnisa* contributed 3.7% of the 350 respondents.

Table 4: Use for bibliographical details

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	122	34.9	34.9	34.9
	Use	192	54.9	54.9	89.7
	Do not use	36	10.3	10.3	100.0
	Total	350	100.0	100.0	

The responses to the use of *bibliographical details* application of *myUnisa* were 192 counts which contributed 54.9% to the 228 respondents who use *myUnisa's bibliographical details* and 54.9% to the total of 350 respondents who participated in the study. Contrary to the counts of those who said they use *bibliographical details*, only 36 respondents who made up 10.3% to the 228 respondents use *myUnisa LMS* showed that they do not use *bibliographical details* application. Interestingly, the same number of 36 respondents who do not use *bibliographical details* made up 10.3% of the total of 350 respondents.

Another *myUnisa* application investigated was *Change Password* and was supported by 217 respondents who said they use it (refer to the tabled presentation below).

Table 5: Use for changing passwords

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
No answer	122	34.9	34.9	34.9
Use	217	62.0	62.0	96.9
Do not use	11	3.1	3.1	100.0
Total	350	100.0	100.0	

Of the 228 respondents who use *myUnisa*, 217 respondents were counted and had contributed 62% to the total number of 350 respondents and within the group of respondents who said they use *myUnisa*. The results also showed that only 11 respondents do not use the *change password* application of *myUnisa*, contributing 3.1% to both the total number of those who do not use *myUnisa* LMS and the total number of 350 respondents of this study (see the table above).

Table 6: Use for editing registration

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
No answer	122	34.9	34.9	34.9
Use	85	24.3	24.3	59.1
Do not use	143	40.9	40.9	100.0
Total	350	100.0	100.0	

Regarding the *editing registration* application of *myUnisa* (refer to the table above), there were fewer respondents who reported that they use *editing registration* of *myUnisa* as compared to those who said they do not use it. The results showed that out of 228 respondents, there were 143 respondents who do not use *editing registration* application and 85 who use it. The contribution made by 143 respondents to the total number of respondents who do not use *myUnisa* was 40.9% which was also a contribution to the total number of respondents who took part in the study.

Table 7: Use for accessing examination results

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
No answer	122	34.9	34.9	34.9
Use	181	51.7	51.7	86.6
Do not use	47	13.4	13.4	100.0
Total	350	100.0	100.0	

One of *myUnisa* application that students used was *examination results*. There were 181 respondents who reported that they used it to check their examination results and this number had a contribution of 51.7%, both to the total number of respondents who participated in the study and within the group of respondents who said they used it for *examination results*. Only 47 respondents reported that they do not use examination results application of *myUnisa* and this proportion was only 13.4% to both the number of respondents who do not use *examination results* and to all the respondents combined (350 respondents).

Table 8: Use for financial tracking

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
No answer	122	34.9	34.9	34.9
Use	108	30.9	30.9	65.7
Do not use	120	34.3	34.3	100.0
Total	350	100.0	100.0	

The question that was geared to determine if students use *financial tracking* application of *myUnisa* revealed that of the 228 respondents who use *myUnisa*, 108 (30.9%) respondents used it and 120 (34.3%) of them did not use it.

Table 9: Use for study fees quotation

	Frequency	Percent	Valid Percent	Cumulative Percent
No answer	122	34.9	34.9	34.9
Valid Use	26	7.4	7.4	42.3
Do not use	202	57.7	57.7	100.0
Total	350	100.0	100.0	

The last application of *myUnisa* to be investigated was the *study fees quotation* which was sought to determine if students make quotation online through *myUnisa* LMS. The results showed that a small percentage of 7.4, that is, 26 respondents who seek quotations about the study fees using the *study fees quotation* application. The results also showed that a larger proportion out of 228 respondents was 202 counts which is 57.7% contribution within the group of respondents who did not use the *study fees quotation* as well as to the total 350 respondents.

Raacke and Bonds-Raacke (2008, pp.170) posit that Uses and Gratification theory holds the view that individual people use a particular media, such as internet for different reasons, including to gratify themselves. The findings of this study confirm this postulation. UNISA students use *myUnisa* extranet for accessing academic records, examination results, and study materials and to seek for quotations on study fees. They also use *myUnisa* for online discussion forums occurring through this platform, for tracking financial status, to check and edit bibliographical information as well as to check and edit registration.

The next question sought to determine the frequency of use of *myUnisa* and the results was presented in a pie chart as depicted below (figure 6):

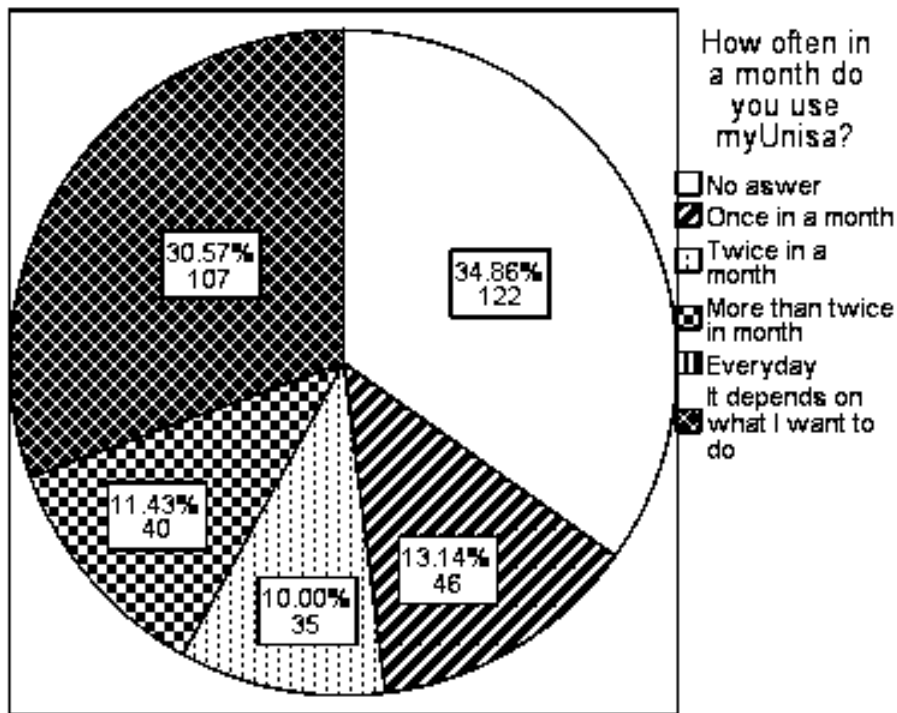


Figure 8: Pie Chart showing the frequency of use of myUnisa

The question that was asked was how often in a month do you use *myUnisa*? The bigger part of the pie chart 122 (34.9%) is for those respondents who did not use *myUnisa* monthly. The second largest proportion is 107 counts of respondents who used *myUnisa* ‘depending on what do they want to do’ and this proportion made up 30.6% of the 350 total respondents and 46.9% within those who use *myUnisa*. Of the total of 350 respondents, 40 respondents (11.4%) reported that they used *myUnisa* more than twice in a month, contributing 17.5% to the 228 respondents who used *myUnisa*. Those who used *myUnisa* ‘twice in a month’ were 35, contributing 10% to the total respondents of 350 and 15.4% to the total respondents who indicated that they used *myUnisa*. Those who indicated that they used *myUnisa* once in a month contributed 13.1% to the 350 total respondents and 20.2% to the total respondents who reported that they used *myUnisa*.

10.2.3 SECTION C: THE ROLE OF MYUNISA AS A COMMUNICATION MEDIUM AND A TOOL AND ITS BENEFITS TO THE STUDENTS

This section consists of three questions. The first one asks how *myUnisa* as a communication medium and a tool helps students in their studies. This was question 11 in the questionnaire. Respondents were required to indicate true or false next to any of the four options, namely *I am to access my study materials quickly*, *I discuss with students through myUnisa forums*, *I request books, articles and other learning materials through myUnisa*, and *It does not help me at all*.

Table 10: Access to study materials

I am able to access my Study Materials quickly	N	% of Total N
No answer	122	34.9%
Yes	193	55.1%
No	35	10.0%
Total	350	100.0%

The results of the study revealed that they used *myUnisa* to access study materials (see table 10). This statement enjoyed a support of 193 counts from the respondents. This makes up a contribution of 55.1% to the total number of 350 respondents. Although many students used *myUnisa* to access study materials, the proportion of 10% from 350 students indicated that they did not use *myUnisa* to access study materials.

Table 11: I discuss with students through *myUnisa* forums

I discuss with students through <i>myUnisa</i> forum	N	% of Total N
No answer	122	34.9%
Yes	49	14.0%
No	179	51.1%
Total	350	100.0%

In the next question where students were required to indicate true or false on whether they hold discussions about their studies through *myUnisa*, 49 respondents (14%) reported that they discuss with other students through *myUnisa*.

Table 12: I request books, articles and other learning materials *myUnisa*

I request books, articles and other learning materials through <i>myUnisa</i>	N	% of Total N
No answer	122	34.9%
Yes	36	10.3%
No	192	54.9%
Total	350	100.0%

To the statement *I request books, articles and other learning materials through myUnisa*, 192 respondents ticked false, indicating that they did not use *myUnisa* to request books, articles and other learning materials. This is 54.9% contribution to the total number of respondents, including those who did not use *myUnisa* at all.

Table 13: It does not help me at all

It does not help me at all	N	% of Total N
No answer	122	34.9%
Yes	18	5.1%
No	210	60.0%
Total	350	100.0%

The last statement *it does not help me at all* was indicated to be false by 210 respondents (60%). Only 18 respondents (5.1%) consider *myUnisa* as useful and helpful. Question 12 of Section C in the questionnaire had two options to choose, namely true or false. There were five statements provided which students were expected to state whether they are true if applicable to them or false if not applicable to them and those were as follows: *I go to UNISA campus personally, I contact UNISA's structures through e-mails, I use a fax, I make a phone call, I write a letter and deliver it through Post Office service*. Interestingly, the research found that a total of 128 out of 147 male respondents and 160 out of 203 female respondents indicated that it is true they go to UNISA campus personally. This brings a number to 288 respondents who said they go to UNISA campus personally.

Those who said that it is *true* they contact UNISA's structures through e-mails amounted to a total of 184 which is 51.7% of the total number of 350 respondents, of which 71 (20.3%) of them were males and 113 (32.2%) were females. In addition, those who indicated *false* that they contact

UNISA's structures through e-mails were 166 (47.4%) in total, with both males and females combined.

It was also interesting to note that out of 350 total respondents, only a total of 21 respondents indicated that it was *true* they used a fax to communicate with UNISA. This contributed only 6% to the total number of respondents. Moreover, a total of 329 respondents, both males and females combined, stated *false*, showing that they do not use faxes in their communications with UNISA. Many of these respondents who said false were female amounting to a total of 194 which contributed 55.4% to the total 350 respondents.

Regarding the statement *I make phone calls* to communicate with UNISA, there were more female respondents who indicated that the statement was *true* with a total of 191 counts. Male respondents who said it was true that they made phone calls were 132, contributing 37.7% to the total 350 respondents and 40.8% to those who considered the statement to be true. In fact, there were 323 total respondents who considered the statement to be true, making up a proportion of 92.3% of all 350 respondents in the study. Contrary to those who said that it was true the make phone calls, only a proportion of 27 respondents (7.7%) regarded the statement to be false to them.

Another means to communicate with UNISA was through writing letters and posting them. The researcher found that only a total of 37 respondents (10.6%) considered the statement to be true. Of these respondents, 13 (3.7%) were males and 24 (6.9%) were females. Male respondents made up 35.1% contribution within the group of respondents who regarded the statement to be true whilst female respondents made up 64.9% contribution to the total number of those who said the statement is true. The majority of the respondents were 312 (89.1%) and have indicated that they do not write letters to UNISA by indicating *false*. About 179 (51.1%) were females and 133 (38%) were male respondents. The 179 female respondents who indicated false to the statement about communicating to UNISA through letters had a contribution of 88.2% to the total female respondents. On the side of males who stated false, the contribution was higher than that of females by 2.3%, making a total of 90.5% to the total number of female respondents.

The last question in Section C of the survey probed on the benefits that students derive from using *myUnisa* as an extranet and a communication channel. This was question number 13 in the questionnaire and there were five statements given which respondents had to indicate whether they are agree or disagree with them. The first statement listed was *Easy accessibility of the study materials at any time of the day and anywhere I am*. There were a total of 228 respondents who

responded to this question and those were respondents who indicated that they use *myUnisa* in their studies. There were 208 respondents who *agreed* with this statement and 20 who *disagreed*. The 208 respondents made up 91.2% of the 228 respondents who use *myUnisa* and 59.4% of 350 respondents who took part in the study, while 20 respondents who disagreed with the statement made up 8.8% of the respondents who use *myUnisa* and 5.7% of the total of 350 respondents in the study. Moreover, it was interesting to note that there was no respondent in Eastern Cape regional hub who disagreed with the statement *Easy accessibility of the study materials at any time of the day and anywhere I am*. There was one respondent from Midlands and Mpumalanga regional hubs who also disagreed with this statement. This means the accessibility of study materials in all UNISA regional hubs is one of the noticeable benefits to the larger number of UNISA students. Of those respondents who agreed, the highest number came from Gauteng with 61 (26.8%) proportion out of 228 who use *myUnisa*, this figure was followed by KwaZulu-Natal regional hub with 49 (21.5%) contribution to the total number of those who use *myUnisa*. According to the students, the second benefit of *myUnisa* was interactivity. The statement it is interactive (referring to *myUnisa*) was given and respondents had to state whether they agree with it or not. The researcher looked at the responses across all the UNISA regional hubs and the results showed that those who agreed with this statement amounted to a total of 42 (12%) to the number of respondents in the study, in comparison to those who do not use *myUnisa* at all (122). These 42 counts contributed 18.4% proportion to 228 respondents who use *myUnisa* and who are also respondents to question number 13 of the survey.

While the lowest number of the respondents who *agreed* with the benefit of interactivity came from Mpumalanga (with only one respondent) and Midlands (with two respondents), the highest score was in KwaZulu-Natal with a representation of 17 counts (7.5%) contribution of the total of 228 respondents who use *myUnisa* and 4.9% contribution to the 350 respondents. The highest number of counts for the respondents who *disagreed* with the benefit of interactivity of *myUnisa* came from Gauteng regional hub with the proportion of 55 (24.2%) of the total of 228 respondents who use *myUnisa* and 15.7% of the 350 total respondents who participated in the study.

The third statement to be investigated in question 13 of the survey was “*It helps me edit my bibliographical information*”. To these statements aimed at determining if *myUnisa* as a communication tool and a channel which helps students to edit their bibliographical information, 212 respondents disagreed with it and only 16 respondents agreed with it. There were no respondents from Eastern Cape and Midlands who agreed with this statement. In Western Cape, only one respondent indicated to use the editing tool for bibliographical information. This means

that many students consider the editing tool of *myUnisa* to be of no benefit to them especially students from Eastern Cape, Midlands and Western Cape. The highest number of those who disagreed with whether they use *myUnisa*'s edit tool to edit their bibliographical information were counted 64 in Gauteng regional hub and 52 (7.1%) in KwaZulu-Natal. While 64 respondents from Gauteng regional hub who disagreed with the statement contributed 18.3% to the 350 respondents who participated in the study and 28.1% to the total number of 228 respondents who use *myUnisa*, respondents from KwaZulu-Natal contributed 15.4% to the total 350 respondents and 23.7% to the total number of respondents who use *myUnisa*.

The fourth statement which respondents were required to agree or disagree with was whether *myUnisa* enabled them to send assignments quickly. The bigger proportion of the respondents who agreed with the statement came from Gauteng and KwaZulu-Natal. Gauteng regional hub had 67 respondents (19.1%) who contributed to the total 350 respondents and 29.4% to the total respondents who indicated that they use *myUnisa*. In the KwaZulu-Natal regional hub, 54 respondents (15.4%) also agreed with the statement.

To the last statement of question 13 in the survey – *it does not help me at all* – all the respondents from the different regional hubs who indicated that they use *myUnisa* *disagreed* with it. This means that they all deem *myUnisa* as essential and helpful in their studies.

10.2.4. SECTION D: STUDENTS' EXPERIENCES AND SATISFACTIONS REGARDING MYUNISA

This section focused on the experiences and satisfactions of the students regarding *myUnisa*. The researcher wanted to know the extent to which students are satisfied with *myUnisa*, both as a learning management system and as a communication channel. Section D in the questionnaire consisted of ten questions. An SPSS analysis done upon the collected data produced graphic results for the first question as shown below in figure 7.

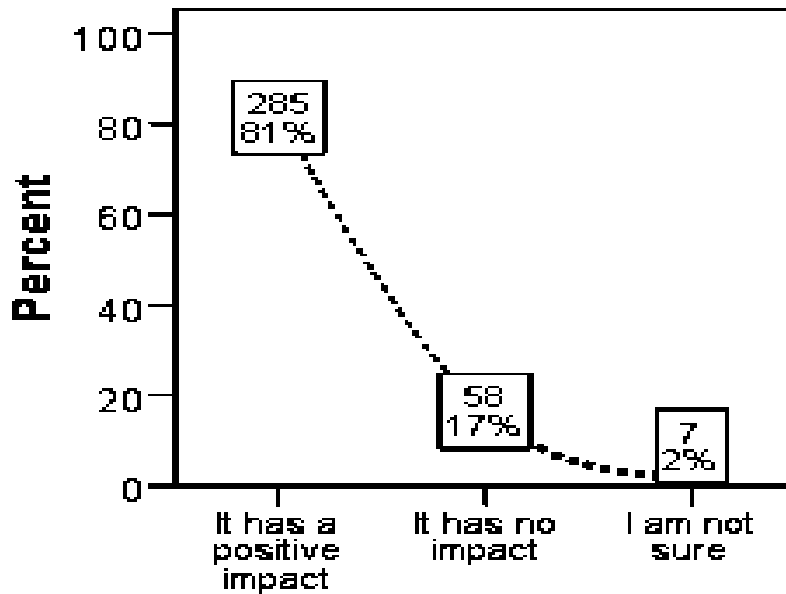


Figure 9: Perceived impact of *myUnisa* on students' studies

The response rate to question 14 of the survey was 100%. This was the result of having both respondents who use *myUnisa* and those who said they do not use *myUnisa*. The researcher provided the respondents with four options to choose from, namely *it has a positive impact*, *it has a negative impact*, *it has no impact at all* and *I am not sure*. According to this graphic presentation of the responses on question number 14 of the survey - *How does myUnisa as an electronic communication medium impact on your studies*, there were 285 respondents (81%) who reported that *myUnisa* as learning management system has a positive impact to their studies. Interestingly, there was no respondent who indicated that *myUnisa* has a negative impact to the studies. Those who indicated that *myUnisa* as a communication channel has no impact in their studies amounted to a total of 58 which contributed 17 % to the total number of 350 respondents who took part in the study. In addition, of the 350 respondents, only 7 respondents who made 2% contribution reported to be unsure if *myUnisa* as an electronic communication impact in their studies.

The second question in Section D in the questionnaire was posed to determine the extent to which those who indicated that they use *myUnisa* feel it is effective. The response rate to this question was 65%. There were five options to choose from to rank the level of effectiveness of *myUnisa*. Respondents had to indicate if they consider *myUnisa* as communication channel *extremely effective*, *less effective*, *effective*, *non-effective* and *extremely non-effective*.

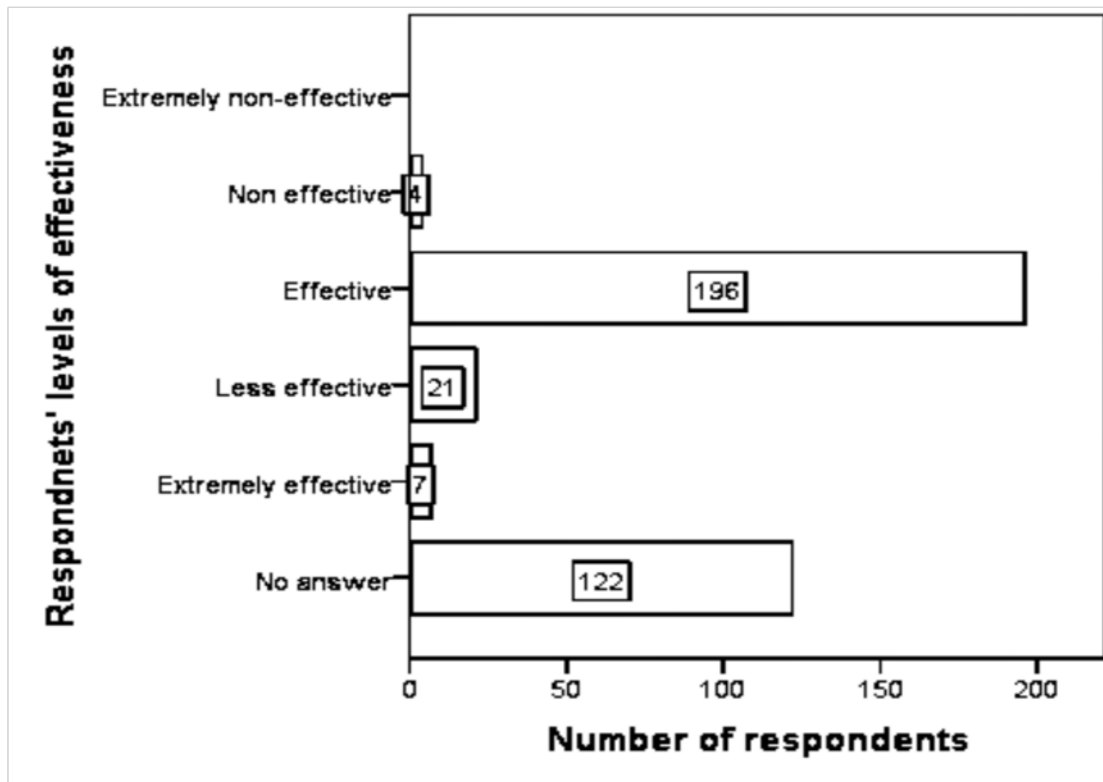


Figure 10: Levels of effectiveness of myUnisa

The graphic presentation of the results shows that there were no respondents who considered myUnisa to be *extremely non-effective*. Of the 228 respondents who use myUnisa, there were only 4 respondents who reported that myUnisa is *non-effective*. This contributed 1.8% to the total number of those who use myUnisa and 1.1% of all the respondents in the study, including those who indicated that they do not use myUnisa. Those who considered myUnisa to be *effective* were 196 respondents. The contribution made by the 196 respondents to the total of 228 respondents who use myUnisa was 86%. The same group of respondents who considered myUnisa to be effective contributed 56% to the total of 350 respondents in the study. While 21 (9.2%) of 228 respondents and 6% of 350 respondents in the entire study) respondents indicated that myUnisa is less effective, only a proportion of 7 respondents indicated that they consider myUnisa *extremely effective*.

Table 14: Level of effectiveness of myUnisa applications

	Extremely non-effective	Non effective	Effective	Less effective	Extremely effective
Academic records	150	9	69	0	0
Bibliographical details	1	79	12	67	69
Change password	0	81	0	91	56

Edit registration	55	13	154	4	2
Examination results	185	8	24	6	5
Examination time table	187	15	17	8	9
Financial tracking	57	54	75	22	20
Study fees quotations	43	32	35	80	38

A total of 122 respondents out of 350 total respondents did not answer the question (question 15 of the survey) and these are the respondents who indicated that they do not use *myUnisa*. The researcher also wanted to determine the levels of effectiveness of different applications of *myUnisa* from the perspective of the students. Owing to this, the question *Indicate the level of effectiveness of the following myUnisa applications, as a communication tools* was asked in questionnaire. The same measuring scales were given (extremely effective, less effective, effective, not effective and extremely effective) to measure the level of effectiveness of *academic records, bibliographical details, change password, edit registration, examination results, examination time table, financial tracking and study fees quotations*.

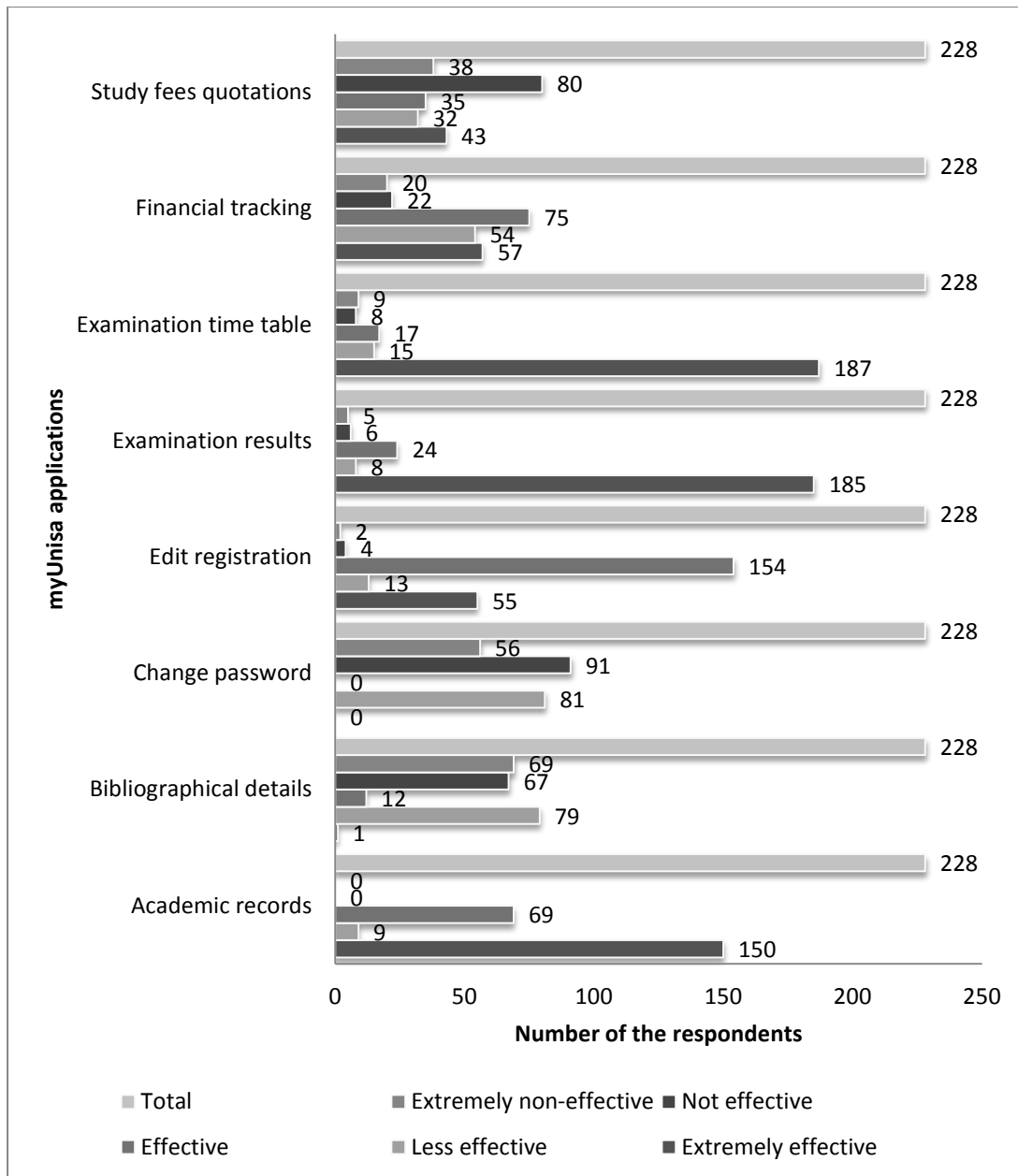


Figure 11: Graphic representation of levels of effectiveness on myUnisa

A total of 150 respondents had indicated that ‘academic records’ application of myUnisa is extremely effective, 69 felt that it is effective and only 9 respondents indicated that is effective. What was interesting to note in this results was that there was no respondent who did not consider myUnisa’s ‘academic records’ as *not effective* or *extremely non-effective*. In fact, of those 228 respondents who use myUnisa, 65.8% regarded an ‘academic records’ application as extremely effective.

Table 15: Level of effectiveness of Academic Records

		Educational Level		Total
		Second year	Third year	
Academic records	Extremely effective	91	59	150
	Less effective	3	6	9
	Effective	42	27	69
	Total	201	149	350

Unlike in the ‘academic records’ application which many respondents reported to be extremely effective, the ‘bibliographical details’ application of *myUnisa* had only one respondent who reported it to be extremely effective. The majority of respondents (79) felt it is less effective. This made up a contribution of 34.6% of the total 228 respondents who use *myUnisa* and 22.6% of the entire 350 respondents who participated in the study. Moreover, there were 54 respondents (23.7% of the 228 who use *myUnisa* and 15.4% of the 350 respondents in the whole study) who reported ‘bibliographical details’ application were at the second year level whilst 25 respondents (11% of the 228 respondents who use *myUnisa* and 7.1% of the entire 350 respondents who took part in the study) were at the third year level of study (see table 14).

Table 16: Level of effectiveness of Bibliographical details

		Educational Level		Total
		Second year	Third year	
Bibliographical details	Extremely effective	0	1	1
	Less effective	54	25	79
	Effective	2	10	12
	Not effective	39	28	67
	Extremely non-effective	39	30	69
Total		201	149	350

Table 17 presents the results relating to the ‘change password’ application of *myUnisa*. The majority of the respondents at the second year level considered it to be *not effective* and had amounted to a

total of 49, contributing 21.5% to the 228 respondents who reported that they use *myUnisa* and 14% to the 350 total respondents in the study. At the third year level, there were 42 respondents who contributed 18.4% to the total number of respondents who use *myUnisa* and 12% to the total number of 350 respondents who participated in the study.

On average, respondents at the second year level who felt that the ‘change password’ application is not effective were 24.4% of the total 201 respondents who are at the second year level of study and 36.6% of the respondents who indicated that the ‘change password’ is *not effective*. Those who were at the third year level and who reported that the ‘change password’ application is not effective were 42 which, on average amounted to 28.2% of 149 respondents and 44.7% of the respondents who indicated that the ‘change password’ is *not effective*. This in turn means that a larger proportion of those who feel the ‘change password’ application of *myUnisa* is not effective come from those who are the third year level of the study than from those who are at the second year.

The lowest proportion of those who responded to the question dealing with the ‘change password’ application reported that it is *extremely non-effective*. There were only 56 respondents in total (out of 228 respondents who use *myUnisa*), 40 (17.4%) of which were at the second year level and 16 (7%) were at the third year level. Furthermore, the results showed that those who were at the second year level who regarded the ‘change password’ application as *extremely non-effective* were 20% average of the total 201 respondents in the second year and 29.9% of the respondents who indicated that the ‘change password’ is *extremely not effective*. The average percentage of those who were at the third year level and who felt that the ‘change password’ application was *extremely non-effective* was 10.7% and 17% of the respondents who indicated that the ‘change password’ is *extremely not effective*. This means that there are many second year students who consider *myUnisa*’s ‘change password’ application more extremely non-effective than those who are the third year level of their study.

Table 17: Level of effectiveness of change password

		Educational Level		Total
		Second year	Third year	
Change password	Less effective	45	36	81
	Not effective	49	42	91
	Extremely non-effective	40	16	56
	Total	201	149	350

The ‘edit registration’ application of *myUnisa* is not considered an effective application. This was confirmed by the results of this study where there were no respondent from the third year level and only two from the second year level who indicated that it is extremely non-effective. Contrary to these results, the highest score was 154, which was the total number of respondents who felt that the ‘edit registration’ application is effective. This proportion was 67.5% of the 228 respondents who responded to this question and who also indicated that they use *myUnisa* and 44% contribution to the total number of the respondents in the entire study. In addition and as a supplement to the significance of the ‘edit registration’ application of *myUnisa*, a total of 13 respondents indicated that it is *less effective* and 55 said it is *extremely effective*. The sum of the respondents who felt that the ‘edit registration’ application is somehow effective was 222 out of the 228 who responded to the question. This is, in fact, 97.4% proportion that deems the ‘edit registration’ application valuable.

The average percentage of those who were at the second year level and who had shown that they use *myUnisa* indicated that the ‘edit registration’ is effective with 47.8% while of those who were at the third year level and who said it is *effective* was 36.2%. This shows that there are more students from second year level who feel that the edit registration application of *myUnisa* is significant in their studies. Interestingly, the average percentage of the third year level who indicated that the edit ‘registration application’ is *extremely effective* was 19.5% of the total of 149 respondents whilst in the case of those who were at the second year level amounted to 13%. These results suggest that many of the UNISA’s students at the third year level feel that the ‘edit registration’ application is *extremely effective*.

Table 18: Level of effectiveness of Edit Registration

		Educational Level		Total
		Second year	Third year	
Edit registration	Extremely effective	26	29	55
	Less effective	8	5	13
	Effective	96	58	154
	Not effective	2	2	4
	Extremely non-effective	2	0	2
Total		201	149	350

As in the case of ‘edit registration’ application of *myUnisa* learning management system, there was no respondent from the third year level who felt that the ‘examination results’ application is extremely non-effective. Only five respondents from the second year level reported that it is extremely non-effective. This contributed 2.5% to the total number of the respondents from the second year level which in the other hand is the average percentage; 2.2% to the total 228 respondents who indicated that they use *myUnisa*; and 1.4% to the total 350 respondents in the entire study.

Table 19: Level of effectiveness of Examination Results

		Educational Level		Total
		Second year	Third year	
Examination results	Extremely effective	103	82	185
	Less effective	3	5	8
	Effective	16	8	24
	Not effective	3	3	6
	Extremely non-effective	5	0	5
Total		201	149	350

The results of the study shows that 179 (78.5%) of the 228 respondents who use *myUnisa* reported that the ‘examination time table’ application of *myUnisa* is *extremely effective*. This was the biggest proportion which eventually serves to indicate that there are many students in UNISA who deem the ‘examination time table’ application important. Of the 228 respondents who use *myUnisa*, a total of 94 respondents indicated that the ‘examination time table’ is *extremely effective* when doing their third year level and was 87.2% average. In the second year level category, there were a total of 134 respondents who indicated that the examination time table is *extremely effective*. This proportion was on average 48.3% within the group of people who said it is *extremely effective*. This results with an obvious interpretation that many of students from the third year level are of the view that the examination time table is *extremely effective*. As regard those who oppose this view, there were only 9 respondents, seven of which were from the second year level and two from the third year level, who reported that the ‘examination time table’ application is *extremely non-effective*.

A total of 150 respondents had indicated that ‘academic records’ application of *myUnisa* is extremely effective, 69 felt that it is effective and only 9 respondents indicated that is effective. What was interesting to note in this results was that there was no respondent who did not consider *myUnisa*’s ‘academic records’ as *not effective* or *extremely non-effective*. In fact, of those 228 respondents who use *myUnisa*, 65.8% regarded an ‘academic records’ application as extremely effective.

Table 20: Level of effectiveness of Examination time table

		Educational Level		Total
		Second year	Third year	
Examination time table	Extremely effective	97	82	179
	Less effective	11	4	15
	Effective	10	7	17
	Not effective	7	1	8
	Extremely non-effective	7	2	9
Total		201	149	350

The highest number of the respondents who recognised the significance of the ‘financial tracking’ application on *myUnisa* was 186 combined. Of these respondents, 57 indicated that the ‘financial tracking’ is *extremely effective* while 54 respondents indicated that they consider the ‘financial tracking’ as *less effective* while 75 of them felt it was *effective*. Furthermore, the results of this study mean that many of the UNISA students consider the financial tracking as effective.

Table 21: Level of effectiveness of Financial Tracking

		Educational Level		Total
		Second year	Third year	
Financial tracking	Extremely effective	33	24	57
	Less effective	31	23	54
	Effective	41	34	75
	Not effective	15	7	22
	Extremely non-effective	14	6	20
Total		201	149	350

The highest count of the respondents who felt that the ‘study fees quotations’ application of *myUnisa* was *not effective* was 80, which was 35.1% ($80/228 \times 100$) contribution to the respondents who indicated that they use *myUnisa*. There were 32 respondents at the third year level who made up 34% of the total of 94 counts of those who felt that the ‘study fees quotations’ is *not effective*, 21.5% of the total number of respondents who are at the third year level, 14% of the 228 total number of respondents who use *myUnisa* and 9.1% of the 350 total respondents in the entire study. Respondents from the second year level who regarded the ‘study fees quotations’ application as *not effective* amounted to a total of 48 which contributed 35.8% to the total number of the respondents who responded to this question about the study fees quotations, 23.9% of the total number of respondents who are the second year level, 21.1% of the total number of the respondents who use *myUnisa*, and 13.7% of the 350 total respondents who participated in the study.

The results suggest that many of the students who are at the third year level as compared to those who are at the second year level of their studies deem the ‘study fees quotations’ application of *myUnisa* as not effective. However, the overall impression of the results imply that the ‘study fees quotations’ is of a paramount importance, reflected by the indications there are other groups of respondents who regarded it as extremely effective, effective and less effective. The scores from these scales outweigh those which oppose positive feelings about the ‘study fees quotations’.

The fourth question in Section D was question number 17 in which the researcher sought to investigate students’ levels of satisfaction regarding *myUnisa*. As the study has already revealed that not all students in UNISA use *myUnisa* learning management system as a communication channel, this question was responded by 228 respondents (65.1%) who indicated earlier in this study that they use *myUnisa*. Therefore, the response rate to this question remains 65.1%.

The researcher asked the respondents to rate their levels of satisfaction on *myUnisa* as an electronic communication medium in their studies. Respondents had to indicate whether *myUnisa* as a communication medium is commented to be ‘very good’, ‘somewhat good’, ‘somewhat bad’ and ‘very bad’ as well as whether respondents were undecided. For those who were neutral or undecided the option provided was ‘I do not know’.

Table 22: Level of effectiveness of study fees quotation

		Educational Level		Total
		Second year	Third year	
Study fees quotations	Extremely effective	21	22	43
	Less effective	15	17	32
	Effective	19	16	35
	Not effective	48	32	80
	Extremely non-effective	23	15	38
Total		201	149	350

Of the 228 respondents who use *myUnisa*, about 166 respondents responded that *myUnisa* as a communication channel is *somewhat good*. This is the bigger proportion of those who responded to a question and contributed 72.8%. To be specific, this 166 total number of respondents who indicated that *myUnisa* is somewhat good was the combination of 103 (45.2%) respondents from the second year level and 63 (27.6%) respondents from the third year level. It was worthy to know that of these 166 respondents, 75 (32.9%) were males and 91 (40%) were females. In addition, there were 40 respondents (17.5%) whose age group was 31-35 years. This was the highest number of the respondents who indicated that *myUnisa* is *somewhat good* while the fewer respondents, about 23 (10.1%), were between the age of 15 and 20 years. The meaning communicated by these results on students' satisfaction level on *myUnisa* is that indeed students are satisfied but there are other things that do not satisfy them when using *myUnisa*.

The results also revealed that *myUnisa* is generally not bad at all. This was confirmed by the fact that there was no one from the age group of 15-20, 21-25 as well as 36 and above who indicated that *myUnisa* is *very bad*. Quite interestingly, not even a single female respondent reported that *myUnisa* is *very bad*. Male respondents were only two, contributing 0.9% to the total of 228 respondents who use *myUnisa*. Even those who indicated that it is *somewhat bad* were few, amounting to only a total of 11 which is 4.8% contribution to the 228 respondents who use *myUnisa*. These results suggest that although students do not see *myUnisa* as a *very bad* communication channel, it is on the other hand not a good communication channel.

In question 18 of the survey, respondents were required to rate their level of satisfaction on *myUnisa* applications. These applications were academic records, bibliographical details, change password, edit registration, examination results, examination time table, financial tracking, and study fees

quotations. The researcher used the same measurement scales used to determine the students' satisfaction level on *myUnisa*, namely completely satisfied, satisfied, neutral, dissatisfied and completely dissatisfied. The results showed that a total of 159 respondents who contributed 69.7% to the 228 respondents who use *myUnisa* indicated that they are *completely satisfied* with the 'academic records' application of *myUnisa*. These results show that the 'academic records' application on *myUnisa* is recognised as an important online tool by a huge number of those students who use *myUnisa* learning management system. The study went on to reveal that the 'bibliographical details' application is not important to the students. This was confirmed by the fact that only one respondent reported to be *completely satisfied* with it.

A huge number of the respondents (97%) which contributed to 42.5% of the 228 respondents who reported to use *myUnisa*, indicated that they are *dissatisfied* with the 'bibliographical details' application of *myUnisa*. Similar to this result, a larger proportion of the respondents indicated that they are dissatisfied with the 'change password' application of *myUnisa*. There were 89 respondents who indicated that they feel dissatisfied with the 'change password' application and these group of respondents made up 39% of those who responded to this question and 25.4% of the total 350 respondent who participated in the study. Regarding the satisfaction level of students on *myUnisa*'s 'edit registration' application, 163 respondents indicated to be neutral. This means that they are not sure if the 'edit registration' application is either satisfactory or dissatisfactory. This suggests that there is a need to make improvement on the edit registration application of *myUnisa* so that many students can use and feel satisfied with the tool.

UNISA students are completely satisfied with the 'examination results' and 'examination time table' online tools of *myUnisa*. The results of this study showed that of the 228 respondents who indicated that they use *myUnisa*, 188 respondents indicated that they are completely satisfied with the *myUnisa* 'examination results' application. This figure contributed 65.3% to the total number of the respondents who use *myUnisa* and 53.7% to the total number of 350 respondents. Respondents also revealed that they are *completely satisfied* with the 'examination time table' application on *myUnisa*. There were 191 respondents (83.8% of the 228 respondents who use *myUnisa*) and 54.6% of the 350 total respondents in the study. The results on the 'examination results' and 'examination time table' applications reflected that a huge number of UNISA students deem these online tools as highly important in the learning process.

Regarding the 'financial tracking' application of *myUnisa*, many students were not sure if it works for them. The study showed that the larger proportion of the respondents indicated that they are *neutral* which shows that they are neither satisfied nor dissatisfied with the tool. There were 84

respondents who chose the neutral item. This was 36.8% of those who use *myUnisa* and 24% of the 350 total respondents who took part in the study. The last *myUnisa* application to be investigated was the ‘study fees quotations’ in which the larger proportion of the respondents who use *myUnisa*, that is, about 72 respondents (31.6%) and 20.6% of the total number of 350 respondents indicated that they *dissatisfied* with it.

Table 23: Experience and satisfaction level of the students on *myUnisa*

							Total
	Second year	16	103	11	8	0	138
	Third year	11	63	11	3	2	90
Total		27	166	22	11	2	228
	Male	11	75	10	7	2	105
	Female	16	91	12	4	0	123
Total		27	166	22	11	2	228
	15-20 years	3	23	2	2	0	30
	21-25 years	3	34	2	2	0	41
	26-30 years	11	37	6	2	1	57
	31-35 years	4	40	8	3	1	55
	36 and above	6	32	4	1	0	44
Total		27	166	22	11	2	228

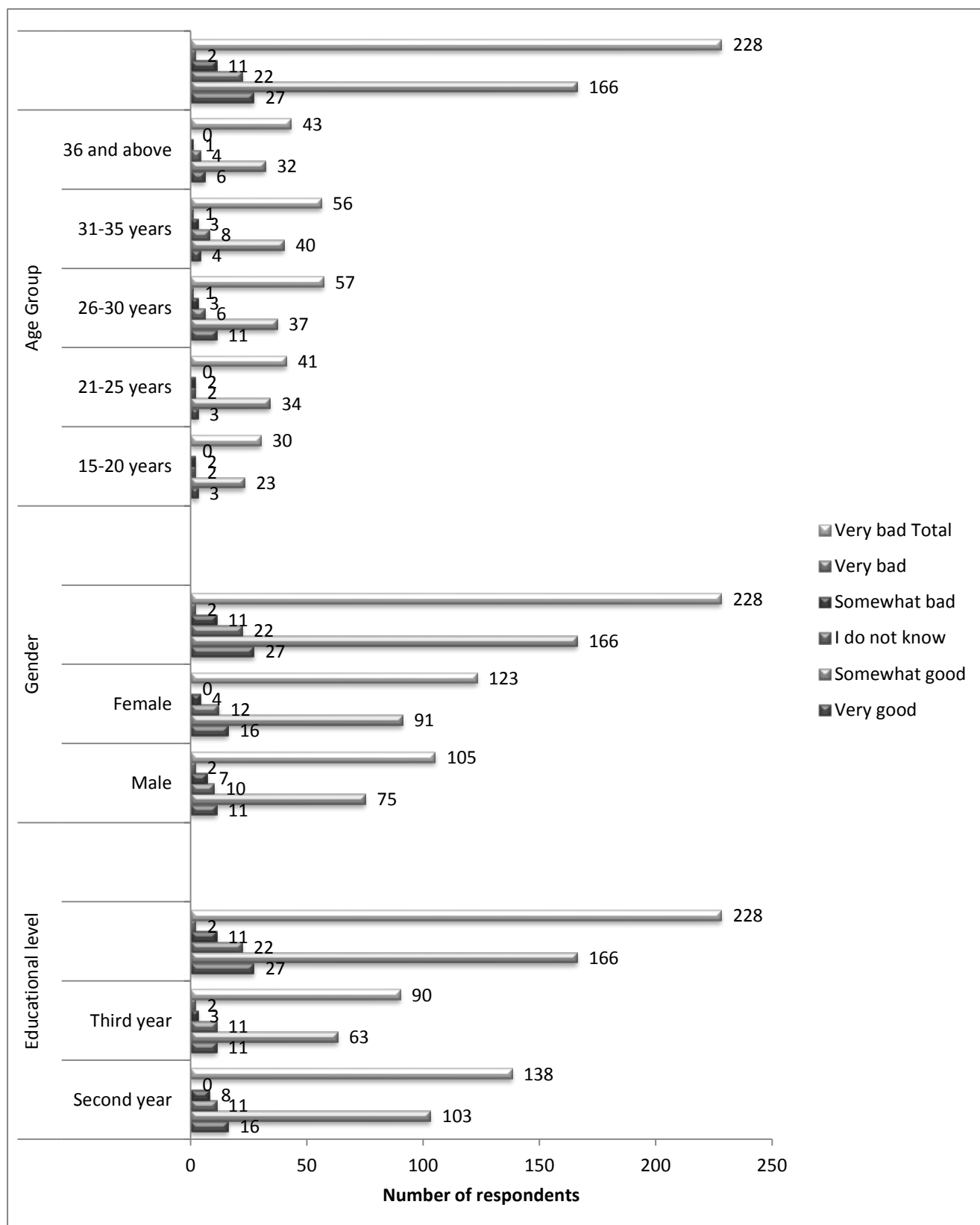


Figure 12: Graphic representation of level of satisfaction on myUnisa

The next question in the survey, also referred to in this report as the self-administered questionnaire, was aimed at determining if students encountered problems with *myUnisa* as the learning management system, and an electronic communication channel and a tool. This was question 19, *are there any problems you encounter when using myUnisa as an extranet and a communication channel?* Respondents were required to indicate yes or no as per whether they find the answer applicable to them. This question was responded to by all who participated in the study, resulting in a 100% response rate.

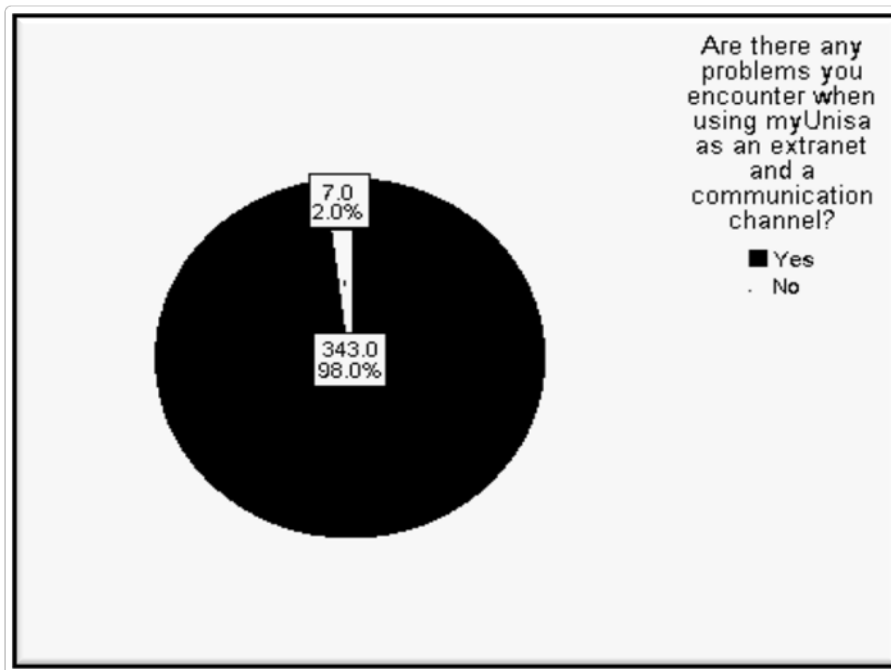


Figure 13: Pie Chart showing distribution of respondents who said 'Yes' Vs those who said 'No'

The results of the study showed that 343 respondents (98%) indicated that they encountered problems when using *myUnisa*. Only a proportion of 7 respondents (2%) indicated that they do not encounter problems when they use *myUnisa*. These results show that although certain students were comfortable with using some of *myUnisa* applications, they still felt that there should be an improvement made on this learning management system and communication channel. As reported earlier in other presentations of the results, the fact that 228 respondents indicated that they use *myUnisa* serves as a reflection of the importance of *myUnisa* in the learning process of the students. Question 20 of the survey required students to mention problems they once encountered when using *myUnisa* and are as follows:

- Many of these students identified 'information overload' particularly during the due dates of the assignments or the exam portfolios. According to the students, this problem is the biggest one as it frustrates students and lowers their morale.

- Another problem which was identified by many respondents relates to resubmission of the assignments and portfolios. Respondents showed that if they make a mistake during the submission of the assignment or the examination portfolio and wants to resubmit a day after the due date, *myUnisa* does not allow such.
- Another problem which results in students not using *myUnisa* in their learning process, particularly as a communication channel is that there is more of a one-way communication rather than of a two-way communication and many of these students want to engage themselves in a two-way communication. “Two-way communication is only possible through online forums as only few students registered in a specific module participate”, said one of the respondents.

Some of the respondents reported that they do not use *myUnisa* because they forgot their passwords and they cannot retrieve them using *myUnisa*. Instead, students are required to first have *myLife* accounts (which is e-mail addresses for UNISA students only) in order to have their *myUnisa* passwords. These passwords are sent to the *myLife* accounts and students can retrieve them there. “This process to register for *myUnisa* is just too long and takes a lot of time” said one of the respondents.

Other respondents reported that *myUnisa* could be useful but going to internet cafes and purchasing airtimes to access internet in the mobile phones is costly. Instead, they opt to study at home and communicate with other fellow students through social media such as ‘whats app’. One the respondents said “I sometimes use telephones if I need to request prescribed books from students who are my friends or ‘whats app’ for some others”.

Another problem was that communication through *myUnisa* is limited to specific UNISA structures. For example, some students revealed that they cannot communicate with UNISA staff from Despatch, Library, ICT, Corporate Communication and Registration department. “It is boring because communication is only between the students and the lecturers, and students themselves and that’s it. So if you want to direct your enquiry to the Despatch you have to use an e-mail account, preferably *myLife* account or make a phone call”.

Because of the problems that *myUnisa* presents to the students, question 21 required students to comment if UNISA should get rid of *myUnisa* or not. Respondents were provided with two options to tick, namely Yes or No.

Although respondents identified a number of problems with *myUnisa*, all the 350 participants said UNISA should not get rid of *myUnisa*. This shows that certain *myUnisa* applications are effective to the students. Moreover, it also shows that *myUnisa* is important but needs to be improved to function more effectively and to the benefit of the students. It was interesting to realise that even

those respondents who did not use it, still consider it as important, especially to those without access to the internet.

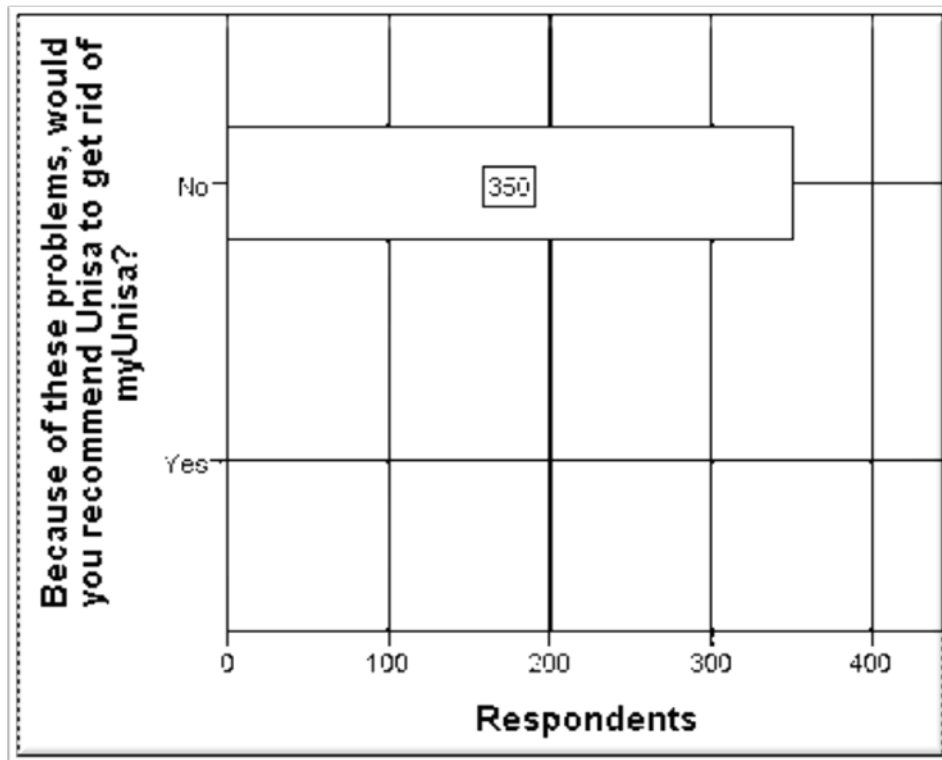


Figure 14: Getting rid of *myUnisa*

In question 22, respondents were required to indicate whether they agree, disagree or not sure with the provided statements. The first one was ‘*myUnisa helps me well to study at UNISA*’. The response rate to this statement was 65.1%. The results show that there were 198 respondents (who made up 86.8% of the 228 respondents who use *myUnisa* and 56.6% of the 350 total respondents in the study) who indicated that they agree with the statement. Only 9 respondents who contributed 3.9% of those who use *myUnisa* and 2.6% of the total number of 350 respondents *disagreed* with the statement. This result reflects that *myUnisa* helps students to study.

Statement number two, “*myUnisa should be used alone as a mode of teaching and learning in UNISA*”, in question 22 received 100% response rate. About 298 (85.1%) respondents *disagreed* with this statement; 12 respondents (3.4%) *agreed* and 40 (11.4%) were *not sure*. These results show that both *myUnisa* and other traditional ODL modes of delivery are important to UNISA students and should be used together in learning and teaching.

A huge proportion of the respondents disagreed with the third statement of the question 22 which stated that *the use of myUnisa is a waste of time*. There were 325 respondents who disagreed, contributing 92.9% to the total number of the 350 respondents who participated in the study. While only 134 respondents were males, 191 were females. This means that 91.2% of male respondents

and 94.1% of female respondents disagreed with the statement. As a result, it can be deduced that the bigger proportion of the female students at UNISA considers *myUnisa* as useful and important of their studies.

About 320 respondents (91.4%) *disagreed* with the fourth statement that “*communication through myUnisa is better than face-to-face communication*” while only 11 (3.1) *agreed* and 19 of them indicated to be *not sure*. Of this 320 respondents who disagreed with the statement, male respondents were 137 whilst female respondents were 183. This means that 93.2% of male respondents and 90.1% of female respondents disagreed that communication through *myUnisa* is better than face-to-face communication. Therefore, this serves to suggest that most of UNISA’s male students as compared to female respondents see face-to-face communication as better than that which takes place through my *myUnisa* learning management system.

On statement which says: “*Both myUnisa technology and hard copy study materials are equally important in learning*”, all respondents indicated that they *agree*. According to students, both *myUnisa* and the use of traditional means of study such as using books, articles, and communicating with UNISA through telephones, faxes, post services and others are still important in the learning. This also suggests that the two modes of learning and teaching (namely, online and traditional modes) must be integrated for effective learning and teaching.

The last statement of question 22 was “*myUnisa should be used together with social media to teach and learn*”. Interestingly, the highest proportion of about 168 respondents (48%) *disagreed* with this statement. There were 51.2% of female respondents and 43.5% of female respondents out of these 168 respondents. While 72 (50%) of male respondents *agreed* that *myUnisa* should be used together with social media to teach and learn, female respondents were 78 (38.4%). This means that many of UNISA female students do not approve that *myUnisa* be used in integration with the social media such as the Facebook, Whats app, twitter, and others to teach and learn.

The last section of the questionnaire/survey dealt with respondents’ general comments on everything involving *myUnisa*. There were only two questions asked (question 23 and 24).

10.2.5 SECTION E: GENERAL COMMENTS

Question 23 which stated that: “*In your opinion, what do you think UNISA should do to improve myUnisa?*”, revealed that there are lot of improvements that need to be done to make *myUnisa* an effective online learning system and a communication channel between the students and the variety of university structures. Many of the respondents pointed out technical problems such as ‘information overload’, and unavailability of *myUnisa* tool during crucial times such as when the students should send their assignments and examination portfolios. One of the respondents wrote in

her questionnaire that *“UNISA should work on improving the capacity and bandwidth of myUnisa to prohibit the problem of ‘information overload’ during the closing dates of the assignments. Otherwise myUnisa is not bad at all”*.

Other respondents stated that it seems as if *myUnisa* as a communication channel is not doing what it was designed for. As written by one of the respondents as follows: *“I think myUnisa was designed to bridge the gap between the university and the students, and at the moment it is mostly a communication channel for one way communications that are in a form of announcements, advertisements, and delivery of study materials. UNISA should make it a two-way communication channel other than through online forums where very few students participate”*.

Other respondents raised the issue of time taken to open the *myUnisa* page. “It sometimes takes more time, approximately two to five minutes, to open the page and some of us are not patient as such. We end up not using it. UNISA should look for best possible solution to solve this problem”, wrote one of the respondents.

The last section of the survey was the general comments and it focused on general opinions from the respondents on how *myUnisa* should be improved as well as other comments relating to the use of extranet in the higher education sector, particularly for the application in the students’ learning process and more as a communication channel. The results revealed that there is a need to improve *myUnisa*. The extranet too should be considered vital in the learning process and should be one of the preferred learning systems. The results from the qualitative phase of this study validated that which were arrived at through quantitative phase. As have been shown in the quantitative phase, qualitative results reflected that although *myUnisa* as a communication channel is considered useful and important in the students’ studies, there are areas in *myUnisa* tool that needs to be improved. For instance, the problem of information overload during the closing dates for assignments and examination portfolios must be crucially and critically looked at.

The “general comments section” of the questionnaire also generated information about the problems of effectively using *myUnisa* whereby it was stated that the use of *myUnisa* and some of its applications or tools requires certain skills such as basic computer literacy skills. This problem was once realised in other similar studies conducted prior to this one. These research findings supported Emmanuel and Ngiye’s (2011, pp.230) findings in a similar study that online technology presents a challenge to the students because it requires basic computer literacy skills. Murphy and Cifuentes’s (2001, pp.285) study on using Web tools, collaborating and learning online in education institutions also found the same results. Respondents also mentioned that the use of *myUnisa* makes them feel isolated. They therefore suggested that the discussions classes must continue to be held.

10.3 DATA PRESENTATION AND ANALYSIS: RESULTS FROM QUALITATIVE PHASE

The purpose to employ a qualitative methodology in this study was to complement and validate the results determined through quantitative methods and to get a deep understanding and breadth of the investigated phenomenon. This makes the study predominately quantitative which is also called quantitative-qualitative dominant (Johnson, et al. 2007, pp.124). The in-depth interviews with the UNISA staff members were conducted between March and April 2013 in their offices. The data were collected from the librarian, Despatch department, Registration department, ICT department and the lecturers. The researchers interviewed two staff members per department. The researcher developed and used the interview guide consisting of both close-ended and open-ended questionnaire. There were fourteen questions asked in the interview guide. The first question was incorporated in the interview guide to draw the attention of the respondents in order to make them feel free and to realise their maximum participation.

10.3.1 INSTRUMENTS (INSTRUMENTATION) FOR COLLECTION OF THE QUALITATIVE DATA

Instruments are tools that a researcher develop or select which are used later to make observations (collected or recorded as primary data) of the research project (Shea, McGaghie and Pangaro, 2001, pp.931). The researcher used the interview guide and the digital tape recorder to collect data.

10.3.2 DATA ORGANISATION

According to McGaghie et al. (2001, pp.923), it is important to organise and analyse data in order to achieve coherent results. In this research, data were organised and analysed with this view taken into consideration to present well organised coherent findings.

Owing to the fact that it was not easy to isolate data or group them question-by-question, the researcher had to group them according to the identified themes or categories. This was in line with the InSites's view (2007) that if it is difficult to separate the data question-by-question, the researcher can categorise them according to the patterns or themes. At its most elementary, when organising data, "if there are several research questions, hypotheses or important findings, the results section may be best presented as a series of subsections, with each subsection presenting the results that are relevant to a given question, hypothesis or set of findings" (McGaghie, et al. 2001, pp.293). In this research, the presentation of findings was organised in terms of themes and set of findings and not in terms of questions as in the questionnaire used in the quantitative phase.

The fact that the quantitative method such as the questionnaire was used in the first phase of this study to collect data also made it easier to group themes for qualitative analysis. The following themes were identified:

- Uses/role of *myUnisa* as a communication medium;
- The benefits staff members derive from using *myUnisa* in the communication with the students;
- Staff members' experiences of *myUnisa*;
- Staff members' levels of satisfaction in using *myUnisa*; and
- Effectiveness of *myUnisa* in communications with the students.

This section presents qualitative findings which were collected using the tape recorder and the jotted down responses from the participants as derived from the interviews. These findings are from the staff members' perspectives. The data were analysed using thematic categorisation. The first theme is on the uses and the roles of *myUnisa* extranet as a communication tool. The next theme presents findings on the experiences and satisfactions of the staff members on *myUnisa* extranet in their communication with students. Thereafter, the section continues with the discussion by presenting analysed findings about the challenges and problems on *myUnisa* extranet. The fourth theme is on the findings relating to the effectiveness of *myUnisa* extranet as a communication tool.

10.3.3 RECORDED DATA

The recorded data were transcribed. The researcher captured only information necessary or deemed important to the study. When transcribing the tapes, the researcher indicated who was speaking (an interviewer or the respondent) along the left side of the transcript. A wide right margin was reserved for coding and giving comments.

10.3.4 FINDINGS

The findings from the in-depth interviews with the key informants or UNISA's staff members are presented in tables below. Each table presents findings that relate to a particular issue as identified by the respondents. This is a thematic analysis, also known as relationship-based classification (Ji, Zhang and Nisbett 2004). To a general question aimed at freeing the participants and maximising the participation interest, respondents were asked to comment on how they feel about working at UNISA. Interestingly, all the interviewed staff members reported that they feel good to be working at UNISA.

THEME 1: USES/ROLES OF MYUNISA AS A COMMUNICATION CHANNEL

This study was informed by the *uses and gratifications theory* which holds the view that people use particular communication mediums for specific reasons and to satisfy their needs and expectations. Raacke and Bonds-Raacke (2008, pp.170) contend that uses and gratifications theory accentuates

the essence of individual people in deciding what media to use, how to use it and what gratifications will such media fulfil to the user.

Media include television, radio, the internet and print media such as newspapers and magazines, as well as books. Uses and gratifications theory is considered important, in this study, and applicable to explore and explain the use of extranets in higher education institutions and for the purposes in which both students and lecturers use them. *MyUnisa* is an internet-based communication tool that was developed for UNISA in 2006 to promote communication between the students and the university structures, particularly between students and the lecturers. Therefore, it is important to investigate how students and various UNISA departments use *myUnisa* and how it helps to meet their needs. Questions 2 and 3 of the interview-guide were asked to gather information on the use of *myUnisa* as a communication channel and how it is used by the segmented participants in their communications with the students and lecturers. Question 13 was asked to check if there is a need to make an improvement on *myUnisa*. This theme addresses one of the objectives of this study to *determine the role of myUnisa as an extranet and a communication medium in students' learning process*.

The responses from interviews are quoted verbatim and therefore not edited for grammar mistakes.

Table 24: Theme 1: Uses and roles of *myUnisa* as a communication channel

PARTICIPANTS	RESPONSES/ DATA PRESENTATION AND INTERPRETATION
Librarians	<p>Both the first and the second participants from the UNISA Muckleneuck campus library responded that they do not get engaged in interactive communications with the students through <i>myUnisa</i>. If students want to ask questions to the librarians, they complete a form which requires the following aspects:</p> <ul style="list-style-type: none"> - the name of the student/staff member asking a question; - an e-mail address and phone number to which the response will be addressed; - the student number/ personnel number; - module/s (their names and codes) registered for; - educational level (such as postgraduate, undergraduate, etc.); - question and why asking (or what do need the assistance for); - when do you need such requested assistance; and - an indication of the sources students/staff members checked.

	<p>Once the student has submitted the details of an assistance he/she wants, a response may be through the telephone or an e-mail. At this stage it is mostly interactive.</p> <p>Requests for articles and books are submitted @http://oasis.UNISA.ac.za while requests for a specific focus of an investigation (literature) are submitted to an in-depth literature search. It was interesting to note that although there are communication channels for different types of communications available for both students and staff members, a bigger pool of the both students and staff members prefer to use other means to communicate with the librarians. The second librarian attested this. “You see students are funny, many of them come all the way from their homes to request articles or books, things that they could easily get via posts or e-mails, and that’s in turn save their times.” The ICTs are intrinsic in extending opportunity to learn to people from disadvantaged backgrounds who do not afford costs associated with attending traditional classes in which learning and teaching take place through face-to-face form of communication (Emmanuel and Ngiye 2011:223) . Academics too, do not use the in-depth literature search or the oasis page. Instead, many of them come personally to the library or send an e-mail to their assigned departmental librarian”.</p> <p>This means that the use of new technology such as <i>myUnisa</i> is still a challenge to both the students and lecturers. It also means that there is a lack of information on available channels for the communications with the UNISA library.</p> <p>According to the interviewed librarians, the UNISA library uses different tools such as the Oasis website, e-mails, in-depth literature search, faxes, telephones and posts to communicate with their students or UNISA staff members. Emmanuel and Ngiye (2011:226) believe that if different ICTs are used in integration, they can result in the provision of quality education and teaching to students.</p> <p>This means that they use both the traditional modes and contemporary modern modes of communications. For example, whereas the telephones and posts are the conventional channels of communications, the e-mail and other specified</p>
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	online tools such as the in-depth literature search are modern technology-based channels of communications.
Despatch	<p>The UNISA Despatch department is responsible, amongst other tasks, in posting tutorial matter to the students and lecturers. Students track their study materials, ask about them as to when will they receive their materials. All the participants from the Despatch department revealed in in-depth interviews that although <i>myUnisa</i> was developed to promote access to UNISA materials and communications between the University and the students, Despatch staff members and the students do not communicate through it. One of the participants said: “I understand the importance of <i>myUnisa</i> in communications with the students because we do not use it for that at all”. Asked how they communicate to the students, the same participant said “Most of the queries I receive come through students’ private e-mails, telephones and UNISA students e-mails called <i>myLife</i> account”. It became clear that the meaning contained in the responses of the Despatch staff members is that <i>myUnisa</i> is not benefiting them in communications with the students. It also became evident that both <i>myUnisa</i> is not a replacement of the conventional communication channels, such as the use of telephones but fulfilling a complementary function. This means that both the conventional and modern channels of communications are vital in communications between the students and the Despatch staff members.</p> <p>Although the Despatch staff members indicated that they do not use <i>myUnisa</i>, they described it as a vital tool and communication channel because it enables students to track their study materials. The findings from interviews with the Despatch also showed that the Despatch staff members know why <i>myUnisa</i> was established, that is, to promote communications with the students. When asked to comment if <i>myUnisa</i> is achieving its goals, they all revealed that there must be an improvement to make it an interactive channel of communication. One of the respondents said: “At the moment is partly achieving its goal but on student-lecturer communication. On our side it is not”.</p>
Registration	UNISA Registration department provides, amongst other duties, administrative support services and advice and register students. Participants

	<p>were asked on how they use <i>myUnisa</i> to communicate with their students on issues relating to their daily work responsibilities. The in-depth interviews showed that the staff members give advices to the students on one-to-one situation because many of the students prefer to personally come to the campuses to register.</p> <p>It was interesting to note that the Registration department staff members do not use <i>myUnisa</i> for their communications with the students. One of the participants said: “I think <i>myUnisa</i> is only useful for registration because some of the students register online using <i>myUnisa</i>, but when it comes to advices, students phone us or rather come personally to the premises to seek advices. Others use e-mails”. When asked if <i>myUnisa</i> is achieving its goal, the Registration department staff members said “yes”. One of them supported that by saying “if people are able to register through <i>myUnisa</i>, it shows the extent to which it is important. But comes to communication with us as the staff members, I think UNISA must do something. There are no communications we hold through it unless through the phones, e-mails and rarely through faxes as well or when they come to the registration department”. Although the Despatch department staff members indicated that <i>myUnisa</i> is achieving its goal of promoting communication between students and the various university structures, the findings showed that it is not achieving that because there are no communications taking place between the Registration department and the students through <i>myUnisa</i>.</p>
ICT	<p>An in-depth interviews with the ICT department also revealed that <i>myUnisa</i> is valued an important online tool and a communication channel for the university and the students. Participants from the ICT were also asked to comment on how they use <i>myUnisa</i> to communicate with the students. Interestingly, the findings showed that</p> <p>ICT do not often hold communications with the students on <i>myUnisa</i> as one of the participant reported: “We do not often directly communicate with the students. We communicate with various UNISA departments on mostly problems encountered by the students when using <i>myUnisa</i> such as when the system is down”.</p> <p>Other technical issues such as problems relating to passwords of both <i>myLife</i></p>

	<p>and <i>myUnisa</i> are dealt with by the Department called MyUnisa. These incorporate technical problems such as if the students have forgotten <i>myUnisa</i> passwords or <i>myLife</i> passwords. This was discovered during the interviews with the ICT participant. Requests to reset the passwords are sent to MyUnisa Section operating from Florida campus and they will reset them and thereafter the students can use them. Sometimes students send these requests themselves. “On our side we place announcements on the <i>myUnisa</i> website or on a specific registered module but also on request by the department”.</p> <p>This means that <i>myUnisa</i> is a significant communication as students can access announcements on <i>myUnisa</i> pages. The researcher further asked if there are other problems on <i>myUnisa</i> sent to ICT other than the password-based ones. The study revealed that these problems are administrative and have to be addressed by the department concerned. One respondent said: “Sometimes students encounter problems when trying to register their modules because they lack a particular skill or they want to request the articles using <i>myUnisa</i>. The Library can show the students how to do a request on <i>myUnisa</i>. That is an administrative responsibility”.</p> <p>This means that although <i>myUnisa</i> is important in serving as a communication source and a channel, it presents so many challenges that are either administrative or technical.</p> <p>To the question on whether <i>myUnisa</i> is achieving its goal, the ICT participants indicated that is important given the nature of the Open Distance Learning like UNISA, but as an interactive tool it is much better in student-lecturer communications than in the case of other departments. “So far it is partly achieving its goal but skills to use it must be transferred to the students to administrative eliminate problems they sometimes experience” said one of the participants.</p>
Lecturers	<p>Findings from the in-interviews with the lecturers showed that <i>myUnisa</i> is used for student-lecturer communication. According to the participants, lecturers use <i>myUnisa</i> to communicate via online forums where they discuss with the students on different topics of a particular specific module. This finding corroborates with Tilwaldi et al.’s (2010, pp.36) study that students</p>

	<p>benefit from learning online with lecturer executing a guiding role. This is one of ways to communicate interactively to the students.</p> <p>Other than this mode of communication taking place through <i>myUnisa</i> channel, the study discovered that lecturers use <i>myUnisa</i> for distributing information on the availability of student jobs such as the academic assistants, research assistants and administrative assistants. U&G theory theorise that people use a particular media channel for certain reason and to fulfil certain needs and derive pleasure in doing so. One of the participants remarked: “<i>myUnisa</i> is quite pivotal in recruiting students for assistant positions such as research, administrative and academic assistants as well as for communications through online forums”.</p> <p>In addition, the study also found that the type of communications that often occur through <i>myUnisa</i> is one-way to the students as compared to the two-way communications. This, in the view of one of the participants, is still a weakness of <i>myUnisa</i> portal. For example, one participant said: “The problem with <i>myUnisa</i> is that it serves as a source from which students get information about UNISA and their studies and not as a communication channel through which they can exchange messages with university departments except through forums”. However, the overall view of the lecturers was that <i>myUnisa</i> is useful and beneficial and it supplements other channels to communicate with the students. Participants identified those channels to be the telephones, faxes, e-mails and the use of UNISA website for postings UNISA matters that also seeks the attentions of the students.</p>
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THEME 2: EXPERIENCES AND SATISFACTIONS OF THE STAFF MEMBERS ON *MYUNISA* IN THEIR COMMUNICATIONS WITH THE STUDENTS

This theme addresses the following two objectives of this study:

- To determine the experiences and the satisfactions of the staff members regarding *myUnisa* as a student-staff member communication medium at UNISA; and

- To determine how effective is UNISA's extranet, (*myUnisa*), as a medium, in communicating with UNISA students.

Akkirman and Harris (2004, pp.397-402) conducted a study to determine and compare satisfaction levels of virtual office workers and traditional office workers. The findings showed that virtual office workers are more satisfied with organisational communication than traditional office workers. *MyUnisa* as a new media technology and a communication channel is an epitome of a virtual workplace in this study. Virtual workplace is, in the words of Crandall and Wallace (1998, pp.9), "networks of people, a workplace where work is done anytime [sic] and anywhere, and not bound by the traditional limitations of time, physical space, job descriptions, title, and pyramidal reporting relationships"

To generate information on this theme from the in-depth interviews, staff members were asked to comment on the current situation of *myUnisa* and to elaborate on whether it is good or bad as a communication channel for their communications with the students. The following tabled information was generated:

Table 25: Theme 2: Experiences and satisfactions of staff members on *myUnisa* in their communications with students

Participants	RESPONSES/ DATA PRESENTATION AND INTERPRETATION
Librarians	<p>Participants from the library showed that <i>myUnisa</i> is a good online tool to access and request study materials from the library, such as books and articles. "MyUnisa is a very good online source for UNISA students but the problem is that very few students realise it. For example, it reduces costs associated with travelling to the campus and it is user-friendly. I am happy of how it works technically and the benefits it offers to us as the staff members and the students. Through this channel we are able to receive requests for articles, for instance, from people as far as Ethiopia and Zimbabwe".</p> <p>This response shows that the librarians are satisfied of <i>myUnisa</i> because it is user-friendly and it enables them to reach UNISA students anywhere they are in the world. This finding supports Akkirman and Harries' (2004) findings that workers in virtual environments are more satisfied by the organisation communication. Their experiences of <i>myUnisa</i> also revealed that it is a good communication channel. From these findings it can be deduced from the librarians' perspectives that <i>myUnisa</i> is effective.</p>
Despatch	Contrary to the librarians' experiences and satisfaction level on <i>myUnisa</i> as

	<p>communication tool and a channel, participants from the Despatch department responded to the interviews that other than tracking the study materials, <i>myUnisa</i> is not beneficial, particularly on issues that need the attention of the Despatch. All the participants showed that <i>myUnisa</i> becomes useful and effective in the distribution of information in the form of an announcement which is done through the ICT department on request. One of these participants said “Because we do not communicate directly to the students through <i>myUnisa</i>, but through e-mails, it becomes less important in using it as a communication channel. As a result, I can’t even say I am satisfied about it or not.”</p> <p>When asked to state and support whether it is good or bad, all the participants said it is good to have it but not effective because they do not even use it. “Unless if the ICT department can design ways for us to communicate directly to the students, maybe in the form of online forums, where we can discuss administrative issues about our services, then it may be effective”.</p> <p>These findings showed that <i>myUnisa</i> is not a communication channel for communication between the students and the Despatch staff. It also becomes clear that the despatch staff members are not satisfied of the current state of the <i>myUnisa</i> because it is not applicable to them. The tool is not effective to them.</p>
Registration	<p>The in-depth interviews with the staff members from the Registration department indicated that <i>myUnisa</i> is not an effective communication channel. However, it is deemed an imperative online tool in the registration process. “As regards the communications with the students, I think it is important in posting news and announcements about registration”, said one of the participants. The other participant said “The actual registration requires student to have the student number and a free <i>myLife</i> e-mail created and given to the student by UNISA, after which communications to the student on the outcomes of the registration is then done through SMSs, an e-mail and a letter. This to me makes <i>myUnisa</i> a useless communication channel on the registration matter, and it is of course ineffective”.</p> <p>This view of the Registration department on <i>myUnisa</i> as a communication channel supports the Despatch’s view that <i>myUnisa</i> is not effective. However, it is considered an important tool for editing registration. One of the participants said in an interview, “I can say it is effective when the registration process is completed because the students can edit the registration on his/her own; the student can cancel</p>

	<p>the module for which he was registered; can trace the parcel number; can check when was the study material despatched; can register additional units; and can change the semester for a specific module to study.”</p> <p>The question asked to seek for the experiences of Registration staff members on <i>myUnisa</i> as a communication channel revealed that they regard it as a good online source about jobs for students, news on UNISA and other various matters. However, many of the staff members are concerned about <i>myUnisa</i> and say that many students do not use it and instead come to the campus for cancellation of the modules, editing of the registration, tracking the registration status, and checking the parcel number. These, according to the participants, led to long queues in the registration hall and ultimately increase workloads. “Long queues during registration make me feel unsatisfied with how <i>myUnisa</i> is currently used” vowed one of the participants.</p> <p>From the perspective of the Registration staff members, <i>myUnisa</i> is not fully achieving the goal for which it was meant during its conceptualization. It also shows that Registration staff members are unsatisfied with it if students are not using it for registration matters.</p>
ICT	<p>Interviews with the participants from the ICT department revealed interesting findings; the experiences of the ICT participants on <i>myUnisa</i> as a communication channel are the subjective accounts of reality. These participants indicated that they only deal with the technical aspects of the <i>myUnisa</i>, managing information distributed through <i>myUnisa</i> and making improvement on the workability and user-friendliness of the channel.</p> <p>Their subjective views upon the satisfaction level of UNISA staff members on <i>myUnisa</i> is that they send requests in large numbers to post on <i>myUnisa</i>, general announcements and news about UNISA and announcements on specific modules which in turn reflects a wide acceptance and recognition of the paramount fundamentality of this student online channel. Because of this, they think the university has achieved its goal of promoting communications between the students and the university structures. On the other hand, the ICT participants also indicated to have objective accounts of negative experiences of the staff members and the students on <i>myUnisa</i> as a communication channel. One of the participants said “The complaints we receive from the students or from the staff members on behalf</p>

	<p>of the students on encountered difficulties to login to <i>myUnisa</i>, send assignments or to use <i>myLife</i> accounts is a clear indication of an element of <i>myUnisa</i> that lowers staff members' and students' satisfaction levels. However, the ICT is satisfied of this online channel and we want to continue making it to be effective for the students in the learning process".</p> <p>This means that irrespective of numerous complaints on problems of <i>myUnisa</i> sent to the ICT, the ICT still feel satisfied of this online communication channel owing to the fact that various UNISA structures value it significant in communications with the students and use it to announce matters ranging from general UNISA information to specific information for specific group of students on specific registered modules.</p>
Lecturers	<p><i>myUnisa</i> as communication channel is considered important in teaching and learning at UNISA. The experience and the satisfaction of the students in using a particular technology to communicate or study are dependent upon various factors that impact on the students' performance. Hermans, Haytko and Mott-Stenerson (Sa, pp.1) argue that there are three crucial aspects to consider for students and lecturers in an internet enhanced course. These authors identified them as satisfaction with the instructor, perceived ease of use of the course technology, and satisfaction with the course".</p> <p>The findings in this study showed that lecturers have the positive experience of <i>myUnisa</i>. One of the interviewed lecturers said: "<i>myUnisa</i> is a good communication channel that enables interaction with the students anywhere they are, and at any time you want. We are able to send study materials in PDF to the students through the help of the ICT, announcements about the module students are registered for, advertisements of student jobs. Apart from these benefits we get, we are able to interactively communicate with them through online forums where topics are usually on a particular module for which students are registered."</p> <p>Lecturers were also asked to give their views on the extent to which they are satisfied with <i>myUnisa</i> as a communication channel. Responses revealed that they were satisfied. It was also stated that students are able to access their study materials such as the tutorial letters and previous exam papers, and to send multiple choice assignments through <i>myUnisa</i> which makes <i>myUnisa</i> an important education delivery mode.</p>

	From these lecturers' responses, it is deducible that UNISA lecturers are satisfied with <i>myUnisa</i> and label it as good in teaching and learning. They also consider it to be effective in learning, contributing to the success of the students.
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THEME 3: CHALLENGES AND PROBLEMS ON *myUNISA* AS A COMMUNICATION CHANNEL

This theme was geared to generate information on the challenges and problems encountered by the staff members. It addresses the same objective addressed in Theme 2 which was on experiences and satisfaction of the staff on *myUnisa* as a communication channel. However, the disparity between these two themes is that theme 3 focuses specifically on staff members' negative experiences and encountered difficulties in using *myUnisa*.

Question 8 and question 9 of the interview-guide were asked to find out the challenges and problems of *myUnisa* from the staff members' perspectives. The findings are presented and interpreted in the table below:

Table 26: Theme 3: Challenges and problems on *myUnisa* as a communication channel

Participants	RESPONSES/ DATA PRESENTATION AND INTERPRETATION
Librarians	<p>Even though <i>myUnisa</i> is an important technology-based mode of delivering educational contents to UNISA students, the in-depth interviews with the librarians showed that it also presents challenges to its users. Lack of necessary skill to use online communication channel is one of the greatest challenges students are facing. Kear, et al. (2004, pp.17) argue that the use of ICT can help students to study from a distance without experiencing some difficulties of being away from an academic institution. Quite interestingly, the findings of this study revealed that such a view is not applicable to all students. For practical example, in the words of one of the participants "the reason why some students decide to personally come to the campus to request books and articles rather than sending requests online using <i>myUnisa</i> as a communication channel is because they do not know how to use it".</p> <p>Given the nature of UNISA which has a huge number of students across the world, <i>myUnisa</i> is a necessity to be able to reach those students and for them to communicate with UNISA. The findings in this study also revealed that there is a lack of information on the portal and that some students are not aware that they can also communicate with Library department using <i>myUnisa</i> channel. Another</p>

	<p>participant remarked: “Most of the students do not read information about this learning management system and as a result, they end up not knowing its vitality when it comes matter pertaining student communications with the library”.</p>
Despatch	<p>Participants from Despatch department were interviewed and asked if <i>myUnisa</i> is giving them some challenges and problems when using it for communications with the students. It was found that <i>myUnisa</i> is not even used in this department and therefore there are no communications that occur between the despatch staff members and the students. One of the participants said: “We only use e-mails, faxes and telephones to communicate directly to the students and then too”.</p> <p>All the despatch communications with the students are in the form of news, and announcements and are put on <i>myUnisa</i> by the ICT department upon requests. The Despatch department receives queries from the students through e-mails, mostly <i>myLife</i> accounts.</p>
Registration	<p>UNISA is one of the five mega universities in the world with many people wanting to study through it owing to the fact that it is an open distance learning institution in which students determine for themselves the right pace to study, when to study and how to study. The registration process is usually stressful with many students queuing to register and others attempting to register online. With this in mind the researcher asked if there are challenges and problems on <i>myUnisa</i>, as a communication channel, that staff members from the registration department experience during registration periods.</p> <p>Quite interestingly, the study showed that no registration occur through <i>myUnisa</i> portal. However, the study found that there are challenges and problems encountered during registration. One of the participants said: “Although students do not register through <i>myUnisa</i>, we do communicate with them on the problems such as information overload, and unavailability of the internet network using the UNISA web and <i>myUnisa</i> as some of the channels”.</p> <p>In addition to these problems, the study revealed that sometimes students who want to add units on <i>myUnisa</i> fail to do so because the internet connection would be unavailable or the page does not open or there is no electricity in UNISA campus where the student is trying to register. In such circumstances, in the words of the participant, we communicate through UNISA radio, news on the UNISA web and announcements on <i>myUnisa</i> portal.</p>

ICT	<p>All participants concurred that <i>myUnisa</i> does present challenges and problems to the UNISA users. As one of the participants remarked: “In order to use <i>myUnisa</i>, the student must have <i>myLife</i> account. The researcher discovered that the ICT department work on technical problems such as when internet network for <i>myUnisa</i> is down. Other technical problems such as setting the passwords for <i>myUnisa</i> and <i>myLife</i> are the responsibilities of the Section called MyUnisa which operates from Florida campus. Upon exploring this, the researcher contacted the MyUnisa department telephonically and found that it is true many students forget passwords for these tools, ending up not using them. One respondent said: “We receive requests to reset passwords for <i>myUnisa</i> and <i>myLife</i> e-mail account. This is a serious challenge we have”. However, the collective view of the ICT participant was that <i>myUnisa</i> is a fundamental UNISA online system for monitoring and managing student learning processes. All the participants from the ICT and the MyUnisa department commented that the benefits that <i>myUnisa</i> has to the users outweigh the problems it presents. One respondent argued: “We are aware that sometimes students encounter problems trying to use <i>myUnisa</i> to submit their assignments, but every year UNISA experience a concomitant growth in the number of students who submit their assignments via <i>myUnisa</i>”. Clearly, to the great extent, <i>myUnisa</i> is effective and achieves some of the objectives for which it was designed.</p>
Lecturers	<p>All participants stated that <i>myUnisa</i> has problems and presents challenges, not only to the students but also to the lecturers who have to monitor the progresses of the students. Lecturers said it is difficult to access students in online forums available in <i>myUnisa</i> when there is no internet connection or when the electricity is down. One of the participants also mentioned that students like to wait until the last day for submission of the assignments and <i>myUnisa</i> is incapable to transmit those assignments to UNISA in a large number – an information overload. In an attempt to eliminate this kind of problem, as one of the participants puts it: “We always urge students to submit their assignments as early as possible because we know that <i>myUnisa</i> bandwidth is not able to carry a lot of assignments during those last days of submission.”</p> <p>It was also interesting to discover that some students make mistakes and submit the wrong assignments and later attempt to submit the right ones. <i>myUnisa</i> does not</p>

	allow for the second submission unless if it is different assignment with different unique code. The findings also showed that sometimes it takes long for <i>myUnisa</i> pages to open; resulting in students feeling bored and personally come to the UNISA campuses for submission of the assignments.
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THEME 4: EFFECTIVENESS OF *myUNISA* AS A COMMUNICATION TOOL

Communications with the students is an important element of sustainability of the higher education institutions in a competitive educational landscape. Communication channels for such communications become increasingly significant in ensuring the success of the students. Allen, Mabry, Mattrey, Bourhis, Titsworth and Burrell (2004, pp.402) assert that new media technologies change the process of communication in higher education institutions to achieve educational goals and that there is a need to investigate the impacts of such technologies on goals of those involved in a communication. Previous studies of communication systems such as an extranet showed that effective communication is highly important than in traditional settings (Conner, 2003; Akkirman and Harris, 2004). Effectiveness of communication channel is when people using a particular communication channel are able to achieve the purpose for communication they were engaged in (Westmeyer, Dicciocio and Rubin, 1998, pp.27). This theme (theme 5 of the qualitative findings) presents findings and interpretations of such findings on the effectiveness of *myUnisa* as an electronic communication channel for the communication between the UNISA students and its structures.

Table 27: Theme 4: Effectiveness of *myUnisa* in communications with students

Participants	RESPONSES/ DATA PRESENTATION AND INTERPRETATION
Librarians	The interviews with the librarians showed that many students choose to come to the library personally than to request books and articles online. It is an indication that <i>myUnisa</i> is not considered effective as one of the participants put it, “I think students do not like it when it comes to using it for requesting study materials from the library. Perhaps they do not understand the benefits it offers to them or they do not understand the nature of our university”.
Despatch	Similar to the findings from the librarians on whether <i>myUnisa</i> is effective or not, participants from the Despatch department said since they do not communicate with the students on <i>myUnisa</i> , they see it as not effective in the department. However, they also said it is good to have it because some students are far away from UNISA

	campuses and <i>myUnisa</i> helps then to connect them to the university structures. “You see, to me <i>myUnisa</i> is very important because I once used for my Unisa studies, sending assignments to UNISA and it was effective”.
Registration	Participants from the registration department also indicated that <i>myUnisa</i> is an important online communication channel but went on to say that it is not effective in the department because the registration process does not require using it. Instead it requires that a student register on the UNISA website. Even to edit registration, cancel registered modules or add units through <i>myUnisa</i> , students do not prefer to use <i>myUnisa</i> and this makes <i>myUnisa</i> less effective.
ICT	<p>The ICT department participants differed with the participants from Despatch, Library and Registration. To them <i>myUnisa</i> is effective. In support of stating that <i>myUnisa</i> is effective, one of the participants said: “We know that sometimes <i>myUnisa</i> becomes down, failing students to send their works to the university, but I can’t say it is not effective because other than students, lecturers send announcements to the students using this very same technology”. We also explored that there is a newly established department called MyUnisa which operates from Florida campus of UNISA. The researcher contacted them to find more on <i>myUnisa</i> and its effectiveness to the students. The findings revealed that the newly MyUnisa department deals with <i>myLife</i> and <i>myUnisa</i> issues, which involve administration of this extranet and a communication channel. It was also found that all the problems relating to the passwords of <i>myUnisa</i> are attended by MyUnisa department. According to MyUnisa department, <i>myUnisa</i> is effective as a communication channel.</p> <p>From this ICT participant’s perspective, <i>myUnisa</i> is effective in helping the lecturers communicate with the students. The study done by Behera (2012) on attitudes of college teachers towards e-learning in Purulia District found that the technological environment is an essential infrastructural element of colleges/universities which encourages interaction between students and teachers and among students themselves. The findings of this study confirmed and supports those Behera (2012) found. It can also be deduced that because students receive information from their lecturers, <i>myUnisa</i> is therefore effective to only those who have technological devices connected to the internet.</p>
Lecturers	Drawing an overall conclusion upon the effectiveness of <i>myUnisa</i> , the lecturers’

	<p>view was that <i>myUnisa</i> is an effective learning management system. In the words of one of the participants: “You see, as lecturers we get linked to the various modules we teach, enabling us to check the students information on the module for which he or she is doing. There, we can check the progress of the students in learning journey after which we can phone or send e-mails to guide the students on the specific module”. According to the participants, this makes <i>myUnisa</i> an effective technology-based channel of communication for communications with the students. The study also found that indeed the lecturers do send announcements on specific modules to those students registered for that module through the ICT department. This finding contributed to forming a collective view that <i>myUnisa</i> is effective in communicating to the students.</p> <p>Another benefit <i>myUnisa</i> brings to the student-lecturer communications identified by the lecturers was that online forums on <i>myUnisa</i> provide platforms to communicate interactively on the topics of modules they are registered for. This helps to encourage them to be actively engaged in learning processes and ultimately make them successful in their studies. The study conducted by Hartman (1995) also presented the same findings that a student who is actively involved in the learning process is likely to be successful.</p>
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10.4 CHAPTER SUMMARY

Chapter 10 presented and discussed an analysis of the data, both the quantitative and qualitative findings. The quantitative category of data analysis was divided into five sections. The first section was Section A and presented interpretations of the demographic information of the respondents results from the quantitative phase. Section B presented results about the role *myUnisa* extranet play as a communication channel in the transmission of communication between the students and the various UNISA’s structures. The next section was Section C which talked about the quantitative results on the on the role of *myUnisa* as a communication channel and an online tool as well as its benefits to the students. Section D also presented quantitative results but focused on the experiences and satisfactions of the students on *myUnisa*. Section E focused on the presentation of the quantitative results and dealt with general comments given on the functionality and usefulness of *myUnisa* student system (SS).

The second category of presentation of the results dealt with findings from the qualitative phase and was arranged in terms of themes as follows: Theme 1 presented an analysis of data about uses and

roles of *myUnisa* as a communication channel. The second theme discussed an analysis of the experiences and satisfactions of the staff members on *myUnisa* in their communication or interaction with the students. Theme 3 focused on an analysis about the challenges and problems on *myUnisa* as a communication medium. Lastly, the chapter presented an analysis of the effectiveness of *myUnisa* in communication with students which was the fourth theme.

CHAPTER 11

CONCLUSION AND RECOMMENDATIONS

11.1 INTRODUCTION

The research objectives of this study were to determine the perceived impact of extranet as a communication medium between the students and the university, to determine which extranet applications UNISA students use to communicate with their various UNISA structures, to determine the effectiveness of UNISA's extranet as a medium in communicating with UNISA students, to determine if UNISA is realising its goals by investing in *myUnisa* as an electronic communication medium, to determine the experiences and the satisfactions of the students on *myUnisa* as an electronic communication medium, and to determine the role of *myUnisa* as an extranet and a communication medium in students' learning process.

11.2 RESEARCH OBJECTIVES

- To determine which extranet applications UNISA students use to communicate with their various University structures. In order to meet this objective, students were asked from the questionnaire to indicate which *myUnisa* applications they use. This forms part of 'Section B named students use of *myUnisa*';

Other objectives of this research were as follows:

- To determine how effective is UNISA's extranet, (*myUnisa*) as a medium in communicating with UNISA students;
- To determine the perceived impact of extranet as an electronic communication medium, on students' mode of learning at UNISA;
- To find out the benefits of *myUnisa* a communication channel, both from students' and staff members' perspectives.

The research met the above three objectives by incorporating Section C which sought to find information on the role of *myUnisa* as a communication medium and tool as well as its benefits to the students. Students were asked how *myUnisa* helps them in their studies. They were expected to answer 'yes' or 'no' on the following options:

- I am able to access my study materials quickly;
- I discuss with students through *myUnisa* forum;

- I request books, articles and other learning materials through *myUnisa*, and
- It does not help me at all.

Section D of the questionnaire focused on the students' experiences and satisfaction on *myUnisa* and sought for information on the perceived impact *myUnisa* has on students' studies. There were four options provided from which to choose one, namely, 'it has a positive impact', 'it has a negative impact', 'it has no impact at all', and 'I am not sure';

In order to determine how effective UNISA's extranet (*myUnisa*) is, as a medium, in communicating with UNISA students, students were also asked about the extent to which they consider *myUnisa* effective in their studies. The following options were given: extremely effective, less effective, effective, non-effective, extremely non-effective. Furthermore, students were asked to rate the level of satisfaction on and the level of effectiveness of *myUnisa* applications;

- To investigate if UNISA is realising its goals by investing in *myUnisa*, as an electronic communication medium. To meet this objective, key staff members who participated in this study were asked if they know the rationale behind the establishment of *myUnisa*. From the interview guide, staff members were also asked to comment on whether *myUnisa* is achieving its goals or not;
- To determine the experiences and the satisfactions of the staff members on *myUnisa* as a student-staff member communication medium at UNISA. In order to explore the staff members' experiences on *myUnisa*, the interviewed staff members were asked to comment on how they use *myUnisa*, and on whether *myUnisa* is a replacement or complementary communication channel for communication with the students. They were also asked to indicate if they deem *myUnisa* good or bad. The interview guide also contained a question that was aimed at revealing the staff members' satisfaction level on *myUnisa* for communication with the students;
- To find out the role of *myUnisa* as an extranet and a communication medium in students' learning process. Section C of the questionnaire was focused on the role of *myUnisa* as a communication medium and a tool for communication with the students; and
- To establish problems and challenges of *myUnisa* extranet as a communication channel between students and the university structures. To meet this objective, participants were asked if there were any problems and challenges they encountered when using *myUnisa*

extranet. The interviewed staff members were also asked to elaborate if there were any problems which students reported about *myUnisa*.

This research focused on the extranets in higher education institutions, investigating their roles, vitality and effectiveness in students' studies. The study used a case study of the University of South Africa's (UNISA) extranet as a fundamental foundation of arguments and as an epitome of the developed and applied extranet in Higher Education Institutions. Approaching this study from a communication perspective and focusing on the extranet as a communication channel for the delivery of education between the students and the university structures and amongst the students themselves, it was learned that the extranet is becoming increasingly useful, facilitating the process to teach and learn as a technology-oriented mode.

The literature review also proved that there is no universal definition of the extranet. An extranet was defined by Hannon (1998) as any network linked to another network in order to allow the sharing of information and data, and which exists when two business partners link their intranets to each other for business communication and transactions. Hannon's definition did not suit the current situation of *myUnisa*. Instead, *myUnisa* as an extranet and an electronic communication channel is understood and better defined by Angeles (2001:168) who argues that an extranet is an organisation's intranet which provides access of information to the outside stakeholder of the host. Angeles's definition slightly qualifies to describe an extranet within the *myUnisa* context merely because students who access UNISA's information are UNISA's external stakeholders. What exacerbates complexity on understanding and referring *myUnisa* as an extranet was that, not only do students access UNISA's information but also exchange educational information through online forums. This makes *myUnisa* an extranet of its own kind. However, because the results of this study showed that *myUnisa* has been understood to be more of a one-way communication (from UNISA to the students in form of announcements, for instance) than a two-way communication (between UNISA and the students or amongst the students themselves through online forums), it can be deduced that *myUnisa* does not or did not meet UNISA's goal of enabling communications between its various structures and the students. It should, therefore, be redesigned and improved to allow more two-way communications with all UNISA's structures.

The research also reflected that the extranet can be developed for various reasons and can take many forms depending on the purpose for which they are developed and implemented. The study discussed different types of extranets and models.

Communication was also seen as one of the important aspect that enables organisations to proactively respond to their environments. In this study, it was shown that communication can take

various forms and can be exchanged using different delivery modes, of which extranet can be considered as another mode to deliver information, incorporating educational contents. An attempt to scrutinise the communication aspects in order to come up with universal understanding of ‘communication’ as concept became difficult to discern. As a result, various perspectives from the intellectuals writing in the field of communication were given through paraphrasing and noting them verbatim. This has served to prove that the term ‘communication’ is an elusive term which its meanings can differ from one proponent to the other and from context to context depending on what purpose does an investigation want to serve. This complements Koekemoer (2004)’s view that the definition of communication should be tuned to the context and the purpose of the research to enable common understanding of the concept defined.

Interestingly, the quantitative phase of this study showed that UNISA’s extranet (*myUnisa*) impacts positively on the majority of students, thus making UNISA easily accessible and easy to study. This was revealed through question 14 of the survey. Both the qualitative results and the qualitative findings showed that there are problems and challenges encountered by the students when using *myUnisa* as a communication channel. This is a clear reflection of the fulfilment of the complementary function for which mixed-methods approach was opted. The qualitative findings validated the results of the quantitative phase of this study. For example, in the quantitative phase, respondents were asked if there are any problems they encounter when using *myUnisa* as an extranet and a communication channel and it was found that 98% indicated *yes*. Complementing these results, participants in the interviews also responded that there are numerous problems and challenges in using *myUnisa* which were categorised as administrative- and technical-based. The technical ones are dealt with by the ICT and *MyUnisa* department which operates from the UNISA Florida Campus. Some of the problems that participants in the qualitative phase identified were the information overload during the submission of the assignments, the absence of internet networks at certain times, and low carrying capacity of *myUnisa* for delivering educational contents. To eliminate or reduce these problems, the study recommends that:

- the ICT should expand the bandwidth of *myUnisa* to eliminate or reduce information overload;
- UNISA should encourage students to submit their assignments at least six to eight days prior to the due date for submission;
- there is a need to research the possibility of transforming *myUnisa* from being more of a one-way to two-way communication channel;

- the ICT department should make provision for registration through *myUnisa* as an alternative way to online registration on the UNISA website rather than just editing registration as it currently stands;
- UNISA should transfer skills to the first year on how to use *myUnisa* to communicate to the library;
- there is a need for continuous programmes to support staff members on the effective use of *myUnisa*, both as a tool and as a communication channel;
- the ICT should make *myUnisa* able to allow the retrieval of the wrong submitted assignments by the students or the denial of submission of wrong assignments. Students must be able to submit and resubmit the same assignment, possibly within a given short time-frame;
- UNISA should develop online forums for each department, as in the case of academics, on *myUnisa* to encourage discussions of issues concerned in those departments;
- future research should be focused on investigating the technical aspects of *myUnisa* and make improvements on them thereafter;
- There is a need for future research focused on the relationship between employees' level of education and communication satisfaction level on the applications of extranets as communication channels in higher education institutions.

Higher education institutions that use or intend to use extranets for their communication with the students should implement a HEI-student type of an extranet which puts student at a focal point. It should be characterised by a two-way communication;

at least the development phase of the higher education institutions should take into account major chunks of information students have to know such as information registration, academic records, financial issues (financial assistance, tracking and study fees), assignments (sent and received), password (creation, change and cancellation), online forums, examination (time table and results); higher education should implement HEI-student extranet with hyperlinks to access various university departments, particularly the Library, Despatch department, academic departments, Department of Information and Communication Technology; and a central directorate or unit should be established to monitor, manage and control the extranet.

The study also found that an extranet is important and effective in the current information era, made possible by the advancement in the technological landscape. However, there is a need to face challenges such as inaccessibility of the internet caused by the digital-divide, and inability to make use of the extranet and its distinct online applications. The majority of the students, as reported in

the analysis and presentation of the results in quantitative phase, reflected that although the majority of students who use *myUnisa* as an extranet and an electronic communication channel are satisfied with its functionality, there is a need to improve it so that it become user-friendly to all students. There is also a need to improve its communication type, mostly a one-way communication from the university to the students. The research revealed that *myUnisa* was established to enable the students to communicate with the university structures. The findings of this research shows that, until recently, this goal is until now not fully realised. Certain students are complaining that a two-way communication through the *myUnisa* forums is not adequate. Even that two-way communications are only between the students and the lecturers and between the students themselves exacerbated the situation. Students want to engage in communications with other structures such as the Library, Despatch and Registration. Therefore, UNISA should start looking at how such two-way communications can be put into place through *myUnisa*. However, an overall view towards the significance of *myUnisa* as a communication channel irrespective of the problems it presents to the students was that all UNISA students find it important and that there should be no attempt to get rid of this learning management system (LMS).

This study revealed that although the modern modes of teaching and learning are widely applied in many higher education institutions throughout the entire world, the traditional modes are still important. Respondents who participated in this study indicated that both *myUnisa* and other modes of delivering educational contents must be used in integration. These findings supported Emmanuel and Ngiye's (2011, pp.226) assertions who believe that if different ICTs are used in integration, they can result in the provision of quality education and teaching to students. In addition to Emmanuel and Ngiye's view to use an integrated approach in teaching and learning, Shea, et al. (2001, pp.115)'s and Verduin and Clark (1991)'s results also supported this view which holds that learning through an internet is as effective as on campus traditional classes. As a recommendation, it is therefore important for UNISA to provide workshops and seminars for the students who need to use *myUnisa* but who do not have basic skills. These skills should be introduced to students at their first level to help them cope well with using *myUnisa* applications in their studies.

Another challenge faced by the students who rely on *myUnisa* to access the information and engaging in *myUnisa* forums was that they feel isolated from the UNISA campus, their lecturers and fellow students. Similarly, Song et al. (2004, pp.62) found that students were unhappy of faculty-student, lecturer-lecturer, and student-student isolations. To get rid of this problem, UNISA should revert to having discussion classes and other various face-to-face contacts with its students such as satellite classes. This is an integrated approach to teaching in which different modern and traditional contacts for teaching and learning are used.

In recognition of the value of extranet, UNISA continuously improves *myUnisa* as it encounters problems or in response to feedback loops. It must be noted that this process of mutation is expensive (financially).

1 1.3 CHAPTER SUMMARY

This chapter summarised the main findings, reflecting the shortcomings of the extranet as a communication tool in higher education institutions and providing possible remedial actions to apply it effectively in an educational context. The study concluded that the extranet is a significant newly adopted technological mode for both teaching and learning and for communication between the students and the various University structures.

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APPENDICES

APPENDIX 1: Voluntary questionnaire for scholar

VOLUNTARY QUESTIONNAIRE FOR SCHOLARS

THE EFFECTIVENESS OF THE EXTRANET AS A COMMUNICATION TOOL IN HIGHER EDUCATION: *A case study of University of South Africa's Extranet*



Researcher: Mr Rendani Sipho Netanda

Student Number: 201100868

Supervisor: PROF. H. RUGBEER

Co-supervisor: DR. G. M. NAIDOO

Faculty of Arts

Department of Communication Science

University of Zululand

Please complete this voluntary questionnaire on the "**THE EFFECTIVENESS OF THE EXTRANET AS A COMMUNICATION TOOL IN HIGHER EDUCATION:**

A case study of University of South Africa's Extranet"

- Complete the questionnaire by pen and please do not revise your initial answers.
 - Please sign the letter of informed consent, giving me permission to use your responses for this research project.
 - Tick or cross in the box where required.
-

SECTION A: INFORMATION ABOUT YOURSELF

Please indicate your gender. Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 1	Tick (✓) or a cross (X)	Office use
Male		1
Female		2

Please indicate your age group: Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 2	Tick (✓) or a cross (X)	Office use
15-20 years old		1
21 -25 years old		2
26-30 years old		3
31-35 years old		4
36 years and older		5

Please indicate your ethnic group. Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 4	Tick (✓) or a cross (X)	Office use
Black		1
White		2
Indian		3
Coloured		4
If other specify		5

Please indicate your educational level: Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 5	Tick (✓) or a cross (X)	Office use
Second year		1
Third year		2

Please indicate your regional hub at which you study: Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 6	Tick (✓) or a cross (X)	Office use
Eastern Cape		1
Western Cape		2
Gauteng		3
Kwazulu-Natal		4
Limpopo		5
Midlands		6
Mpumalanga		7

SECTION B: STUDENTS' USES OF *MYUNISA*

Please indicate whether or not you use *myUnisa* as an electronic communication medium for your studies. Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 7	Tick (✓) or a cross (X)	Office use
Yes		1
No		2

Please indicate which of the following *myUnisa* applications you use. Place tick/s (✓) or crosses/s (X) that is/are applicable to you in the appropriate block:

Question 8	Tick (✓) or a cross (X)
------------	-------------------------

Office use	Use (1)	Do not use (2)
Academic records		
Bibliographical details		
Change password		
Edit registration		
Examination results		
Examination table		
Financial tracking		
Study fees quotation		

Indicate how often in a month do you use *myUnisa* as an electronic communication channel for study purpose. Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 9	Tick (✓) or a cross (X)	Office use
Once in a month		1
Twice in a month		2
More than twice in a month		3
Everyday		4
It depends on what I want to do		5

Indicate which of the following Unisa structure/s do you communicate with through *myUnisa* as a communication channel. Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 10	Tick (✓) or a cross (X)	Office use
Registration		1
Library		2
Despatch		3
Examination		4

Lecturers		5
other		6

SECTION C: THE ROLE OF *MYUNISA* AS A COMMUNICATION MEDIUM AND A TOOL AND ITS BENEFITS TO THE STUDENTS

How does *myUnisa* as a communication medium and a tool help you as a student in your studies?

Question 11	Tick (✓) or a cross (X)	
Office use	Yes (1)	No (2)
I am able to access my study materials quickly		
I discuss with students through <i>myUnisa</i> forum		
I request books, articles and other learning materials through <i>myUnisa</i>		
It does not help me at all		

If you do not use *myUnisa* as a communication medium and a tool, how do you communicate with Unisa structures?

Question 12	Tick (✓) or a cross (X)	
Office use	True (1)	False (2)
I go to Unisa campus personally		
I contact Unisa's structures through e-mails		
I use a fax		
I make a phone call		
I write a letter and deliver it through Post Office service		

What benefits do you derive from using *myUnisa* as an extranet and a communication channel? Please tick (✓) or make a cross(X) block below:

Question 13	Tick (✓) or a cross (X)	
Office use	Agree (1)	Disagree (2)
Easy accessibility of study materials at any time of the day and anywhere I am		
It is interactive		
It helps me edit my bibliographical information		
I am able to send assignments quickly		
It does not help me at all		

SECTION D: STUDENTS' EXPERIENCES AND SATISFACTIONS ON MYUNISA

How does *myUnisa* as an electronic communication medium impact on your studies? Please tick (✓) or make a cross(X) block below:

Question 14	Tick (✓) or a cross (X)	Office use
It has a positive impact		1
It has a negative impact		2
It has no impact at all		3
I am not sure		4

Indicate to what extent you consider *myUnisa* effective in your studies. Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 15	Tick (✓) or a cross (X)	Office use
-------------	-------------------------	------------

Extremely effective		1
Less effective		2
Effective		3
Non effective		4
Extremely non-effective		5

Indicate the level of effectiveness of the following *myUnisa* applications, as communication tools. Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 16	Extremely effective	Less effective	Effective	Not effective	Extremely non-effective
<i>Office use</i>	1	2	3	4	5
Academic records					
Bibliographical details					
Change password					
Edit registration					
Examination results					
Examination time table					
Financial tracking					
Study fees quotations					

Indicate your level of satisfaction on *myUnisa* as electronic communication medium in your studies. Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 17	Tick (✓) or a cross (X)	Office use
Very good		1
Somewhat good		2

I don't know		3
Somewhat bad		4
Very bad		5

Rate your level of satisfaction on using *myUnisa* applications/tools, as an electronic communication channel, in your learning process. Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 18

	Completely satisfied	Satisfied	Neutral	Dissatisfied	Completely dissatisfied
<i>Office use</i>	1	2	3	4	5
Academic records					
Bibliographical details					
Change password					
Edit registration					
Examination results					
Examination time table					
Financial tracking					
Study fees quotations					

Are there any problems you encounter when using *myUnisa* as an extranet and a communication channel? Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 19	Tick (✓) or a cross (X)	Office use
Yes		1
No		2

Question 20

If your answer is YES, list those problems. If your answer to question number 19 was 'No', skip to question 21).

--

Because of these problems, would you recommend Unisa to get rid of *myUnisa*? Place ONE tick (✓) or a cross (X) in the appropriate block:

Question 21	Tick (✓) or a cross (X)	Office use
Yes		1
No		2

Tick (✓) or cross (X) in EACH row:

Question 22	Agree	Disagree	Not Sure
Office use	1	2	3
<i>myUnisa</i> helps me well to study at Unisa			
<i>myUnisa</i> should be used alone as a mode of teaching and learning in Unisa			
The use of <i>myUnisa</i> is a waste of time			
communication through <i>myUnisa</i> is better than face-to-face communication			
Both <i>myUnisa</i> technology and hard copy study materials are equally important in learning			
<i>myUnisa</i> should be used together with social media to teach and learn			

SECTION E: GENERAL COMENTS

Question 23

In your opinion, what do you think Unisa should do to improve *myUnisa*?

--

Question 24

If you have any other comments relating to the extranet as an electronic communication channel provide them hereunder:

--

Thank you for completing this questionnaire

APPENDIX 2: Information Sheet

**THE EFFECTIVENESS OF THE EXTRANET
AS A COMMUNICATION TOOL IN HIGHER EDUCATION:
A CASE STUDY OF UNIVERSITY OF SOUTH AFRICA'S
EXTRANET**



University of Zululand
Faculty of Arts
Department of Communication Science
Researcher: Netanda, RS
Supervisor: Prof. H. Rugbeer
Co-Supervisor: Dr. G.M. Naidoo

PART A: NOTE TO THE RESPONDENT

1. In my study I want to investigate the effectiveness of the extranet, as a communication tool in higher education. It also seeks to:
 - To determine the impact of extranet, as an electronic communication medium, on students' mode of learning at Unisa.
 - To determine which extranet applications Unisa students use to communicate with their various University structures.
 - To determine how effective is Unisa's extranet, (*myUnisa*), as a medium, in communicating with Unisa students.
 - To determine if Unisa is realizing its goals by investing in *myUnisa*, as an electronic communication medium.
 - To determine the experiences and the satisfactions of the students on *myUnisa* as an electronic communication medium.
 - To determine the role of *myUnisa* as an extranet and a communication medium in students' learning process.

Respondents Copy

2. Your contribution to this study as a respondent will remain private and confidential.
3. Your permission to use these responses is required. This will form the first part of the questionnaire.
4. This is a confidential survey and your name will be anonymous. All personal information will remain confidential.
5. This questionnaire will take approximately –10 to 20 – minutes to complete.

PART B: THE QUESTIONNAIRE HAS TWO PARTS:

Section A requests for permission to use your responses for academic research.

Section B requests that you answer questions about the effectiveness of the extranet, as a communication tool in higher education: A case study of the University of South Africa's extranet.

HOW TO COMPLETE THE QUESTIONNAIRE

1. Your opinion is required. It does not matter what other people think. I am solely interested in your opinion. Tell me how you feel. Your responses are important to me.
 2. Read each question carefully and take a moment to think about your answer.
 3. You can mark each response by making a tick (✓) or a cross (X), or encircling each appropriate response with a **PEN** (not a pencil), or by filling in the required words or numbers.
 4. Please do not change any of your responses afterwards (for instance: do not scratch out or tippex any of your responses).
-

Thank you very much for agreeing to assist.

Contact Details: RS Netanda **Tel:** 0732183802 **Email:** sipho25@webmail.co.za;

Netanda.rendani.sipho@gmail.com



CONSENT FORM

Full title of Project: THE EFFECTIVENESS OF THE EXTRANET
AS A COMMUNICATION TOOL IN HIGHER EDUCATION: A case study of University of South
Africa's Extranet

Researcher: Netanda, RS

Contact Details: Tel: 073 218 3802

Email: sipho25@webmail.co.za

**Please initial
box**

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.
2. I fully understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.
3. I agree to take part in the above study.

☐
☐
☐

Please Note: indicate Yes or No only if the following statements are appropriate:

Please tick box

4. I agree to the survey (self-administered questionnaire interview/ consultation being audio recorded)

Yes

No

☐
☐

Name of Participant

Date

Signature

Name of Researcher

Date

Signature

**THE EFFECTIVENESS OF THE EXTRANET AS A COMMUNICATION TOOL IN
HIGHER EDUCATION: A CASE STUDY OF UNIVERSITY OF SOUTH AFRICA'S
EXTRANET**



RESEARCHER: MR RENDANI SIPHO NETANDA
STUDENT NUMBER: 201100868

SUPERVISOR: PROF H. RUGBEER

CO-SUPERVISOR: DR G.M. NAIDOO

FACULTY OF ARTS

DEPARTMENT OF COMMUNICATION SCIENCE

UNIVERSITY OF ZULULAND

AN INTERVIEW GUIDE

FOR UNISA STAFF MEMBERS WHO USE myUNISA AS AN EXTRANET AND
A COMMUNICATION CHANNEL TO COMMUNICATE WITH STUDENTS

1 Comment on how you use *myUnisa* to interact with the students.

2 How do you communicate with them? Please elaborate

3 Comment on whether *myUnisa* is a replacement or a complementary communication channel for communication with the students?

4 Do you know why *myUnisa* was established? Support your answer

5 Comment on whether *myUnisa* is achieving its goals or not

6 Are there any problems students once reported on about *myUnisa*? Please elaborate

7 If there are any problems, can you identify few that you still remember? Please explain

APPENDIX 5: Ethical Clearance from the University of Zululand (UNIZULU)

**UNIVERSITY RESEARCH ETHICS
COMMITTEE**
(Reg No: UZREC 171110-30)



UNIVERSITY OF ZULULAND
Website: <http://www.uzulu.ac.za>

Private Bag X1001
KwaDlangezwa 3886

Tel: 035 902 6645
Fax: 035 902 6222
Email: dviljoen@pan.uzulu.ac.za

ETHICAL CLEARANCE CERTIFICATE

Certificate Number	UZREC 171110-030 PGM 2012/19				
Project Title	The effectiveness of the extranet as a communication tool in Higher Education: A case study of University of South Africa's Extranet				
Principal Researcher/ Investigator	RS Netanda				
Supervisor and Co-supervisor	Prof. RH Rugbeer			Dr GM Naidoo	
Department	Communication Science				
Nature of Project	Honours/4 th Year		Master's	x	Doctoral
					Departmental

The University of Zululand's Research Ethics Committee (UZREC) hereby gives **PROVISIONAL** ethical approval in respect of the undertakings contained in the above-mentioned project proposal and the documents listed on page 2 of this Certificate. Special conditions, if any, are also listed on page 2.

The Researcher may therefore commence with the research as from the date of this Certificate, using the reference number indicated above, but may not conduct any data collection using research instruments that are yet to be approved.

Please note that the UZREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the documents that were presented to the UZREC
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

The Principal Researcher must report to the UZREC in the prescribe format, where applicable, annually and at the end of the project, in respect of ethical compliance.

The table below indicates which documents the UZREC considered in granting this Certificate and which documents, if any, still require ethical clearance. (Please note that this is not a closed list and should new instruments be developed, these may also require approval.)

Documents	Considered	To be submitted	Not required
Faculty Research Ethics Committee recommendation	X		
Animal Research Ethics Committee recommendation			X
Health Research Ethics Committee recommendation			X
Ethical clearance application form	X		
Project registration proposal	X		
Informed consent from participants	X		
Informed consent from parent/guardian			X
Permission for access to sites/information/participants		X	
Permission to use documents/copyright clearance			X
Data collection/survey instrument/questionnaire		X	
Data collection instrument in appropriate language		Only if necessary	
Other data collection instruments		Only if used	

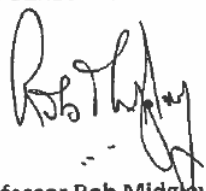
Special conditions: Documents marked "To be submitted" must be presented for ethical clearance before any data collection can commence.

- a) A letter of access should be obtained
- b) The telephonic data instruments to be used should be specified

The UZREC retains the right to

- Withdraw or amend this Certificate if
 - Any unethical principles or practices are revealed or suspected
 - Relevant information has been withheld or misrepresented
 - Regulatory changes of whatsoever nature so require
 - The conditions contained in this Certificate have not been adhered to
- Request access to any information or data at any time during the course or after completion of the project

The UZREC wishes the researcher well in conducting the research.



Professor Rob Midgley
 Deputy Vice-Chancellor, Research and Innovation
 Chairperson: University Research Ethics Committee
 14 December 2012

College of Human Sciences
21 January 2013

ETHICAL CLEARANCE APPROVAL

Reference number: CHS/REC/90172035/PG2013

Proposed study title: The effectiveness of the extranet as a communication tool in Higher Education: A case study of the University of South Africa's Extranet

Researcher: Mr RS Netanda **Supervisor:** Prof RH Rugbeer **Co-supervisor:** Dr GM Naidoo

Institution: University of Zululand **Department:** Communication Science

Reviewed and processed as: Class approval (see paragraph 10.7 of the UNISA Guidelines for Ethics Review)

Approval status recommended by reviewers: Approved

The Research Ethics Committee (REC) of the College of Human Sciences (CHS) has reviewed your proposal and considered the methodological, technical and ethical aspects of the proposal to be appropriate for the tasks proposed. Approval is hereby granted for the researcher to proceed with the study in strict accordance with the approved proposal and the revised policy on Research Ethics of the University of South Africa. In addition, researchers should pay attention to the following guidelines:

- To obtain permission from **SENRIC** to carry out the research according to good research practice and in an ethically sound manner as per Guidelines for conducting research involving Unisa staff, students or data (March 2012).
- To maintain the privacy, anonymity and confidentiality of all data obtained from or about research participants.
- To notify the REC of the CHS in writing immediately if any change(s) to the study is proposed and to await approval before proceeding with the proposed change(s).
- To notify the REC of the CHS in writing immediately if any adverse event occurs during the conduct of the study.

The approval is valid for **ONE** academic year after which a request for a continuation of the approval must be submitted to the REC of the CHS.

Kind regards


Prof LI Zungu

Chairperson: Research Ethics Sub-committee: College of Human Sciences


Prof G du Plessis

Chairperson: Research and Innovation Committee: College of Human Sciences



**THE EFFECTIVENESS OF THE EXTRANET AS A COMMUNICATION
TOOL IN HIGHER EDUCATION: A CASE STUDY OF UNIVERSITY OF
SOUTH AFRICA'S EXTRANET**

Department of Communication Science
University of South Africa (Unisa)
Office: 6-88

**TO: PROF M PHAKENG
(VICE PRINCIPAL: RESEARCH AND INNOVATION)**

APPLICATION TO CONDUCT A STUDY

I am conducting a study on the effectiveness of the extranet as a communication tool in higher education Institutions. I am using UNISA as the context of my studies and will focus at *myUnisa* as a case study.

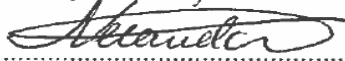
This is a cross-sectional study to determine the perceived effectiveness of Unisa's extranet (*myUnisa*), as an electronic communication medium, between the university and students. The aim is to determine the degree to which *myUnisa* help students meets their expectations in Open distance learning environments. Unisa is an ODL whose mode of teaching requires that students use (in addition to traditional modes of learning) new media technologies such as the internet, intranet and extranet in learning processes. Driven by the technological advancement, Unisa responded to the changes emanating from the technological environment by developing *myUnisa*, an extranet and a communication channel that facilitates communication between the university and its students. Koekemoer (2004:46) defines communication channel as a formal or less formal route or direction in which the message travels. *myUnisa* is a two-way

communication channel, enabling Unisa and students to share information through interactive online forums. Although the use of technology may help the students in learning, it may presents a number of problems to the students if they lack necessary skills to use them and this may negatively affect the students' learning (Emmanuel and Ngiye 2011). According to Emmanuel and Ngiye 2011:230) online technology presents a challenge to the students because it requires basic computer literacy skills. Murphy's and Cifuentes' (2001:285) study revealed similar finding that acknowledges that Web-based courses present challenges to students who do not know how to use Web tools. In recognition of the value of extranet, Unisa continuously improves *myUnisa* as it encounters problems or in response to feedback loops. It must be noted that this process of mutation is expensive (financially).

This study will employ mixed-methods (quantitative and qualitative methods) to generate data. Data from students will be collected using the administered questionnaires while data from the staff members (lecturers, librarians, dispatch staff members, and other from registration department and the ICT will be generated using an in-depth interviews. Participation in this study is completely voluntary and informed consent forms will be given to the participants who wish to partake in this study. The research promises to maintain anonymity and confidentiality. The results of this study will not be used for any other purposes than for the stated study. The study will be conducted during March 2013 – April 2013.

I will appreciate your academic cooperation!

Yours faithfully



.....
Rendani Siphon Netanda (Unizulu's student and a Unisa Staff member)

Tel. +27 12 429 3993

Cell. +2773 218 3802

E-mail: netanrs@unisa.ac.za

PROF L LABUSCHAGNE
EXECUTIVE DIRECTOR: RESEARCH DEPARTMENT
Tel: +27 12 429 6368 / 2446 Fax: +27 12 429 6960
Email: llabus@unisa.ac.za
Address: Theo van Wijk Building, 10th Floor, Office no. 50 (TvW 10-50)

19 March 2013

Mr Rendani Netanda
Department of Communication Science

Dear Mr Netanda

PERMISSION TO DO RESEARCH INVOLVING UNISA STAFF, STUDENTS OR DATA

A study into The Effectiveness of the Extranet as a Communication Tool in Higher Education: A Case Study of University of South Africa's Extranet.

Your application regarding permission to conduct research involving Unisa staff, students or data in respect of the above study has been received and was considered by the Unisa Senate Research and Innovation Committee (SENRIC) on 14 February 2013.

It is my pleasure to inform you that permission has been granted for this study as set out in your application.

We would like to wish you well in your research undertaking.

Kind regards



PROF L LABUSCHAGNE
EXECUTIVE DIRECTOR: RESEARCH



University of South Africa
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