

**AN INVESTIGATION INTO THE USE OF THE INTERNET BY STUDENTS AT
ST. JOSEPH'S THEOLOGICAL INSTITUTE, KWAZULU-NATAL, SOUTH
AFRICA**

By

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DECLARATION

I, MHLUKANISI SIMON SHEZI declare that this thesis is my own work.

Signature:  _____

Date: 01/07/05 _____

DEDICATION

This present thesis is dedicated to my late father Mr. E. Shezi. Beautiful memories of you are deeply locked into my heart. This is my thanks to you for everything you have done for the family and me. Dear father I will always love you.

ABSTRACT

The discussion of introducing the Internet at St. Joseph's Theological Institute in KwaZulu-Natal, South Africa took place in 2002 and access to the Internet was introduced in 2003 via 70 computers which were housed in the library. Given that the Internet has emerged as an important learning tool at the tertiary level, the aim of the study was to investigate the use of the Internet by the students at St. Joseph's. The specific objectives of the study were as follows: to find out which students were using the Internet, to find out what students were using the Internet for, to find how often students used the Internet and when they used it, to find out the problems experienced by those students who used the Internet, to find out why certain students do not use the Internet, and lastly the study aimed to make recommendations concerning the use of the Internet by students.

The survey research method was used and the data was collected through a self-administered questionnaire. No sampling was done as the entire population of 188 students was surveyed. Sixty five students responded - a response rate of 34.6 %. Findings revealed that of the 65 students who completed the questionnaires 34 (52.3%) had used the Internet and 31(47.6%) had not. Out of the 24 respondents who gave reasons for not having used the Internet, the majority 17 (70.8%) of respondents said that they had not received formal training and did not know how to use the Internet. The major problems facing the Internet users at St. Joseph's were the shortage of computers mentioned by 13 (38.2%) respondents and computers being slow as indicated by 13 (38.2%) respondents. Six (17.6%) respondents also pointed to not having enough training in the use of Internet facilities. Recommendations concerning Internet use at the Institute were made and suggestions for further research put forward.

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ABBREVIATIONS

CD ROM:	Compact Disc Read Only Memory
E-mail:	Electronic mail
FTP:	File Transfer Protocol
ICT:	Information and Communication Technology
IT:	Information Technology
SADC:	Southern African Development Community
TELNET:	Terminal Emulator Protocol Network
WWW:	World Wide Web

CHAPTER ONE: INTRODUCTION

1.1 Setting the Scene

The Internet is an international computer network through which computer users all over the world can communicate, and exchange information. The Internet enables people from all areas in the world to share information as well as disseminate it. Grimes and Borman (1997:1) point out that access to the Internet is, for most, access to a wealth of information from academic research to stock market information. The Internet is a collection of sprawling computer networks that links millions of computers used by tens of millions of people all over the world (Keenan 1996: 96). This network of networks allows those with proper access the ability to log on to remote computers, send electronic mail, transfer files, access global bulletin boards, or search the Internet for software and information. The Internet largely connects people for the purpose of sharing information.

The Internet provides a variety of services including electronic mail (e-mail), file transfer protocol (FTP) and the World Wide Web (WWW). The Internet is an invaluable tool for the researcher. The Internet facilitates a global information system, providing access to services, like e-mail and the WWW, that have revolutionised the way we communicate, inform, entertain and enrich ourselves. The Internet has made changes in almost all aspects of our lives (Chachage 2001: 226; Luambano and Nawe 2004: 13). It plays a role in most of what we discuss today about access, dissemination and retrieval of information. However, despite the fact that the Internet is wide spread, there is limited use on the part of some users due to their poor knowledge of how to utilize it. Maximum utilization of Internet resources depends on users' knowledge to search resources available in it (Chachage, 2001: 226).

The Internet has numerous advantages associated with it and these are also applicable to students at St. Joseph's Theological Institute. Advantages include:

- Accessing information
- Keeping in touch with friends and lecturers
- Getting current information
- Quick transmission of information

- Easy communication
- Sharing resources
- Learners can become researchers because of easier access to data (Chifwepa, 2003: 127).

All technologies have their disadvantages and the Internet is no exception. These disadvantages, which would also be applicable to students at Joseph's Theological Institute, include:

- Time allocated to Internet use
- Knowledge-poor meaning that students are not good at dealing with the overload of information available on the Internet
- No (or insufficient) librarians for quality control
- Need for quality control in the information that students find and use
- Not enough training for effective use (Healey, 2004).

It is argued that with Internet access students will be able to broaden their scope of research. Our world today functions through technology and thus steps should be taken to introduce computers for the expanded use of the library in terms of cataloguing and access to the Internet (Healey, 2004).

1.2 Background of the Study

The St. Joseph Theological Institute is situated 15km from Pietermaritzburg, near Cedara Agricultural College in the Hilton District of KwaZulu-Natal and is predominantly populated by black students from former disadvantaged communities. St. Joseph's is a Catholic theological institution. The first discussion regarding the introduction of the Internet at St. Joseph's took place in 2002 and access to the Internet was introduced in 2003 via 70 computers which are housed in the Library. This development has brought the Library at the Institute into the Information Technology (IT) age. Two other developments that recently took place are:

- The installation of smoke detectors in the Library and the archives; and
- The installation of a LAN to link the computers in the Library.

These are positive developments as it is essential for the Institute to strengthen its information technology infrastructure to ensure that information technology is more readily available to students.

Access to the Internet gives a wide range of topics and media which facilitates different learning styles. Use of computers and the Internet enables learners to become researchers more easily because they have direct access to data (Healey, 2004). Since the Internet is an important learning tool at the tertiary education level, it is argued that investigating the use of the Internet at St. Joseph's will help to identify problems which are experienced by students in their use of the Internet. The resolution of these problems would assist in facilitating more effective use of the Internet by students at the Institute.

1.3 Research Problem

The Internet is an aspect of IT, and has been in existence for some time. However, due to cost and expertise required to access, maintain that access, and effectively use the Internet, not all libraries in South Africa have this facility while others have just acquired the technology. The Library at St Joseph's has, as noted above, only recently acquired computers for access to the Internet. Given the fact that the Internet has not been accessible to many potential users and also the fact that it is a technology being continuously improved, it is essential to investigate Internet use at the St. Joseph's Library in order to find out who uses the Internet, how it is used, what it is used for and how the Internet is assisting the Library users to locate and retrieve information. Such a study could assist in the effective use of the Internet in the St. Joseph's Library. Without the information that such a study will yield, it may be quite difficult for the Librarian at the St Joseph's Library to determine whether an expensive IT tool like the Internet is being effectively used or not.

1.4 Purpose of Study

The purpose of the study was to investigate Internet use among the students at St. Joseph's Theological Institute in KwaZulu-Natal, South Africa.

1.5 Objectives

The above purpose led to the following specific objectives:

- To find out which students use the Internet.
- To find out what students use the Internet for.
- To find out how often students use the Internet and when they use it.
- To find out the problems experienced by those students who use the Internet.
- To find out why certain students do not use the Internet.
- To make recommendations concerning the use of the Internet by students.

1.6 Research Questions

The objectives in turn, were stated as research questions and these were as follows:

- Which students use the Internet?
- What are students using the Internet for?
- How often do students use the Internet and when do they use it?
- What are the problems experienced by students who use it?
- What is preventing certain students from using it?
- What recommendations can be made?

1.7 Significance of the Study

No one as yet has undertaken a study of Internet usage at St Joseph's Institute. As mentioned above the Internet was introduced in 2003 and it is possible that some of the students may not yet see the Internet as an important tool for their studies. The Internet can increase creativity amongst students using it and enable them to interact with various personalities. It was found that for example, the Internet improved academic excellence amongst students at the University of Bergen (Norwegian Historian visits UniZulu 2000: 5). All students on campus should have access to the Internet. Students should have access to current information, which may contribute to and bring about improvements in their studies.

Internet use by students on campus can attract more students from other institutions and local schools, and make the institution more marketable. The Internet as it is used worldwide will give students a golden opportunity of networking with fellow colleagues

in other geographical areas. It has been introduced to students so that they will be able to conduct research on various subjects in the fields of their study. Finally, the findings of the study could assist the Institute in identifying problems associated with Internet use by students and the opportunity to resolve these problems.

1.8 Scope and Delimitations

The study was conducted at the St Joseph's Theological Institute. It was directed at students presently studying at the Institute. Academic and administrative staff at St. Joseph's were excluded from this study. The study was limited to the use of the Internet specifically. Thus the use of other Information Communication Technology (ICT) resources such as Compact Disc Read Only Memory (CD ROM) was excluded from the study.

1.9 Research Method

The survey method was used. Busha and Harter (1980: 62) state that survey research is capable of collecting background information and hard-to-find data, and the researcher usually does not have the opportunity to motivate or influence the respondents' responses. The self-administered questionnaire was adopted as the data gathering technique because of the advantages it provides when compared to other types of instruments. The questionnaire comprised both open and closed questions, although the latter predominated. Questionnaires were distributed to all 188 students registered at St. Joseph's Institute. Instructions for the return of the completed questionnaires were provided. A total of 65 students responded giving a response rate of 34.6%. The research method is further discussed in Chapter Three.

1.10 Definition of Terms

Significant terms used in the study are defined below.

Internet

As mentioned in the introduction, the Internet is an international computer network through which computer users all over the world who have access can communicate, and

exchange information. Also, as mentioned the Internet comprises a number of services namely WWW, email, FTP, and Gopher (Maxwell 2003).

Use

Use is defined as a means of accomplishing a purpose or achieving a result (Pearsall 1998: 2038). According to Abbott (1989: 1) the term 'use' comprises many definitions and these include access to information, the ability to use library resources profitably, consumptive and non-consumptive use, incremental use, and finally, desired use. In the present study the term "use" refers to whether or not students are using the various services of the Internet such as e-mail, file transfer and the WWW.

Students

Students, for the purposes of this study, were defined as any person registered at St. Josephs Theological Institute to study for a theological degree or diploma.

1.11 Organisation of the Thesis

Chapter One the introductory chapter, provides background information on the nature of Internet use as well as the introduction of access to the Internet at St. Joseph's Theological Institute in KwaZulu-Natal. The statement of the problem is also presented and this is followed by the aim of the study and the specific research objectives. The chapter finished with the justification, definition of terms, scope and limitation of the study.

Chapter Two reviews the related literature, which involves a systematic identification, location and analysis of documents containing information related to the research problem. This chapter further reviews earlier studies in the area of Internet use among students and, in that way, the chapter places the study within the context of previous studies in the area.

Chapter Three outlines the methodology used in the study. In this chapter the population of the study is defined and the instruments used for data collection are also described. The

chapter describes the data collection process and the pretesting process of the data collection instruments. Finally, the chapter presents the methods used for data analysis.

Chapter Four presents the findings, in tabular format.

Chapter Five discusses the findings from the previous chapter in relation to the relevant literature. The objectives of the study are used as a basis for the discussion.

1.12 Summary

In this introductory chapter the topic of investigation, namely, the use of the Internet by students at St. Joseph's Theological Institute was introduced. The importance of the Internet was highlighted and the reasons why it was essential to investigate Internet use at the Institute. The statement of the problem was presented and this was followed by the purpose and specific objectives of the study. The justification for the study was provided and the definitions of key terms as well as the scope of the study and the limitations were presented. This chapter concluded with a summary of the structure of the remainder of the thesis.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the related literature, which involves the systematic identification, location and analysis of documents containing information relating to the research problem. In this literature review the focus will be on Internet use by students in general. This chapter also reviews earlier studies in the area of Internet use and in that way place the study within the context of previous studies.

Increased use of the Internet has greatly influenced the evolution of academic institutions during the last three decades. Some students gravitate to the Internet like nothing before in their lives. While the Internet is unlikely to completely replace conventional means of accessing information resources, for some students it is the best opportunity ever made available to them. Contacts around the world, in far away places, make any project more dynamic and more interesting (Ellsworth 1996: 5). Students quickly grow adept at finding and retrieving remote information and then go on to develop more sophisticated search and retrieval strategies (Ellsworth 1996: 6). Students can also learn educational independence and intellectual autonomy by using the Internet.

Students are using the Internet to find data, complete assignments, network with other students and for collaborative projects. Many student organizations have access to the Internet and WWW documents in order to network and disseminate information (Ellsworth 1996: 199). According to Schofield and Davidson (2002: 142) prior studies of Internet use in schools have made the point that it is important to consider not only how much use is made of the Internet by educators and students but also how regularly the use occurs. Also important is the nature of the on-line resources students use for the activities they engage in, given that the Internet offers such a wide variety of choices. These choices include:

- Doing archival and other research at Websites;
- Contacting others on-line in order to get information;
- Interacting with others on-line in order to exchange information;
- Producing material on-line for others; and

- Acquiring technical training on-line.

The transmission of information is as fast as a heart beat due to the nature of services imbedded in the functioning of the Internet. Communication with other users is also easy and makes interaction with them swift. Once one has information that one wants to upload onto a Website, one, with the necessary resources, is able to publish the information, that is, make one's work publicly available to other Internet users.

As noted, in this literature review, the focus will be on Internet use by students in general. It can be argued that students should have access to the Internet so as to meet the challenges of technological developments. Students should be exposed to the Internet, so that their intellectual capacity can grow.

Bao (1998: 540) pointed out that the Internet has become an important source of information for academic studies. This was demonstrated in his survey where 617 (78.5%) of the respondents indicated that they used it on a daily or weekly basis. This is in agreement with the study done by Urrehman (2000: 177) who reported that the Internet today is both needed and a most extensively used information resource, and that it has impacted on our personal and organisational lives in a most pervasive way. Urrehman (2000: 177) further said the Internet serves as an essential tool for communication, information processing and delivery and so has profoundly affected the information profession. Urrehman (2000) continued by saying that the Internet creates endless opportunities for information capture, storage, organisation, retrieval and delivery systems and services. According to Anderson (2001) the Internet provides a new medium of communication that enables college students to gain access to vast amounts of information on a broad range of topics. It provides students with the ability to access the WWW, as well as e-mail and related Internet activities.

In a study conducted at the University of the Witwatersrand, Brackman (2002: 30) reported that there were many issues at stake in extending the use of information communication technology (ICT) in universities. Therefore ICTs could enhance student development by complementing and enriching courses and, ideally, by preparing students

for the new world of work, for global communications and for lifelong learning. Brackman (2002: 30) further said the possibility for anyone to use the Internet, to find and contribute resources and information, promises to distribute power and so give students control over their own learning.

According to Ojedokun (2001: 97), the Internet offers the opportunity for access to up to date research reports and knowledge globally. Ojedokun (2001: 97) continued by saying that the Internet has thus become an important component of electronic services in academic institutions. Scherer (1997: 655) pointed out that while the growth of the Internet is a positive or negative evolution in society, the Internet is fast becoming the environment in which students and staff function and interrelate on campuses. Scherer (1997: 655) concluded that the Internet is fairly simple for students to use, it requires no planning ahead, little if any coordination with others, little or no expense, and an open line is usually available nearby.

2.2 Studies on the use of the Internet

Seven studies on the use of the Internet in a college environment were reviewed for this section. The studies were conducted in the United States of America, United Kingdom, Botswana, Nigeria, Malaysia, Israel and Japan.

The use of the Internet in the United States of America was commended by educators, students, parents and the government on the basis that the availability and use of the Internet applications saw an improvement of grades for some students. However, while the use of this computer-based facility was growing, there were concerns that heavier usage of the Internet negatively affects students' academic performance, their social interaction and participation in cultural activities. Such are some of the concerns that are explored by Kubey (2001: 366) in research done at colleges and universities in the United States of America.

In another study conducted in the United States of America, Scherer (1997: 655) reported that approximately 32% of Internet users access the Internet through educational providers and 28% of all users were full-time college students. Scherer (1997: 655) stated

that approximately 23 microcomputer laboratories allow thousands of students to use the Internet from campus. However, students would wait up to 30 minutes to access a computer at popular laboratories.

In a study conducted at the University of Bristol, Selwyn, Marriott and Marriott (2000) reported that within the wider drive in higher education to promote students use of ICT, it was assumed that the Internet would be a key application. Popular conceptions of a new generation of students at ease with on-line learning persist through official literature and the media and from that basis, the study took an empirical perspective of student use of the Internet (Selwyn, Marriott and Marriott 2000).

On the other hand, Ojedokun (2001: 97) focused on Internet access and usage by students at the University of Botswana. This study investigated the adequacy of provision of access to, and the usage (in terms of use and misuse) of the Internet by the students, as well as the problems these students faced in its use. The study revealed that computers with Internet facilities at the time of this study were inadequate. Hence many of the students did not have access.

In a study conducted at the University of Nigeria, Jagboro (2003) reported that the Internet is arguably one of the most significant technological developments of the late 20th century. However, despite the added benefits of this tool to learning, teaching and research, a number of problems still plague Internet connectivity and usage in the Nigerian University system.

The objective of Jagboro's (2003) study was to evaluate the level of utilization of the Internet for academic research at the Obafemi Awolowo University, Ile-Ife, Nigeria. Questionnaires were administered to postgraduate students spanning art and science based programmes. The study concludes that the use of the Internet for academic research would significantly improve through the provision of more access points at departmental and faculty levels (Jagboro 2003).

In a study conducted at the University of Malaysia, Hong, Ridzuan and Kuek (2002) reported on the success of a technology and Internet-enriched learning environment in moulding attitudes among students using the Internet for learning. Hong, Ridzuan and Kuek (2002) stated that students were provided with computer facilities and required to complete two compulsory generic courses in information technology. The lecturers actively encouraged the use of information technology, in particular, the Internet in the teaching and learning processes.

The results from the study indicated that students had a positive attitude toward using the Internet as a learning tool, adequate basic knowledge of the Internet, and viewed the learning environment as supportive of using the Internet. The study showed that students with better basic Internet skills and who viewed the learning environment as promoting the use of the Internet, favoured using the Internet for learning. Therefore, the university achieved its objectives of promoting the use of the Internet for teaching and learning (Hong, Ridzuan and Kuek 2003).

In the study done at the Tel-Aviv University (Nachmias and Segev 2003: 145) found that the use of the Internet as an instructional tool in higher education was rapidly increasing. In that study, a computer log was used to evaluate how online content was consumed and to identify the individual differences among students in terms of content usage and the amount of content that was presented in Web-supported course sites. Nachmias and Segev (2003: 146) also found that the Internet was mainly used for information transferring from the teacher to the student.

Nachmias and Segev (2003: 146) stated that the Web supports many forms of students' interactivity and engagement and provides access to a vast repository of resources. Moreover, Nachmias and Segev (2003: 147) believed that presentation of educational content on the Internet was highly valuable for students, who enjoy visual presentation of information, comments, and supplements to materials taught in lectures. Furthermore there was a decrease of scaffold usage during tutorials over time, indicating the increased knowledge and skills of students.

According to Kitao (1999) the Internet had many resources that were useful for students of English, especially for students in Japan who did not have many chances to communicate in English. Kitao (1999) further said that among those Internet resources there were journals with readings for students, and students could publish their own writings. Kitao (1999) also said that there were sites where students could learn about grammar and vocabulary and could do grammar and vocabulary quizzes and games. There were sites where students could also practice the four skills of reading, writing, listening, and speaking.

2.3 Usage of the Internet by students

Tadasad, Maheswarappa and Alur (2003) discovered that few undergraduate students of an engineering college made use of the Internet. It was also found that the use of the Internet was confined to general or recreational purposes. The authors' conclusion was that very few students utilised the Internet service at the college. Therefore, there was a need to increase the number of students who used Internet facilities at the college (Tadasad, Maheswarappa and Alur 2003). There was a lack of training in the use of the Internet, particular for undergraduate students. A study at the University of Dar es Salaam revealed that many students were also not using the Internet effectively (Luambano and Nawe 2004: 16). Their reasons for this state of affairs included inadequate provision of computers with Internet facilities, lack of skills in Internet use and slow speed of computers (Luambano and Nawe 2004: 16).

Ojedokun (2003: 49) in his study of Internet access and usage by students of the University of Botswana reported the limited use of file transfer (via FTP) among students and that this perhaps suggested that the students were not skilled in the use of this facility and thus were unable to share data sets, jointly write proposals and research papers, and engage scholars on a global basis in dialogue on research issues of interest to them. Hong, Ridzuan and Kuek (2003) found that students with better basic Internet skills were more positively predisposed toward using the Internet for learning.

2.4 Purpose of use of the Internet by students

Ojedokun (2001: 98) found that in terms of the purpose of usage, studies revealed that the major use of the Internet was for surfing the WWW and e-mail. Ojedokun (2001: 98) stated that in a report of the 1998 library survey of Internet users at Seton Hall University, 40.2% of respondents used the WWW on a daily basis, 38.3% weekly, and 10.7% on a monthly basis. Ojedokun (2001: 98) further stated that about 10% of respondents said they seldom or never used the Internet. It was found that students and faculty searched the Internet for information related to both their academic, (83.2%) and non-academic studies, (73.8%).

Kubey (2001: 366) pointed out that recent research at colleges and universities has suggested that some college student's academic performance might be impaired by heavier use of the Internet. Although use of the Internet by students was on the rise, so were concerns that for some students, heavier use of the Internet might interfere with academic achievement, conventional social interaction, and exposure to desirable cultural experiences.

Ojedokun's study (2001: 97) also revealed that because of the lack of effective searching skills, those who had access to the Internet used it essentially to search and retrieve information on entertainment, sports, and news from around the world. The study noted that the university had greatly influenced the student's use of the Internet to access information. Ojedokun (2001: 102) further stated that students used the Internet to communicate with lecturers, friends and relatives in and outside Botswana, students in and outside Botswana and lastly to participate in discussion groups.

Ojedokun (2003: 48) found that e-mail (94.4%) and Web browsing (84.7%) were the most popular applications used by the respondents. However out of the 94.4% of respondents who used e-mail, only 22.1% had received prior Internet training. Also out of 84.7% of respondents who carried out Web browsing, only 26% had received formal Internet use training.

non academic

Ojedokun (2001: 103) found that the majority of the respondents in his study were not using the WWW for academics matters, but they were using it for entertainment purposes. In this regard 25% of respondents were using the WWW for retrieving images of superstars, 16.9% for computer games, 6.8% for audio files, 6.8% for pornographic related materials, 16.9% for music files, 14.9% for computer software, 20.9% for newspaper articles and 27% for full text of academic related materials. Therefore it is obvious that there was misuse of the Web in this academic environment.

Academy

Studies have demonstrated that the Internet has become a functional tool for most college students, one that has greatly changed the way they interact with others and with information as they go about their studies. On the other hand, Lindsay and McLaren (2000) found that the majority of students, while recognising the attendant frustrations of the Internet, have found it to be a valuable source of information for the support of their studies. Chapman (2000) also found that the Internet was mainly used for educational purposes. Furthermore, it was found that the female undergraduate students used Internet most. Chapman (2000) found that the only one third of the undergraduate students had received Internet training.

FTP

Ojedokun (2003: 49) further reported that students used file transfer less often. This perhaps suggests that the students were not skilled in the use of this facility. Students were therefore unlikely to know how to use this facility to share data sets, organise conferences, jointly write proposal and research papers, and engage scholars on a global basis in dialogue on research issues of interest to them. Ojedokun (2003: 49) pointed out that file transfer through FTP, supplemented e-mail attachments by quickly and cheaply transferring very large files, such as high-resolution images and large databases. Ojedokun (2003: 49) pointed out that the Internet and e-mail could be invaluable tools to promote collaborative research. E-mail and FTP help researchers in widely separated locations to pursue joint projects.

web

In a study conducted in the United States, Perry (1998: 136) reported that universities had their own Web pages, but on some campuses, students' use of e-mail has led to students creating their own Web pages. Perry (1998: 136) pointed out that Kent State University

also encouraged students to develop their own home pages by offering disk space, authoring software and training and support.

2
General
Jones (2002) stated that nearly four-fifths of college students, 79% agreed or strongly agreed that Internet use had a positive impact on their college academic experience. Most students felt their relationships with their professors have been positively affected by e-mail and Internet communication in general. Only 2% said e-mail had a negative impact on their relationship with professors. Interestingly, these good feelings stemmed from fairly limited e-mail contact. Only 19% of students said they communicated more with their professors via e-mail than face to face.

3
General
Jones (2002) further stated that half of the college students in his study agreed that the Internet has had a positive impact on their relationship with professors, while only 7% stated that it had not. Over half 56% of the students felt that e-mail has enhanced their relationships with professors, while a mere 2% felt that it had had a negative impact. The Internet is used in many cases to supplement students' academic activities and provide some alternatives for professors and students looking to bring new life to familiar educational experiences. For example, two-thirds (68%) of college students reported that they had subscribed to one or more academic-oriented mailing lists that relate to their studies (Jones 2002). 4
Conclu

5
E-mail
Jones (2002) stated that other research by the Pew Internet and American Life Project showed that as users increased their experience online, they were more likely to use e-mail to communicate about serious topics. College students showed similar traits, nearly half of them (46%) agreed that e-mail was a communication tool that allowed them to more freely express their ideas to professors. Nine out of 10 (87%) college students had been contacted by professors via e-mail. Slightly more students (89%) said professors used e-mail to communicate class announcements (Jones 2002).

6
Academic
Perry (1998: 136) noted that at colleges and universities, students also use the Internet for academic purposes. At some institutions, students can e-mail professors when they have questions. Jones (2002) and Perry (1998: 196) pointed to the fact that some students may

find electronic communication less threatening than speaking in class. Moreover, a number of faculty members have reported that virtual office hours can free up class time and office visits. Furthermore, faculty members at some universities have used the Internet to post course syllabuses and class announcements and others have used the Web to integrate charts, graphs, photographs, sound, and video for use in their classes. The Internet is thus being used to make course information available and to supplement classroom instruction. In fact, as Perry (1998: 137) points out, entire courses are now being offered on the Internet.

E-mail

Therefore for many college students, use of e-mail had become a part of their daily activities. Perry (1998: 137) further said, "use of e-mail by college students was so common that for some of them it's like picking up a phone". Perry (1998: 137) pointed out that in one study researchers used survey data to extrapolate that 9.1 million students used the Internet almost every day. The researchers also concluded that 7.5 million college students have their own computers. Jones (2002) stated that Internet use is a staple of college students' educational experience. They use the Internet to communicate with professors and classmates, to do research and to access library materials.

File share

Jones (2002) stated that college students also lead other users in file sharing of all kinds. Forty-four percent of college Internet users report sharing files from their own computers while 26% of the overall population of Internet users had shared files. The sharing of files other than music was also greater among college Internet users with 52% of them having downloaded files other than music, while 41% of the overall population of Internet users reported doing so (Jones 2002).

Social N

Jones (2002) stated that college Internet users are heavier users of instant messaging and online chat than those in the overall online population. While about half of all Internet users have sent instant messages, nearly three quarters of college Internet users have done so, and college Internet users are twice as likely to use instant messaging on any given day compared to the average Internet user (Jones 2002). Jones also noted that the majority of college students (89%) have a positive attitude toward the Internet and its

communication tools. They are comfortable with Internet communication, and even report finding enjoyment while using it for academic and personal reasons.

Jagboro (2003) stated that more and more students are doing their research exclusively on the Internet. Results of his study showed that students used Internet facilities with e-mail having the highest score (69.86%), research materials (53.42%) and course materials (39.93%). Davis (2002: 53) stated that students used the Internet for submitting assignments. According to Davis (2002: 54) "there was faculty acceptance of students using the Web for research and concluded that faculty generally feels positive about using the Web as a research tool".

In a study conducted at Duke University, Lubans (1999) reported that the Web was used for academic, learning purposes several times a week by a majority of respondents. However, males tended to use the web significantly more often than females. Scherer (1997: 658) also pointed out that over 90% of weekly Internet users accessed the Internet for academic work and to maintain relationships with family and friends. Furthermore, Scherer noted that other reasons for using the Internet included meeting new people (35.4%), socially experimenting (20.6%), seeking sexual material (15.4%), or seeking illegal or immoral material (12.8%). These less common reasons for using the Internet were reported by more dependent than nondependent students. Therefore overall, Internet dependent students used the Internet for a wider variety of reasons than other students (Scherer 1997: 660).

Scherer (1997: 661) also found that the majority of students use the following services on a regular basis, which include e-mail (98.7%), WWW (85.2%), and library services (54.0%). Less-used services included news group (37.7%), games (11.7%), bulletin board services (8.1%), Internet relay chats (9.1%), and multi-user dungeons (1.8%). Scherer (1998: 662) also stated that the majority of students, dependent and nondependent, describe themselves as sociable or very sociable, as opposed to shy, introverted, or unsociable. However, Scherer (1998: 662) stated that more of their relationships were face-to-face rather than on-line. Therefore although the majority of Internet dependent

students reported more face-to-face than on-line relationships, dependent students are more likely than other students to have a larger proportion of relationships on-line.

2.5 Frequency of use of the Internet by students

In his study at the University of Botswana Ojedokun (2001: 100) found that a large number of the students had been using the Internet for less than six months. He also found that 60.1% of the students spent three hours or less per week surfing the Internet, while only 4.73% of the students spent more than 10 hours per week. Ojedokun (2001:101) reported that similar findings were revealed in a survey conducted by Bao (1998: 540) where 78.5% of the student respondents used the Internet for their academic studies on a daily or weekly basis.

Furthermore, the study revealed that the respondents most regularly used e-mail followed by the Web browsing and then followed by news groups. The reason for that might be that e-mail was used in communication with students and lecturers, as it was quick and permits transmission of files, permits near instantaneous transfer of manuscripts, spreadsheets, and some images as attachments (Ojedokun 2003: 46). On the other hand, Luambano and Nawe (2004:15) found that students used the Internet less frequently, as 16.3 % of them indicated using it once a day, (55%) of them more than once a day, 23.8% of them once a week, 10% of them once a month and 7.5 % of them more than once a month.

In a study conducted in the United States Jones (2002) reported that college students were heavier users of the Internet compared to the general population. He pointed out that use of the Internet was a part of college students' daily routine, in part because they have grown up with computers. It was integrated into their daily communication habits and had become a technology as ordinary as the telephone or television. Jones (2002) stated that:

- One-fifth of today's college students began using computers between the ages of five and eight. By the time they were 16 to 18 years old, all of today's current college students had begun using computers and the Internet was a common place in the world in which they lived.

- Eighty-six percent of colleges have gone online, compared with 59% of the general population.
- College students are frequently looking for e-mail, with 72% checking e-mail at least once a day.
- Just under half 49% of students first began using the Internet in college, while 47% first began using it at home before they arrived at college.
- Seventy-eight percent of college Internet users say that at one time or another they have gone online just to browse for fun, compared to 64% of all Internet users.
- College Internet users are twice as likely to have ever downloaded music files when compared to all Internet users: 60% of college Internet users have done so compared to 28% of the overall population.

In terms of the amount of time spent on the Internet, Jones (2002) stated that three-quarters (74%) of college students use the Internet four or more hours per week, while about one-fifth (19%) use it 12 or more hours per week. This is somewhat higher than the amount of time most students devote to studying - nearly two-thirds (62%) reported studying for classes no more than 7 hours per week, while only 14% reported studying 12 or more hours per week (Jones 2002). Jones (2002) reported that college students used the Internet, rather than the library, as the primary site of their information searches. Nearly three-quarters (73%) of college students said they use the Internet more than the library, while only 9% said they use the library more than the Internet for information searching. In response to a general question about overall library use, 80% of college students reported using the library less than three hours each week. Many students are likely to use information found on search engines and various Web sites as research material (Jones 2002).

Despite the extensive use of the Internet as an information source, Jones (2002) found that college students use the Internet more as a medium for social communication than for educational or professional communication. The difference though is slight. While 42% of college students say they use the Internet primarily to communicate socially, nearly as many 38% use it primarily to engage in work for classes. Only a modest portion use it

primarily for entertainment, apart from their socializing (Jones 2002). It is clear, however, that the Internet was not the only means of communication for college students, and in some cases it was not even their first choice for it. Over two-thirds (69%) of college students said they were more likely to use the phone than the Internet to communicate socially, even though 85% of college students consider the Internet to be an easy and convenient choice for communicating with friends (Jones 2002).

Jones (2002) stated that nearly all college students (95%) reported using e-mail for social communication at least once a week, and 21% said they use it at least once a day for that purpose. Other Internet tools like chat rooms, message boards and newsgroups were practically unused by the students surveyed. Students spent a good portion of their total Internet time on social communication. Furthermore findings suggest that many college students spent between one and three hours online per week in social communication. The majority of students reported that they either use the Internet less than three hours a week 31% or four to seven hours a week 38%.

Of those who reported that they spent less than three hours a week on the Internet, 45% claimed they spent an hour of that time in communication, while 41% claimed one to two hours communicating socially. Of those who reported spending four to seven hours a week on the Internet, 35% claimed they spent only an hour a week in social communication, while 40% spent one to two hours and the majority of college students 62% spend two to three hours communicating for social purposes. At least 25% of college students spent as many as three or more hours a week communicating socially online (Jones 2002).

Kubey (2001: 366) pointed out that recent research at colleges and universities has suggested that some college student's academic performance might be impaired by heavier use of the Internet. Although use of the Internet by students was on the rise, so were concerns that for some students, heavier use of the Internet might interfere with academic achievement, conventional social interaction, and exposure to desirable cultural experiences.

In a study conducted at the University of Nigeria, Jagboro (2003) reported that 22.06% of students accessed the Internet on a daily basis, 38.24% weekly, 11.76% monthly, 11.76% bi-monthly and 16.17% quarterly. In addition, 25% spent an average time of half an hour, 39.71% spent one hour, 19.12% spent two hours, 7.35% spent three hours, 2.94% spent four hours, while 5.88% spent more than four hours (Jagboro 2003).

Scherer (1997: 655) found that 13% of college students fit a classification of Internet dependency. Anderson (1999) concluded that 9.8% of students surveyed were Internet dependent, and a majority of these were in the hard sciences. Perry (1998: 137) pointed out that the widespread use of the Internet on college and university campuses has contributed to an increased curiosity about how much time students spend on the Internet. In a study involving adult Internet users from the general public, heavy Internet users (20 hours or more per week) were found to contribute around 8%. In another study referred to by (Perry 1998: 137), the number of heavy Internet users was 9%.

In a study conducted by Scherer (1997: 655), 75% of the students accessed the Internet at least once a week, 13% of weekly users reported that their use was excessive and significantly interfered with personal functioning. Scherer (1997: 658-659) also pointed out that weekly Internet users include a larger proportion of male than female respondents as a whole that is 53% vs. 46.3%. Therefore, the distribution of men and women in the weekly users remained near 50%. Furthermore the majority of weekly Internet users perceive the Internet as having a positive 58% or no significant 40% effect on their lives. Therefore only 40% of students said their use of the Internet had a negative effect on their lives.

Scherer (1997: 659-660) found that students reported, on average, 4.2 hours per week online for personal or leisure activities, 2.7 hours for academic tasks, and 1.2 hours for professional work. Furthermore the total number of hours online for all activities was an average of 8.1 hours per week.

However other studies have come up with very different numbers. Homes (1997) studied 531 students at the University of Texas at Austin and found that of those surveyed 381 used the Internet at least once per week and of these students 49 (13%) were classified as Internet dependent because they had at least three out of 10 problems, which parallel chemical dependencies. Holmes (1997) further argued that users were classified into three groups. Pathological users average 8.5 hours of Internet use per week, persons with limited symptoms average 3.2 hours per week, and those with no symptoms average 2.4 hours per week.

Holmes (1997) stated that with 19 hours per week of Internet use, many students reported signs of interference of functioning (primarily failure to manage time, missing sleep, and missing meals). Holmes continued by saying that surprising results were that 80% of the sample reported at least three of these signs. These numbers suggested that the presence of some level of these problems was normal and therefore should not be considered as pathological. These less common reasons for using the Internet are reported by more dependent than nondependent students. Therefore overall, Internet dependent students used the Internet for a wider variety of reasons than other students (Scherer 1997: 660).

2.6 Problems experienced by students when using the Internet

In his University of Botswana study, Ojedokun (2001: 104) reported that there were four identifiable problems of Internet facilities on campus. These were:

- Very few computers with Internet facilities;
- Very slow Internet connections;
- Very little time allocation for Internet use; and
- Very little training in the use of the Internet facilities.

Luambano and Nawe (2004) identified the same issues at the University of Dar es Salaam.

Anderson (2001) maintains that college students may be particularly susceptible to problems related to Internet use and specifically, to excessive Internet use. In his study seventy-two percent of college students are users, and 87% of college students had Internet access. Anderson (2001) points out that the Internet has been connected to other

problems as well. For example one study of college students has linked Internet use to the rate of academic dismissal.

Another example provided by (Anderson, 2001) is that the Internet has provided an opportunity for some to stalk and harass other online users. Web sites have been created to help those victimized by others who have taken advantage of the anonymity provided by the Internet. Other risks of Internet use include the exchange of pornography, online gambling, credit card debt as a result of excessive online purchasing and social isolation secondary to excessive amounts of time spent online. With these factors in mind, one might conclude that college students could be susceptible to overusing or becoming dependent on the Internet (Anderson 2001).

Kubey (2001: 367) found that studies of general Internet users suggest that some people may experience psychological problems: social isolation, depression, loneliness, and time mismanagement related to their Internet use. Furthermore, Schulze (2000: 248) reported that students experience problems when using the Internet, such as keeping up with developments of the Web demands time and effort and can lead to hours of unproductive browsing. Students may be misinformed since Web publishing is generally not refereed and assessment of group projects presents problems. Scherer (1997: 656) found that excessive Internet use is problematic when it results in impaired functioning such as compromised grades or failure to fulfil responsibilities.

2.7 Why certain students did not use the Internet

Studies have revealed that certain students did not use the Internet because of their limited skills and knowledge (Luambano and Nawe 2004; Ojedokun 2003). In his study conducted at the University of Botswana, Ojedokun (2003: 46) reported that 22.2% respondents had the experience of between one and two years of Internet use, while 73.6% had three years and upward of Internet use.

Ojedokun (2003) also found that of the 22.2% who had used the Internet for one to two years, only 18.8% had received prior formal training on Internet use, while 73.6% had received prior informal Internet training. Ojedokun (2003: 47) found that of the 58.3% of

students who used the Internet very regularly, only 28.6% had received any training on Internet use prior to the study. Ojedokun (2003) also found that 19.4% used the Internet regularly and out of this number, only 14.3% had received prior formal training on Internet use. Therefore it is clear that a large proportion of the respondents had no formal training on the use of Internet.

Luambano and Nawe (2004:16) also identified the problem of insufficient awareness of the resources available on the Internet that could enhance learning. Some lecturers did put more emphasis on printed sources than Internet information. Therefore, lack of motivation by lecturers was seen by Luambano and Nawe (2004) as one of the reasons why students did not utilise this information-rich resource.

2.8 Summary

This chapter reviewed the related literature on Internet use by tertiary students and in doing so answered the following questions:

- Which students were using the Internet?
- What do students use the Internet for?
- How often students were using the Internet and when they use it?
- The problems experienced by those students who were using the Internet?
- Why certain students were not using the Internet?

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology used in the present study. Aspects which are examined include: the research design, population, data collection instrument, the validity and reliability of the instrument and the analysis of the data.

3.2 Research design

Surveys are one of the many research methods available to researchers. Like any research method, its aim is to gather data regarding an identified phenomenon or felt need. Haralambos and Molborn (1995: 515) have defined a survey as a research tool that seeks to collect standardised data about large numbers of people. Survey research is probably the best method available to social scientists interested in collecting original data for describing a population too large to observe directly (Babbie and Mouton 2001: 256).

The researcher considered the survey approach the most appropriate method in terms of ascertaining an overall picture of the use of the Internet at St. Josephs. Furthermore, the survey method was also used in a similar study conducted in Botswana by Ojedokun (2001). The main data collection instrument used by Ojedokun (2001) was a questionnaire. The same questionnaire was adapted and used in this study with the permission of the author (see Appendix 2).

3.3 Data collection instrument

After the researcher has identified the information that is required to answer the research question, the next task is to design or adopt an appropriate instrument with which to collect that information (Chinyemba 2002: 64). The research stands or falls depending on the quality of the facts on which it is based. The importance of constructing an appropriate and accurate instrument for measuring and collecting data is absolutely necessary.

According to Bless and Higson-Smith (1995: 99), “as facts are empirically verifiable observation, data consists of measurements collected as a result of scientific observation”.

In other words, facts which are expressed in the language of measurement become data. A person's views on Internet use by students, for example, could be positive, neutral or negative. The fact that this person takes a definite position towards an issue becomes data once it is expressed in terms of measurement. The most frequently used method of gathering information is by directly asking the respondents to express their views, therefore the emphasis is placed on interviews or questionnaires.

The most common methods of gathering data in survey research are the interview, observation and the self-administered questionnaire. A self-administered questionnaire was used, in the present study.

3.4 Self-administered questionnaire

The questionnaire has been defined as a set of questions for submission to a number of persons to gather data (Powell 1985: 90) and they are, as noted above, commonly used in social science data collection. The self-administered questions can be open-ended, that is when they allow respondents to communicate their experiences or opinions about specific issues in their own words, without restricting them. The self-administered questionnaire can also comprise closed questions which do not allow the respondents to provide answers in their own words, but they require a choice of one or more among the fixed answers provided on the sheet (Terre Blanche and Durrheim 1999: 295).

The self-administered questionnaire was considered the most appropriate instrument for data collection in the present study because of the nature of the data required to answer the research questions. The data was required from different students, which necessitated the presentation of the same questions to different people on similar issues.

3.4.1 Advantages of the self-administered questionnaire

There are a number of advantages to the self-administered questionnaire and the following are applicable to the present study. These were important considerations in the present study.

- “Collecting data through self-administered questionnaire is more efficient in that it requires less time, it is less expensive, and permits collection of data from a much larger sample” (Powell 1985: 91).
- “The self-administered questionnaire tends to encourage frank answers due to possible anonymity, since the respondent can complete the questionnaire without being in the presence of the researcher” (Powell 1985: 90).
- Self-administered questionnaires, if they have to be returned later without mentioning the respondent’s name, assures anonymity which in turn encourages respondents to be honest in their answers (Bless and Higson-Smith 1995: 112).
- “The self-administered questionnaire eliminates interviewer bias, in that it provides a fixed format of questionnaires, which eliminates variation in the questioning process. Once the questions have been written in their final version and included in their questionnaire, their content and originality will not change” (Powell 1985: 91).
- They provide respondents time to think before answering (Powell 1985: 90).
- Questionnaires can be constructed so that data are relatively easy to analyse (Powell, 1997: 91).
- Questionnaires can facilitate the collection of a large amount of data in a relatively short period of time (Powell 1997: 91).

3.4.2 Disadvantages of the self-administered questionnaire

The self-administered also has certain disadvantages and these include the following.

- The self-administered questionnaire requires the level of literacy and familiarity with the language used. In sending out questionnaires, it is not easy to discover in advance whether or not the respondent has the minimum level of literacy (Bless and Higson-Smith, 1995: 113). However, this was not a problem in the present study due to the nature of the population. The population comprised tertiary students who it was assumed, were familiar with the language used in the questionnaires.
- Unlike interview protocols in which ambiguities can always be clarified, it is impossible to enlighten or clarify in the case of self-administered questionnaires

since they are sent or mailed rather than administered directly as in an interview (Gay 1981: 166).

3.5 Format of questions

Questions can be categorised as either open or closed. In the present study both types were used as recommended by De Vos (1998).

3.5.1 Open questions

De Vos (1998: 160) stated that an open question gives the respondents an opportunity to express themselves. The open question has advantages when a variable is relatively unexplored or unknown to the researcher. Therefore the researcher will be able to explore the variable better and to obtain some idea of the spectrum of possible responses. The disadvantage of open questions is the difficulty in analysis. It is also difficult to interpret the content.

De Vos (1998: 160) found that questionnaires could contain both open and closed questions. Therefore in such case the researcher must aim at using as many closed questions as possible, even though there will always be information which is difficult to generate by closed questions, so that open questions are unavoidable.

However open-ended questions are time consuming because the respondents would take time expressing themselves when they answer the questionnaires.

3.5.2 Closed questions

According to Babbie and Mouton (2001: 233) closed questions ask the respondents to select an answer from among a list provided by the researcher. Babbie and Mouton (2001) also pointed out that closed questions are very popular because they provide a greater uniformity of responses and are more easily processed. It limits the respondents potential answers.

However closed-ended questions are limited, because they do not allow the respondents to express themselves as much as they want to. According to Babbie (1992:148) the

researcher's structuring of the responses may overlook some important responses, for example leaving out certain issues that respondents would have said were important.

De Vos (1998: 160) also pointed out that using only closed questions can leave out important information, because closed questions can never completely provide for the variety of response options which may exist on any particular subject.

De Vos (1998: 160) stated that the ideal is a section of the questionnaire consisting of closed questions suitable for statistical processing by computer on the one hand, and open question, which have to be processed manually, on the other hand.

3.6 Population

The word population in the research context refers to persons, objects or institutions that have at least one characteristic in common. If the population consist of a large number of units, then sampling would need to be done because the researcher cannot survey the entire population. In the present study the population surveyed comprised all 188 students at St. Joseph's Theological Institute. Given the small size of the population, sampling was not done and the entire population was surveyed.

3.7 Pre-testing the questionnaire

The pre-test would also help the researcher to refine the data collection instrument (Babbie 1992: 238). It can permit a preliminary testing of the hypothesis, point out a variety of problems not anticipated relating to design and methodology, facilitate a practice run of the statistical procedures to be used, and perhaps even indicate that the final study may not produce any meaningful results and therefore should be rethought or abandoned.

In the present study once the questionnaire was completed the pre-testing was done immediately. The questionnaire was pre-tested on 10 students at St. Joseph's Theological Institute. This gave the researcher the opportunity to identify questionnaire items that were misunderstood by the participants.

The pre-test identified questions which were unclear and these were rectified. Apart from that, the respondents in the pre-test experienced no further problems.

3.8 Distribution of the questionnaires

Once the pre-test had been completed and adjustments made on the basis of the recommendations of the pre-test population, the questionnaires were immediately distributed to all the students at St. Joseph's Theological Institute. Students were informed that all the replies would be treated in the strictest confidence and the data would be presented only in the aggregate and the responses would not be attributed to particular respondents. Students were asked to return the completed questionnaires to the library. Students were informed that the questionnaires should be deposited in a box marked 'Internet use survey' on the issue counter in the library. The students were given two weeks to complete and return the questionnaire. The questionnaire was distributed in the classroom in order to make contact with the respondents and to encourage the return of the questionnaire.

3.9 Response rate

Babbie and Mouton (2001: 261) pointed out that the response rate is a guide to the representativeness of the respondents. If a high response rate is achieved, there is less chance of significant response bias, than in a low rate. Babbie and Mouton (2001: 261) further state that conversely, a low response rate is a danger signal, because the non-respondents are likely to differ from the respondents in ways other than just their willingness to participate in a survey.

Babbie and Mouton (2001: 261) also stated that a quick review of the survey literature would uncover a wide range of response rates but that it is possible to state some rules of thumb about return rates. Given this, a researcher should encourage the respondents to return answered questionnaires in order to increase the response rate.

In this study the response rate was not as high as the researcher expected. The researcher was anticipating 100 or more returned questionnaires. However, only 65 out of 188 questionnaires distributed were returned. To encourage response the researcher had made

it clear to the students that their participation would be highly appreciated and that their participation was important as the findings of the study could assist St. Joseph's Theological Institute in identifying problems associated with Internet use by students and the opportunity to resolve these problems. The response rate is further discussed in the following section 4.2 of Chapter Four.

3.10 Data processing and analysis

The data was processed and prepared for analysis using SPSS 11 for Windows.

According to Kothari (1990: 151) there is a distinction between data processing and data analysis:

Technically speaking, processing implies editing, coding, classification and tabulation of collected data so that they are amenable to analysis. The term analysis refers to the computation of certain measures along with searching for patterns of relationships that exist among data-groups.

Before preparing the data to be coded for analysis, the questionnaires were checked to ascertain whether respondents completed it or not. The errors and omissions were checked to ensure that the researcher had received accurate and consistent data.

A coding key was prepared which involved assigning numerals to the answers of question items. This facilitated the inputting of responses into a limited number of categories.

Using these categories an SPSS matrix was designed by defining the variables. The data was then captured, questionnaire-by-questionnaire, variable-by-variable, into the SPSS matrix to facilitate further analysis.

The data was then analysed using the features of SPSS. Descriptive statistics in the form of frequency and percentage distributions were used to reveal patterns and thus facilitate interpretation and the presentation of findings.

3.11 Validity

According to Babbie (1992: 132) the term “validity” refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration.

The author adapted the questionnaire used by Ojedokun (2001) in his study of Internet usage by students at the University of Botswana. The questionnaire was pre-tested on 10 students at St. Joseph’s Theological Institute before it was distributed to all the students. Pre-testing was done to ensure that all the questions in the questionnaire were closely related to the research objectives and that closed ended, open ended and scaled items were appropriate. Also misunderstanding of the questions could be avoided.

Bless and Higson-Smith (1995: 82) stated that in order to achieve high internal validity a research design should control as many extraneous variables as possible, and should deal with problems such as history, maturation, regression to the mean, test effects, instrumentation effects, experimental mortality and selection bias.

Therefore external validity examines the extent to which the results of a study can be generalized to the real world. Pratt (1992: 80) pointed out that pre-testing of questions and surveys or the use of pilot studies may save a great deal of time by validating the questions themselves to check whether they are relevant or useful or give the information required.

3.12 Reliability

According to (Newell, 1993: 99) reliability is a matter of whether a particular technique, applied repeatedly to the same object would yield the same result each time. Moreover, (Newell 1993:106-107) stated that reliability is concerned with the consistency of measure. An instrument, which produces different scores every time it is used to measure an unchanging value, has low reliability.

However, an instrument, which always gives the same score when used to measure an unchanging value, can be trusted to give an accurate measurement and is said to have high reliability.

✦ 3.13 Evaluation of the methodology

The validity of a study refers to its ability to measure what it sets out to measure (Newell 1993: 99). A factor that should be taken into account when considering the validity of a study is sensitivity (Newell 1993: 106-107) which leads to respondents over-reporting what they perceive as desirable behaviours. Pre-testing of the questionnaire was done to help ensure the validity of the instrument. The survey research technique was employed for data collection, which included the questionnaire. The researcher decided to use only the questionnaire, because the population was large and including other methods of data collection would place this research beyond the scope of a minor thesis. Time constraints also precluded the use of other data collection methods. The students were given two weeks to complete and return the questionnaire. As a researcher, one needs to give respondents enough time to complete the questionnaires and also remind the respondents to return the questionnaires after they complete it.

3.14 Summary

This chapter described the methodology used in the study. The study adopted the survey design with the self-administered questionnaire as the instrument of data collection. The choice of instrument was dictated by the nature of the problem under study, which required the collection of factual information to describe the use of the Internet by students at St. Joseph's Theological Institute. In the present study sampling was not done because the population was not large enough to warrant it. Once the pre-testing had been completed, the questionnaire was distributed. The distribution of the questionnaires was discussed. A discussion of the response rate, the analysis of the data, and an evaluation of the research methodology were done.

CHAPTER FOUR: PRESENTATION OF THE FINDINGS

4.1 Introduction

The purpose of this chapter is to present the findings in terms of the objectives. The study was set out to fulfil the following objectives:

- To find out which students use the Internet.
- To find out what students use the Internet for.
- To find out how often students use the Internet and when they use it.
- To find out the problems experienced by those students who use the Internet.
- To find out why certain students do not use the Internet.
- To make recommendations concerning the use of the Internet by students.

The division of the chapter into sections was based on each of the above stated objectives.

4.2 Questionnaires returned

All respondents were students at St. Joseph's. Out of the 188 questionnaires handed out only 65 (34.6%) were returned. The respondents were students from inside and outside South Africa as illustrated in Table 1.

Table 1: Respondent's place of origin

Country	Frequency	Percentage
South African	32	49.2%
Foreign students outside SADC	13	20%
Foreign students within SADC	20	30.8%
Total	65	100%

This poor return could be due to the fact that the respondents were given the questionnaires to take and complete in their free time and return them to a box placed in the library. While the students were asked to return the questionnaires within two weeks, there was no pressure placed on them to do so or even to complete the questionnaires. Despite several reminders and follow-ups, the response rate remained very low. It was also towards the end of the school term and some of the students were going home.

Babbie and Mouton (2001: 261) stated that a response rate of 50 per cent is acceptable to analyse data. Babbie and Mouton further pointed out that 60% is good and a response rate of 70 % is very good. Ngulube (2003: 220) pointed out that Hite (1994) in his study achieved a response rate of 4.5%. Mbaye (1995: 41) in his study of 28 institutions had a response rate of 53.72%. It is evident that response rates can vary greatly and that the 34.6% response rate achieved in the present study while not good, could have been worse.

4.3 Respondents' use of the Internet

The respondents were asked if they used the Internet or not and those who answered in the negative were asked to stop completing the questionnaire after listing their reasons for not using the Internet.

Table 2: Use of the Internet

Used the Internet	Frequency	Percentage
Yes	34	52.3
No	31	47.6
Total	65	100%

Of the 65 students who completed the questionnaires 34 (52.30%) had used the Internet and 31 (47.6%) had not.

4.4 Reasons for not having used the Internet

The respondents were asked to give reasons for not using the Internet. The findings are listed in Table 3 below.

Table 3: Reasons for not having used the Internet

Reasons	Frequency	Percentage
No training and do not know how to use the Internet	17	54.8%
No interest	4	12.9%
No access	3	9.6%
No response	7	22.5%
Total	31	100%

In the present study out of the 24 respondents who gave reasons for not having used the Internet, the majority 17 (54.8%) of the respondents said that they had not received formal training and did not know how to use the Internet.

4.5 Demographic details of respondents using the Internet

Of the 65 students who completed the questionnaires 34 (52.3%) had used the Internet and 31 (47.6%) had not. Characteristics of the 34 students who used the Internet are given in the Tables 4, 5, 6 and 7 below.

Table 4: Level of study

Qualification	Frequency	Percentage
Undergraduate	22	64.7%
Postgraduate Diploma	6	17.6%
PhD	4	11.8%
Masters	2	5.9%
Total	34	100%

As can be seen from Table 4 above, the majority of students who were using the Internet were undergraduates, numbering 22 (64.7 %).

Table 5: Year of study

Year of study	Frequency	Percentage
1 st	6	17.6%
2 nd	3	8.8%
3 rd	13	38.2%
4 th	6	17.6%
5 th	2	5.8%
6 th	4	11.8%
Total	34	100%

As shown in Table 5 above, there was a wide range of years of study. The highest number of respondents 13 (38.2%) were in their third year.

Table 6: Gender

Gender	Frequency	Percentage
Male	30	88.2%
Female	4	11.8%
Total	34	100%

As shown in Table 6 above, the vast majority 30 (88.2%) of respondents who had used the Internet were male. It must be borne in mind though that male students who responded outnumbered female students. St. Josephs is a Catholic Institute and there are more male students than females.

Table 7: Place of origin of Internet user

Country	Frequency	Percentage
South African	13	38.2%
Foreign students outside SADC	11	32.3%
Foreign students within SADC	10	29.4%
Total	34	100%

From Table 7 above, the students who were using the Internet were mostly (38.2%) from South Africa and the least (29.4%) from within the Southern African Development Community.

4.6 Demographic details of respondents not using the Internet

Of the 65 students who completed the questionnaires 34 (52.3%) had used the Internet and 31 (47.6%) had not. Characteristics of the 31 students who had not used the Internet are given in the Tables 8, 9, 10 and 11 below.

Table 8: Level of study

Qualification	Frequency	Percentage
Undergraduate	29	93.5%
Postgraduate Diploma	1	3.2%
Masters	1	3.2%
Total	31	100%

Of the 31 students who are not using the Internet the vast majority 29 (93.5%) were undergraduates.

Table 9: Year of study

Year of study	Frequency	Percentage
1 st	7	22.5%
2 nd	14	45.1%
3 rd	7	22.5%
4 th	1	3.2%
5 th	1	3.2%
Other (7 th)	1	3.2%
Total	31	100%

There was a wide range of years of study. Second year students constituted the largest group with 14 (45.1%) not using the Internet.

Table 10: Gender

Gender	Frequency	Percentage
Male	18	58.1%
Female	13	41.9%
Total	31	100%

From Table 10 above it is evident that more male respondents than female respondents were not using the Internet. Again it must be borne in mind that male students outnumbered female students.

Table 11: Place of origin of non Internet users

Country	Frequency	Percentage
South African	19	61.3%
Foreign students from within the SADC	10	32.3%
Foreign students from outside the SADC	2	6.5%
Total	31	100%

South Africans were the highest 19 (61.3%) among the students who were not using the Internet.

4.7 Use of Internet services/facilities

Respondents were asked various questions relating to the use of Internet services or facilities. The findings are listed below.

Table 12: Length of time using the Internet

How long	Frequency	Percentage
Over 24 months	18	52.9%
7-12 months	5	14.7%
19-24 months	5	14.7%
Less than six months	3	8.8%
13-18 months	3	8.8%
Total	34	100%

The researcher asked respondents for how long they had used the Internet. From Table 12 above out of the 34 students who were using the Internet, just over half (52.9%) had used the Internet for over two years. Only three (8.8%) respondents had used the Internet for less than six months.

Table 13: Frequency of Internet use in hours per week

Hours per week	Frequency	Percentage
<1hr/week	18	52.9%
1-3hrs/week	5	14.7%
Over 12 hrs/week	4	11.85
4-6 hrs/week	3	8.8%
10-12hrs/week	3	8.8%
7-9 hrs/week	1	2.9%
Total	34	100%

As can be seen in Table 13 above, although students were using the Internet, many of them did not spend much time on it, with 23 (67.6%) of students using the Internet three or less hours per week. However, seven (20.6%) students were using the Internet for 10 or more hours per week.

Table 14: Extent of use of Internet facilities

Internet facilities	Very frequently	Frequently	Not so frequently	Rarely	Never	Total
E-mail	10 (29.4%)	11 (32.3%)	7 (20.5%)	2 (5.8%)	4 (11.7%)	34
WWW	12 (35.2%)	8 (23.5%)	9 (26.4%)	5 (14.7%)	0 (0%)	34
News-reader	2 (5.8%)	9 (26.4%)	5 (14.7%)	6 (17.6%)	12 (35.2%)	34
Telnet	3 (8.8%)	9 (26.4%)	0 (0%)	3 (8.8%)	19 (55.8%)	34
FTP	2 (5.8%)	3 (8.8%)	1 (2.9%)	2 (5.8%)	26 (76.4%)	34
Usenet	0 (0%)	1 (2.9%)	3 (8.8%)	2 (5.8%)	28 (82.3%)	34
Total	29	33	26	20	121	229

***Multiple responses were received**

Respondents were provided with a scale to indicate the extent to which they used the various Internet facilities. The most frequently used facilities (very frequently and frequently) were e-mail (61.7%) and the WWW (58.8%). The least used facility was Usenet with only six (17.4%) respondents indicating usage of the facility.

4.8 Electronic mail

Respondents were asked questions relating to use of e-mail and the WWW. The findings are listed below.

Table 15: Personal e-mail address

Address	Frequency	Percentage
Yes	30	88.2%
No	4	11.7%
Total	34	100%

The respondents were asked if they have personal e-mail addresses. As can be seen in Table 15 above, the vast majority (88.2%) of respondents had their own e-mail addresses.

Table 16: E-mail account system

E-mail	Frequency	Percentage
Yahoo mail	16	53.3%
Hotmail	13	43.3%
Other (Hanmail)	1	3.3%
Total	30	100%

In the present study the researcher found that just over half (53.3%) of respondents were using Yahoo mail as their e-mail account. This was followed by another Internet-based e-mail system Hotmail being used by 13 (43.3%) of the respondents.

Table 17: Main use of e-mail

Use of e-mail	Frequency	Percentage
Communication with friends and relatives in and outside South Africa	23	76.7%
Communication with lecturers at St. Joseph's Theological Institute	4	13.3%
Communication with students in and outside South Africa	2	6.7%
Other (Job application)	1	3.3%
Participation in discussion groups	0	0%
Total	30	100%

The researcher wanted to find out what respondents use electronic mail for. Table 17 indicates that the most common use of e-mail mentioned by 23 (76.7%) respondents was to communicate with friends and relatives in and outside South Africa. Interestingly, none of the respondents indicated that they used e-mail to participate in discussion groups.

4.9 World Wide Web

The researcher wanted to find out from respondents what they used the Web for. The largest number 16 (47.1%) of respondents were using the WWW for accessing academic related materials. This was followed by using the WWW to obtain news from around the world, mentioned by eight (23.5%) of the respondents. Of interest, only three (8.8%)

respondents listed entertainment and sport as their main use of the WWW. Results of the major use of the WWW are presented in Table 18.

Table 18: Main use of the WWW

Use of the WWW	Frequency	Percentage
Accessing academic related materials	16	47.1%
News from around the world	8	23.5%
Accessing the Hotmail or Yahoo Website to use Web e-mail	4	11.7%
Entertainment and sport	3	8.8%
Search services provided by sites like Yahoo, Google, etc.	2	5.9%
Just browsing with no particular site or subject in mind	1	2.9%
Total	34	100%

Table 19: Type of data downloaded

Downloaded data	Frequency	Percentage
Full text of academic related materials	22	64.7%
Newspapers articles	12	35.3%
Images of pictures	9	26.5%
Screensavers	6	17.6%
Citations from bibliographic services and catalogues	4	11.8%
Computer software	4	11.8%
Music files	2	5.8%
Pornographic related materials	2	5.8%
Other (International news)	1	2.9%
Other (Vatican Website)	1	2.9%
Computer games	1	2.9%
Total	64*	188%*

***Multiple responses were received**

Table 19 above indicates that out of the 34 respondents who were using the WWW, 22 (64.7%) were downloading the full text of academic related materials. This was followed by the downloading of newspaper articles mentioned by 12 (35.3%) of the students. Only one (2.9%) respondent indicated that he downloaded computer games.

Table 20: Favourite search engine

Search engine	Frequency	Percentage
Yahoo	14	41.1%
Google	12	35.3%
Alta Vista	3	8.8%
Do not have a favourite search engine	3	8.8%
Hot Bot	1	2.9%
Other (Surf Wax)	1	2.9%
Excite	0	0%
Info Seek	0	0%
Lycos	0	0%
Web Crawler	0	0%
Who Where	0	0%
Total	34	100%

As can be seen from the Table 20 above Yahoo was listed as the most favourite search engine being mentioned by 14 (41.1%) of respondents. Yahoo was closely followed by Google with 12 (35.3%) respondents. A number of search engines were not mentioned at all.

4.10 Ways of learning how to use Internet facilities

Since the respondents were using the Internet, they were asked how they learnt the use of its facilities.

Table 21: Ways of learning the use of the Internet

Ways of learning	Frequency	Percentage
Self-taught	18	52.9%
Taught by friend	10	29.4%
Reading books	4	11.8%
Other (Academic course)	2	5.9%
Total	34	100%

As seen in the Table 21 above the majority of respondents 18 (52.9%) who were using the Internet said that they were self-taught.

4.11 Problems experienced when using the Internet

The respondents were asked to indicate the problems they were experiencing when using the Internet. The findings are summarized in Table 22.

Table 22: Ability to use e-mail facilities

Ability	Frequency	Percentage
Good	18	52.9%
Very good	12	35.3%
Total	30	100%

All 30 of the respondents who used e-mail rated their ability to use the facility as either good or very good.

Table 23: Ability to use the World Wide Web

Ability	Frequency	Percentage
Good	20	58.8%
Very good	8	23.5%
Poor	5	14.7%
Very poor	1	2.9%
Total	34	100%

The majority of respondents 28 (82.3%) rated their ability to use the WWW as either good (58,8%) or very good (23.5%)

Table 24: Ability to use Telnet facilities

Ability	Frequency	Percentage
Good	8	53.3%
Very good	4	27.6%
Poor	3	20%
Total	15	100%

Of the 15 respondents who said they use Telnet facilities 12 (80%) rated their ability as either good or very good.

Table 25: Ability to use a search engine

Ability	Frequency	Percentage
Good	21	61.8%
Very good	7	20.5%
Poor	6	17.4%
Total	34	100%

Six (17.4%) of the respondents described their ability to use a search engine as poor. The remainder of students were positive of their ability to use a search engine.

Table 26: Ability to use File Transfer Protocol

Ability	Frequency	Percent
Good	3	8.8%
Very good	2	5.8%
Poor	2	5.8%
Very poor	1	2.9%
Total	8	100%

As indicted in Table 14 previously, the majority 26 (76.4%) of respondents did not use File Transfer Protocol. The eight who indicated that they did had varying abilities.

Respondents were asked in an open-ended question to indicate the problems they experienced when using the Internet. The responses are reflected in Table 27 below.

Table 27: Problems experienced

Problems	Frequency	Percentage
Very few computers	13	38.2%
Computers are slow	13	38.2%
Little training	6	17.6%
Time is not enough	2	5.8%
Total	34	100%

The major problems facing the Internet users at St. Joseph's were the shortage of computers mentioned by 13 (38.2%) respondents and computers being slow also

indicated by 13 (38.2%) respondents. Six (17.6%) respondents pointed to not having enough training in the use of Internet facilities.

4.12 Comments and suggestions

The respondents were asked to make any comments and suggestions on the use of the Internet. Eight of the respondents did so. Comments and suggestion given by the eight respondents varied and each comment and suggestion is listed in Table 28 below.

Table 28: Comments and suggestions

Comments & suggestions	Frequency
"I wish I had better knowledge about the use of the Internet"	1
"I think that net is a wonderful way of knowing, exchanging and meeting people"	1
"Time allocation for net use is limited"	1
"I wish everyone can have access to the net since it is very good"	1
"Internet is a good tool, students should be used to, and encouraged to use it. Proper Internet services should be provided at St. Joseph's Institute"	1
"More computers or a computer room or library would also help the access at the net"	1
"The Institute should improve the quality of computers and training for the use of net"	1
"Such technology is needed and necessary in every Institute of learning"	1
Total	8

4.13 Summary

This chapter presented the finding on Internet use by students at St. Joseph's Institute, in KwaZulu-Natal, South Africa. The present study classified students into those who were using the Internet and those who were not. The results demonstrated what the students were using it for, how often they used it and problems they faced in using the facility. It was found out that there was a lack of training on the use of the Internet, and students were not spending much time using the Internet. Most interestingly, there was a larger proportion of males who were using the Internet than females. In the following chapter the findings are discussed.

CHAPTER FIVE: DISCUSSION

5.1 Introduction

This chapter discusses, in relation to the research objectives, important aspects that emerged from the presentation of the findings in the previous chapter. The chapter divisions for the sections below are based on each of the stated objectives as listed in Chapter One.

5.2. Students who were using the Internet

In the present study, the researcher found that not all the students at St. Joseph's Theological Institute were using the Internet. Of the 65 students who answered the questionnaires, just over half 34 (52.3%) used the Internet. The study shows that the vast majority, 30 (88.2%) of Internet users were male. This was a reflection of more males having responded to the questionnaire than females. There were 48 (73.8%) males and 17 (26.2%) females who responded to the questionnaires. It must be noted though that St. Josephs, as a Catholic Institute, does have more male than female students. When examined proportionally, more male usage is again evident with 62.5% of the males using the Internet and only 23.5% of the females doing likewise. These findings are in agreement with the study, which was done by Scherer (1997: 659), which found that dependent Internet users included a significantly large proportion of men to women, namely, 71.4% of men and 28.6% of women.

Students from South Africa comprised the biggest proportion 13 (38.2%) of those students who were using the Internet. This is understandable as South African students comprised just under half 32 (49%) of respondents. Of the respondents who were using the Internet, just over half 18 (52.9%) stated that they learnt to use the Internet by being self-taught. In line with the present study Chachage (2001: 229-230) stated that it is difficult to do something or to use particular equipment, if one is not instructed in how to use it. Chachage (2001: 231) in his study of the use of the Internet by Tanzanian students, found that (56%) of participants had never had any training on the use of the Internet at all. Furthermore some 26% had trained themselves through Internet tutorials. Chachage (2001) also found that the amount of training that was provided was limited in terms of

duration. Chachage (2001: 220) noted that the reason for this lack of training might be that users did not have time for training or that the cost of Internet training was too high.

Chachage (2001: 229-230) pointed out that the absence of training on the part of users was also evident when the participants were asked to rank their level of knowledge of different Internet resources, such as Telnet, FTP, e-mail and Gopher. Out of 13 popular Internet resources, only three, that is, e-mail, World Wide Web and chatting were well known by respondents, 77% of whom rank themselves as having very high knowledge of using e-mail on the Internet, 63% reported having a very high knowledge of the WWW, and 43% said they had a very high knowledge of chatting. Chachage (2001: 230) revealed that over 70% of respondents said they had very low knowledge of resources such as Telnet and Gopher. Chachage (2001: 230) also noted that the lack of training was evident in the fact that 84% of his respondents admitting that they sometimes needed help from Internet café staff (who paradoxically also needed training as well).

In the present study students' usage of the Internet facilities suggests a need for training. Ojedokun (2003: 49) in his study of Internet access and usage by students of the University of Botswana reported the limited use of file transfer (via FTP) among students and that this perhaps suggested that the students were not skilled in the use of this facility and thus were unable to share data sets, jointly write proposals and research papers, and engage scholars on a global basis in dialogue on research issues of interest to them. Finally, Hong, Ridzuan and Kuek (2002) in their study found that students with better basic Internet skills were more positively predisposed toward using the Internet for learning.

5.3 Students who were not using the Internet and reasons why they were not

Just under half 31 (47.6%) of the students surveyed indicated that they had not used the Internet. The vast majority 29 (93.5%) of these were undergraduate comprising 56.8% of the fifty-one undergraduates surveyed. In contrast only two of the 14 (14.28%) postgraduates surveyed did not use the Internet. Given that most postgraduate students are engaged in academic research it could be argued that their need to use the Internet for such purposes is greater than that of undergraduate students.

Of the 48 (73.8%) males who answered the questionnaire 18 (37.5%) had not used the Internet while of the 17 (26.2%) females who answered the questionnaire 13 (76.5%) did not use the Internet. As noted above, proportionally there were far more females who had not used the Internet than males.

In terms of country of origin, most of the students not using the Internet, 19 (61.3%) were South African followed by foreign students from within the Southern African Development Community. Again, this is not surprising, as South African students comprised the largest number of respondents.

Of the 24 students who gave a reason for not using the Internet the vast majority 17 (54.8%) indicated that they did not know how to do so. Surprisingly, three (9.6%) said that they had no access, which could suggest a lack of publicity about the availability of Internet services to students at the Institute.

Ojedokun (2001: 97) investigated the adequacy of provision of access to, and the usage (in terms of use and misuse) of the Internet by the students, as well as the problems those students faced in its use. The study revealed that computers with Internet facilities at the time of the study were inadequate. Ojedokun (2001: 97) stated that many of the students did not use the Internet because they lacked the necessary searching skills to make effective use of the resource. In contrast, (Gietzelt, 2001:144) found that amongst those who had not taken up using the Internet 50% thought it would be difficult, 25% had not time to use it yet 13% thought it was too expensive and another 13% had no interest whatsoever in learning to use it. (Gietzelt 2001:145) found that the most often mentioned difficulty in using the Internet concerned unreliable Internet service providers.

5.4 Usage of the Internet facilities

There were several questions relating to the students' usage of Internet facilities such as e-mail and WWW. The use of the various Internet facilities varied. Each will be discussed below.

5.4.1 E-mail

E-mail was the most frequently used Internet facility with 21 (61.7%) of the 34 respondents using it either frequently or very frequently. The findings are in agreement with the study conducted at the University of Botswana (Ojedokun 2001: 98), which also found that in terms of usage, the major use of the Internet was e-mail. (Perry, 1998: 136) made the observation that the use of e-mail had become a part of the daily activities of many college students. (Chachage, 2001: 228) in his study also found, that in this instance, Web-based e-mail proved to be the most popular facility used. Similarly Jagboro (2003) in his study also found e-mail as the most used Internet facility with e-mail having the highest score, 69.86%. In the present study the researcher found that most of the students were using Yahoo mail as their e-mail account. Yahoo mail can be classed as a Web-based e-mail system. Similarly (Urrehman, 2000:180) in his study also found that e-mail was the one of the most heavily used Internet applications.

The researcher wanted to find out what students used e-mail for. The most mentioned reason for using e-mail, mentioned by 23 (76.7%) respondents was for communicating with friends and relatives in and outside South Africa. On the list, which was given to the respondents to choose from, there was also a choice of “participation in discussion group”, but it seems that no respondents used e-mail for that particular purpose. In the present study communicating with lecturers at St. Joseph’s Theological Institute was indicated as the next main use of e-mail mentioned by four (13.3%) respondents. Jones’ (2000) study of college students and Internet use also found that 19% of students actually communicated more with their professors via e-mail than face-to-face. Jones (2000) did make the observation that most students felt their relationships with their professors had been positively affected by e-mail and Internet communication in general. Perry (1998: 136) made the point that some students may find electronic communication less threatening than speaking in class. It is evident that having Internet access in an academic institution can be positive in the sense that students can use e-mail to communicate with lecturers and that the use of e-mail does open another avenue of communication for students who would be less inclined, for whatever reason, to communicate with lecturers personally. Furthermore, use of e-mail can be convenient to both the lecturers and the students in terms of, for example, time.

5.4.2 World Wide Web

All respondents who used the Internet used the WWW with 20 (58.8%) using it either frequently or very frequently. There were a large number 16 (47.1%) of the respondents who used the WWW for accessing academic related materials. Similarly, Schulze (2000: 28) found that it as an advantage to use Internet, especially in distance education, because it gives the potential for more effective interaction and communication between students and content, educators, students and among the students themselves. In contrast, Ojedokun (2001: 103) found that the majority of the respondents in his study were not using the WWW for academic matters. Also Gietzelt (2001: 142) revealed that the respondents used WWW for family, friends and organizations communication through e-mails and business graphics.

The second major use of the WWW by respondents in the present study was to obtain news from around the world. Eight (23.5%) students indicating that they used the WWW for this purpose. Similarly, Ojedokun (2001: 103) in his study found that 290 (19.6%) respondents rated access to news items as the second major use of the WWW. Similarly Gietzelt (2001: 145) in his study found out that 21 (64%) respondents who accessed the WWW frequently visited news sites.

5.4.2.1 Type of data downloaded

In the present study the respondents were using WWW to download different materials. Several choices as to what they were downloading were listed for the respondents to choose from and respondents were allowed to tick as many responses as possible. Therefore multiple responses were received. The majority of students 22 (64.7%) indicated that the type of data most downloaded was the full text of academic related materials. This was followed by nine (26.5%) of the respondents who were using WWW for retrieving and downloading images. These findings differ to those of Ojedokun (2001: 103) in his study of Internet access and usage by students of the University of Botswana study in which he found that the major use 25% of the WWW by his respondents was for retrieving images of superstars. In the present study, it was found that four (11.8%) of

respondents were using the WWW for retrieving computer software - a finding similar to that of Ojedokun (2001: 103) who found that 14.9% of his respondents were using the WWW for such purposes.

The present researcher found that two (5.8%) of the respondents retrieved music files. In Ojedokun's (2001: 103) University of Botswana study the percentage was significantly higher with 16.9% of respondents downloading music files. In the present study, it was found that two (5.8%) of the respondents indicated that they downloaded pornographic related materials. This was very similar to the findings of Ojedokun (2001: 103) in his study 6.8% of respondents indicated that they downloaded pornographic materials. These latter findings need to be treated with some caution though as it could be argued that students would not readily admit to such use of the WWW.

In the present study, it was found that even though there was a lack of searching skills (see below), the students used the WWW for full text of academic related materials as their first priority. However Ojedokun's study (2001: 97) differed revealing that because of the lack of effective searching skills, those who had access to the Internet used it essentially to search and retrieve information on entertainment, sports, and news from around the world.

5.4.2.2 Favourite Internet search engine

In the present study the researcher found out that Yahoo was the favourite Internet search engine most used by students with 14 (41.1%) indicating its use. Ojedokun (2001: 104) also found in his study that Yahoo was the search engine most favoured by respondents. This is surprising in that it is generally known that Google has become the dominant search engine worldwide. However, in terms of the present study Google was not far behind Yahoo in term of use 12 (35.3%) as opposed to 14 (41.1%).

5.4.3 Use of Other Internet Facilities

The present study found that the most frequently used facilities (very frequently and frequently) were Telnet 12 (35.2%) This finding differs in the study done by Ojedokun

(2003:48) found that none of the students indicated that they used Telnet very frequently and frequently. In the present study it was found that the respondents who used FTP very frequently and frequently were five (14.6%). Again, this finding differs to the study done by Ojedokun (2003: 48) who found that only six (2.8%) of the respondents used FTP very frequently and frequently.

5.5 Frequency of the use of the Internet by students

5.5.1 Length of time using the Internet

Over half 18 (52.9 %) of the respondents had been using the Internet for over two years. Three (8.8%) students had been using the Internet for six months or less. This latter finding is in contrast with the University of Botswana study done by Ojedokun (2001: 100) which found that a large number of students 460 (31.1%) had been using the Internet for six months or less. This could be attributable to the length of time service had been available in the institution.

5.5.2 Frequency of Internet use in hours per week

Generally the respondents did not spend much time on the Internet. A large number of students 23 (67.6%) spent three or less hours per week on the Internet. A similar finding is reflected in the study done by Ojedokun (2001: 100) who found that 60.1% of the students spent three hours or less per week surfing the Internet, while only 4.73% of the students spent more than 10 hours per week, which is significantly less than the 7 (20.6%) students using the Internet for 10 or more hours per week in the present study.

In his study conducted at the University of Nigeria, Jagboro (2003) found that 22.06% of students accessed the Internet on a daily basis, 38.24% weekly, 11.76% monthly, 11.76% bi-monthly and 16.17% quarterly. It was also found that 25% spent an average time of half an hour, 39.71% spent one hour, 19.12% spent two hours, 7.35% spent three hours, 2.94% spent four hours, while 5.88% spent more than four hours on the Internet. Therefore, when comparing these findings with those of the present study, it is evident that as more time is spent by the students on the Internet, the lower the percentage of the student using the Internet.

In the present study, as noted above, it was found that seven (20.6%) of the 34 students reported that they were spending 10 hours or more per week on the Internet and these students could be regarded as Internet dependent. Internet dependency is defined by Homes (1997) as students having at least three out of 10 problems, which paralleled chemical dependencies and who averaged 11 hours per week online. This percentage of 20.6% is higher than findings in similar studies done elsewhere. For example, in the study by Holmes (1997) 531 students at the University of Texas at Austin were surveyed and 381 students used the Internet at least once per week, 49 (13%) of these were classified as Internet dependent because they, amongst other things, averaged 11 hours per week online while the average for the entire sample was eight hours. Similarly, Scherer (1997: 659) in his study found that the percentage of students who could be classed as Internet dependent was also 13%.

The amount of time allocated to academic and leisure activities on the Internet was not determined in the present study. However, according to Scherer (1997: 659-660) in his study, students reported on average, 4.2 hours per week online for personal or leisure activities, 2.7 hours for academic tasks, and 1.2 hours for professional work. The total number of hours online for all activities was an average of 8.1 hours per week.

5.6 Problems experienced by students who were using the Internet

Respondents were asked to indicate the problems they experienced when using the Internet. The students were first questioned on their ability to use the various facilities of the Internet. This was followed by an open-ended question asking them to list the problems/constraints relating to the use of Internet facilities on campus.

5.6.1 Ability to use Internet facilities

In terms of their ability to use the various Internet facilities, the vast majority of students who used e-mail, the WWW and a search engine, rated their ability to do so as either good or very good. Less than half of the students used Telnet or FTP and of these most rated their abilities to use these facilities as either good or very good.

5.6.2 Problems/constraints experienced

The two most mentioned constraints were: “Very few computers” and “Computers are slow” mentioned by 13 (38.2%) respondents in each instance (see Table 26). Six (17.6%) students mentioned lack of training. Given that these 34 students were already using the Internet the little-mentioned problem of lack of training is possibly not surprising. That lack of training is a problem in general though is evident given that this was the most cited reason mentioned earlier for students not using the Internet and that the vast majority of students who were using the Internet learnt how to do so by means other than formal training. Lack of formal training in the use of the Internet is also borne out by the University of Botswana study (Ojedokun 2001: 46). Ojedokun (2001: 46) found that of the respondents who had used the Internet for 1 to 2 years only 9 (18.8%) had received prior formal training. This was decidedly more than the two (5.9%) students in the present study who had received formal training. Ojedokun (2001: 97) also raised an interesting consequence relating to lack of formal training. He pointed out that although quite a number of the students in his study were aware of the immense benefits of Internet usage for academic studies, they lacked the necessary searching skills to make effective use of the Internet. (Ojedokun 2001: 97). Gietzelt (2001: 143) pointed out that computer breakdowns (28%), and the user’s own shortcomings (16%) represented many of the difficulties encountered by students. Lack of support from help desks or instruction manuals also featured (8%). Furthermore, Gietzelt (2001: 142) revealed that one third of the students learned to use a computer through informal mechanisms.

The lack of computers and their “slowness” are undoubtedly perennial problems in many academic environments in both developing and developed contexts. Scherer (1997: 655) found that while 23 microcomputer laboratories allow thousands of students to use the Internet from campus, at popular laboratories students could wait up to 30 minutes to access a computer.

Kubey (2001: 367) found that studies of general Internet users suggest that some people may experience psychological problems, social isolation, depression, loneliness, and time mismanagement related to their Internet use. Furthermore, Schulze (2000: 248) reported that students experienced problems when using the Internet in that keeping up with Web

developments demands time and effort and that use of the Web can lead to hours of unproductive browsing.

5.7 Comments and suggestions

Eight respondents gave comments and suggestions and these were classified into four groups. The first group which comprised two (25%) respondents was concerned about knowing how to use the Internet to exchange ideas and meet other people.

The second group comprised three (37.5%) respondents and was concerned about the time allocation for Internet use and they pointed out that there should be more computers available for access to the Internet.

The third group consisted of two (25%) students who referred to the importance of the Internet. The fourth group which consisting of one respondents, was concerned about the lack of training for computer use.

5.8 Summary

The chapter discussed the findings as presented in the previous chapter. Respondents were divided into those who used and those who did not use the Internet. Discussion centred, in the main, on the former. In the concluding chapter, which follows, a summary of the major findings and conclusions are provided and suggestions for further research are made.

CHAPTER SIX: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

In this final chapter a summary of the study will be given, conclusions reached will be provided and various recommendations based on the findings of the study will be put forward. To begin with, the aim and the objectives of the study will be revisited.

6.2 Revisiting the aim and objectives of the study

The aim of the study was to investigate the use of the Internet by students at St. Joseph's Theological Institute in KwaZulu-Natal, South Africa. The specific objectives were as follows:

- To find out which students use the Internet.
- To find out what students use the Internet for.
- To find how often students use the Internet and when they use it.
- To find out the problems experienced by those students who use the Internet.
- To find out why certain students do not use the Internet.
- To make recommendations concerning the use of the Internet by students.

6.3 Summary of the findings

The findings can be summarized as follows:

- Of the 65 students who completed the questionnaires 34 (52.3%) had used the Internet and 31 (47.6%) had not.
- Out of 24 of respondents who gave reasons for not having used the Internet, the majority 17 (70.8%) of respondents said that they had not received formal training and did not know how to use the Internet.
- The majority of students who were using the Internet were undergraduates numbering 22 (64.7 %).
- The highest number of respondents 13 (38.2%) were in their third year.
- The vast majority 30 (88.2%) of respondents who had used the Internet were male.

- The students who were using the Internet were mostly 13 (38.2%) from South Africa and the least 10 (29.4%) from within the Southern African Development Community. Of the 31 students who were not using the Internet the vast majority 29 (93.5%) were undergraduates.
- More male respondents than female respondents were not using the Internet. It must be borne in mind though those male students who responded outnumbered female students.
- South Africans were the highest 19 (61.3%) among the students who were not using the Internet.
- Out of the 34 students who were using the Internet, just over half 18 (52.9%) had used the Internet for over two years. Only three (8.8%) respondents had used the Internet for less than six months.
- Although students were using the Internet, many of them did not spend much time on it, with 23 (67.6%) of students using the Internet three or less hours per week. However, seven (20.6%) students were using the Internet for 10 or more hours per week.
- The most frequently used facilities (very frequently and frequently) were e-mail 21 (61.7%) and the WWW 20 (58.8%). The least used facility was Usenet, never used by 28 (82.3%) respondents.
- The vast majority 30 (88.2%) of respondents had their own e-mail addresses.
- Just over half 16 (53.3%) of respondents were using Yahoo mail as their e-mail account. This was followed by another Internet-based e-mail system, Hotmail, being used by 13 (43.3%) of the respondents.
- The most common use of e-mail mentioned by 23 (76.7%) respondents was to communicate with friends and relatives in and outside South Africa. Interestingly, none of the respondents indicated that they used e-mail to participate in discussion groups.
- The largest number 16 (47.1%) of respondents were using the WWW for accessing academic related materials. This was followed by using the WWW to obtain news from around the world, mentioned by eight (23.5%) of the respondents. Of interest only three (8.8%) respondents listed entertainment and sport as their main use of the WWW.

- Out of the 34 respondents who were using the WWW, 22 (64.7%) were downloading the full text of academic related materials. This was followed by the downloading of newspaper articles mentioned by 12 (35.3%) of the students. Only one (2.9%) respondent indicated that he/she downloaded computer games.
- Yahoo was listed as the most favourite search engine being mentioned by 14 (41.1%) of respondents. Yahoo was closely followed by Google with 12 (35.3%) respondents. A number of other search engines were not mentioned at all.
- The majority of respondents 18 (52.9%) who were using the Internet said that they were self-taught.
- All 30 of the respondents who used e-mail rated their ability to use the facility as either good or very good.
- The majority of respondents 28 (82.3%) rated their ability to use the WWW as either good 20 (58,8%) or very good 8 (23.5%).
- Of the 15 respondents who said they use Telnet facilities 12 (35.3%) rated their ability as either good or very good.
- Six (17.4%) of the respondents described their ability to use a search engine as poor. The remainder of students were positive of their ability to use a search engine.
- The majority 26 (76.4%) of respondents did not use File Transfer Protocol. There was varying ability in the eight who did.

The major problems facing the Internet users at St. Joseph's were the shortage of computers mentioned by 13 (38.2%) respondents and computers being slow also indicated by 13 (38.2%) respondents. Six (17.6%) respondents pointed to not having enough training in the use of Internet facilities.

6.4 Conclusions

The conclusions of the present study are guided by the aim and the objectives of the study and are as follows:

From the demographic details in the previous chapters, it is clear that 34 (52.3%) students used the Internet and 31 (47.6%) did not. The breakdown by qualification of the students who used the Internet was: 22 (64%) Undergraduate Diploma, two (5.9%) Masters and four (11.8%) PhD. In the previous chapter it was discussed that

postgraduate respondents were the ones who used the Internet the most. Unlike the above findings, Jagboro (2003) however argues that his study clearly demonstrated the present low level of utilization of the Internet by postgraduate students as a source of materials for academic research at the Obafemi Awolowo University.

In terms of gender, more male students were using the Internet than females. It must be noted that male students were the majority in terms of student numbers at the Institute generally and, more specifically, in terms of number of respondents. It was also found that more South Africa students were using the Internet. Again though, South Africa students comprised the largest number of respondents.

The study showed that not all of the students surveyed were using the Internet. The students who were using the Internet were the students who learned to use it through being self-taught, taught by friends and reading books. Moreover the study revealed that when the Internet was introduced at the Institution, there was no formal training in Internet usage. Over 70% of students who had not used the Internet pointed to a lack of training as a reason for not doing so – a finding which underscores the need for some form of training programme being implemented at the Institute. It is also evident from the findings that there were students among those who did use the Internet who would also benefit from some form of training. This is in line with the study done by Ojedokun (2003: 52) who concluded that the respondents who claimed to be skilled in Internet use would still need further training in order to acquire essential skills, such as those required for using the Internet to deliver additional lecture notes, as well as using Internet mail to send files to students.

In the present study it was found that those who were using the Internet were using Internet facilities, such as e-mail, WWW, news reading, Telnet and FTP. The respondents had identified their personal e-mail account system and it was found that Yahoo mail was the most popular e-mail address. The respondents also identified their main use of e-mail from the choices, which were as follows: communication with friends and relatives in and outside South Africa, communication with lecturers at St. Joseph's Theological Institute and communication with students in and outside South Africa. Moreover most of the

students identified communication with friends and relatives in and outside South Africa as their main use of e-mail.

The respondents showed their main use of WWW was to access academic related materials, news from around the world, access the Hotmail or Yahoo mail Website for Web e-mail, entertainment and sport, search services provided by sites like Yahoo, Google, and just browsing with no particular site or subject in mind. The study revealed that accessing academic related materials was the most common use of WWW.

The respondents were asked to identify their favourite search engine from the list of choices. It was found that the Yahoo search engine was leading as their favourite search engine. Students were downloading a range of topics which were clearly not related to their academic work. The most downloaded subject was the full text academic material mentioned by 22 (64.7%) respondents. This was followed by the newspaper articles which were identified by 12 (35.3%) respondents. Only one (2.9%) of the respondents indicated downloading a computer game.

In terms of time using the Internet a small majority 18 (52.9%) of respondents had used it for over 24 months. The same number indicated that they spent less than one hour per week using the Internet. Three (8.8%) respondents indicated that they spent 10-12 hours per week using the Internet. These respondents could be categorised as Internet dependent.

Finally, the major problems facing the Internet users at St. Joseph's were the shortage of computers mentioned by 13 (38.2%) respondents and computers being slow also indicated by 13 (38.2%) respondents. Six (17.6%) respondents pointed to not having enough training in the use of Internet facilities. The shortage of computer facilities as noted in this study is in agreement with the study done by Ojedokun (2001: 106) which found that computers with Internet facilities for the use of students at the University of Botswana were inadequate with the result that not many students had access to the Internet.

6.5 Recommendations

The following recommendations relating to student use of the Internet at St. Joseph's Theological Institute are made:

- There should be more computers at St. Joseph's Theological Institute since some of the respondents who did not use the Internet had said they did not have access to computers. The availability of the Internet at the Institute should be publicised more, given that some students were not aware of the availability of the service.
- Training of the students to use the Internet is recommended because some of the students who used and did not use the Internet did not have the necessary skills to do so. This may well encourage increased and more efficient use of the Internet particularly in relation to finding academic-related materials. At the same time consideration could also be given to the training of staff as no training of this nature presently takes place.
- It is also suggested that computer rooms should be established which are opened on a 24 hour basis given that students indicated that there was not enough time allocated for the Internet use.

6.6 Suggestions for further research

The present study investigated the use of the Internet by students at St. Joseph's Theological Institute in KwaZulu-Natal, South Africa. The two further studies to be conducted are suggested:

- Given that staff are likely to be significant users of the Internet at the Institute it is suggested that a survey of Internet use by staff at St. Joseph's Theological Institute be done.
- The introduction of Internet access to students at St. Joseph's is a relatively recent development. It is suggested that a further study similar to the present study be done at the Institute after a period of two to three years.

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APPENDICES

Appendix 1: Covering letter on the survey on the use of the Internet by students at St. Joseph's Institute, in KwaZulu-Natal, South Africa.

Dear Student

I am a student at the University of KwaZulu-Natal doing a Masters in Information Studies. I am seeking your assistance in my research project. The main aim of the project is to investigate the use of the Internet by students at St. Joseph Theological Institute. The findings of the study could assist the Institute in identifying problems associated with Internet use by students and the opportunity to resolve them. Thus your participation in the study is very important and will be much appreciated.

All replies will be treated in the strictest confidence. Data will be presented only in the aggregate and responses will not be attributed to particular respondents.

This questionnaire is being distributed to all students registered at St. Joseph's. I will be grateful if you would complete and return it by 10 November 2003. When you finish please return the questionnaire to the library. On the issue counter there is a box marked "Internet use survey". Please place your completed questionnaires in that box.

Should you have any queries about the study, please do not hesitate to contact me at this number (033) 8459106, E-mail 972115433@ukzn.ac.za.

Thank you for your time and cooperation.

Yours faithfully

Simon Shezi

Appendix 2: Survey questionnaire for collecting data on Internet use by students at St. Joseph's Theological Institute in KwaZulu-Natal, South Africa

Please note: All the information collected in this study will be used strictly for writing an academic thesis. Identification of participants is **not important in this study**.

Instructions

Please indicate your appropriate response by means of a tick or a cross. Where possible please elaborate in the spaces provided.

1. For which qualification are you studying?
 Under-graduate
 Post-graduate diploma
 Master degree
 Ph.D degree
2. What is your year of study?
 1st
 2nd
 3rd
 4th
 5th
 Other, please specify _____
3. Gender: Female
 Male
4. I am a
 South African
 Foreign student-from the Southern African Development Community (SADC)
 Foreign students-outside the Southern African Development Community (SADC)

PART B- ACCESS TO THE INTERNET

5. Have you used the Internet either at St. Joseph's or elsewhere?
 Yes Please go to question 7
 No
6. If No, Could you please explain why not.

7. Where do you mainly use the Internet?
 St. Joseph's Theological Institute
 Home
 Other, please specify _____

C. USE OF INTERNET SERVICES/FACILITIES

8. For how long have you been using the Internet?

- Less than 6 months
- 7 to 12 months
- 13 to 18 months
- 19 to 24 months
- over 24 months

9. On the average, how many hours per week do you spend on using the Internet?

- less than 1 hour
- 1 to 3 hours/week
- 4 to 6 hours/week
- 7 to 9 hours/week
- 10 to 12 hours/week
- Over 12 hours/week

10. How regularly do you use the Internet facilities listed below: Please rank each in the order of the frequency of use

(Please indicate the appropriate number in the brackets provided)

- 1= Very frequently
- 2= Frequently
- 3= Not so frequently
- 4= Rarely
- 5= Never

- Electronic mail
- World Wide Web (WWW)
- News-reader
- Telnet (for example, to access library catalogue remotely)
- File Transfer Protocol (FTP)
- Usenet
- Other, please specify _____

11. Do you have a personal e-mail address on the Internet?

- Yes Please go to question 13
- No

12. If no, could you please explain why not.

13. If yes, to question 11 on which system is your e-mail account?

- Hotmail
- Yahoo Mail
- Other, please specify _____

14.(a) How did you learn the use of the Internet facilities? (Please tick those that apply)

- Reading books
- Self-taught
- Taught by friends
- Other, please specify _____

14. (b) If you ticked more than one category above, please specify what was the most effective way

15. If you use e-mail which one of the uses listed below would you rate as your **First** major use of e-mail facilities?

- Communication with lectures at St. Joseph's Theological Institute
- Communication with friends and relatives in and outside South Africa
- Communication with students in and outside South Africa
- Participation in discussion groups
- Other, please specify _____

16. Which one of the listed below would you rate as your **Second** major use of e-mail facilities?

- Communication with lectures at St. Joseph's
- Communication with friends and relatives in and outside South Africa
- Communication with students in and outside South Africa
- Participation in discussion groups
- Other, please specify _____

17. If you use the World Wide Web (WWW) which one of the uses listed below would you rate as your **First** major use of the World Wide Web (WWW)?

- News from around the world
- Entertainment and sports
- Accessing academic related materials
- Accessing the Hotmail or Yahoo website to use web-email
- Search services provided by sites like Yahoo, Google, etc.
- Just browsing with no particular site or subject in mind
- Other, please specify _____

18. Which one of the uses listed below would you rate as major **Second** Major use of the World Wide Web?

- Citations from bibliographic services and catalogues
- Full text of academic related materials
- Computer software
- Images / Pictures
- Computer games
- Audio files
- Music files
- Screensavers
- Newspaper articles
- Pornographic related materials
- Other, please specify _____

20. Which of the following is your favourite Internet search engine?

- Alta Vista
- Excite
- HotBot
- InfoSeek
- Lycos
- WebCrawler
- Who Where
- Yahoo

- Google
- Do not have a favourite search engine
- Other, please specify _____

PART D-PROBLEMS

21. How do you rate your ability to use e-mail facilities?

- Very good
- Good
- Poor
- Very poor
- Do not use e-mail

If poor or very poor please indicate what you would like to learn

22. How do you rate your ability to use the World Wide Web?

- Very good
- Good
- Poor
- Very poor
- Do not use e-mail

If poor or very poor please indicate what you would like to learn

23. How do you rate your ability to use Telnet facilities?

- Very good
- Good
- Poor
- Very poor
- Do not use Telnet

If poor or very poor please indicate what you would like to learn

24. How do you rate your ability to use a search engine?

- Very good
- Good
- Poor
- Very poor
- do not use Yahoo, Google

If poor or very poor please indicate what you would like to learn

25. How do you rate your ability to use File Transfer Protocols (FTP)?

- Very good
- Good
- Poor
- Very poor
- Do not use FTP

If poor or very poor please indicate what you would like to learn

26. Which of the following would you rate as the major/ constraint in your use of Internet facilities on campus? (Please tick only 1)

- Very few Internet Computers
- Very slow Internet connection (takes too long to load pages)
- Very little time allocated to Internet use
- Very little training in the use of Internet facilities is offered to students
- Other, please specify_____

Comments and Suggestions

27. Please, state any comments, suggestions, etc, below:

Thank you. Please place your completed questionnaire in the box marked “Internet use survey” on the counter in the library.