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INFORMATION LITERACY AND ACADEMIC PERFORMANCE OF STUDENTS IN TWO HALLS OF RESIDENCE OF THE UNIVERSITY OF CAPE TOWN (SOUTH AFRICA)

BY

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ACRONYMS

BA	Bachelor of Arts
BBusSci	Bachelor Business Science
BCom	Bachelor of Commerce
BMus	Bachelor of Music
BORIS	Borrowers Information Service (the UCT on-line library computer catalogue)
BSc	Bachelor of Science
BScEng	Bachelor of Science Engineering
BScQS	Bachelor of Science Quantity surveying
BSocSci	Bachelor of Social Science
CALICO	Cape Library Co-operative
CD-ROM	Compact Disc Read Only Memory
INFOLIT	Information literacy project of CALICO
MBChB	Medicine
OS	Open shelves
SLC	Short Loan Collection
UCT	University of Cape Town
WWW	World Wide Web

ABSTRACT

Information literacy may be regarded as the ability to recognise and identify an information need when it arises, and act upon this need to find the relevant information. It involves critical evaluation of information and application of cognitive thinking skills to various types of information sources. An information literate person uses and accesses variety of information sources in different formats so that s/he may use information effectively to try and solve problems, make proper decisions and prepare for life long learning. Information literacy is regarded as very important to people living in the Information Society, and to students studying at the university, on the job and in life as a whole. Therefore, there is a need to establish the information literacy skills of students at tertiary institutions to last them a lifetime. This dissertation investigates the different levels of information literacy skills of some undergraduate students at the University of Cape Town with a view to establish patterns of information use and to find if this may have any relationship with their academic performance.

In order to access information for the solution of the task that the researcher proposed to achieve, a questionnaire was prepared and administered to the students of Tugwell and Kopano halls of residence of the University of Cape Town, South Africa. That was to establish the different levels of students' information literacy with the purpose of finding whether there was any positive correlation between the information literacy skills of undergraduate students and performance in their studies. The researcher compared the students' actual examinations results with the way they responded to sections of the questionnaire.

The researcher made use of a total number of 184 students as the research sample on whom the research questionnaire were administered. The instrument used for this study consisted of 60 items broken into sections 1 – 9. The data used comprised of two sets. The first set, which was collected with the aid of the research instrument, was collected on the 20th – 22nd September, 1998. The second set of data was collected from the 15th December, 1998 – 20th January, 1999. It was analysed using tables which show totals and percentages of the totals. The study revealed that some relationships might exist between the information literacy skills and information use

of the students and their academic performance and it was also established that some students have problems while studying at UCT. The study showed that positive correlation might exist between good academic writing and academic performance. Students who had indicated that they were able to express themselves and prepare reference lists performed better in the examinations. Students who reported to work more by supplementing their textbooks and course packs with extra material performed better in their examination, and therefore, there may be said to exist some positive correlation between students' academic performance and their information literacy.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

The Information Age has emerged with rapid developments of information technologies and an increase in quantities of information, hence the need for people to develop essential information handling skills in academic, professional and private contexts has become crucial. Effective learning research, communication, decision-making and problem-solving, require individuals to be able to locate, manage, evaluate and use appropriate information from a wide range of formal and informal sources (Bruce, 1995: 158).

According to Rader (1996:71-72), in the 1990s, information is a big business in developed countries and it is also an important commodity in developing countries. Hence citizens of all countries need to obtain valuable information handling skills in order to gain meaningful employment to function productively in society, and to communicate effectively with one another locally and globally. She maintains that concern with preparing students for the information age is worldwide and various countries have developed programmes to address the problems related to effective information access and use. The reason for this is that, for people to lead productive lives in the Information Age, it is necessary for them to continue developing critical information skills throughout their lives, whether it is at school, the university or on the job.

Ford (1994:423) describes how Australia, South Africa and Europe are addressing concerns regarding information access and use in order to stay in the global Information Age. In the case of South Africa, she mentions that in recent years academics and librarians have cooperated to improve the learning process for all populations. Furthermore, they have encouraged information literacy instruction as part of the preparation for life-long learning. She actually mentions one noteworthy consortium project in the Western Cape, the Cape Library Cooperative (CALICO). In CALICO, three universities and two technikons of the Western Cape Province, South Africa have cooperated in library resource sharing as well as curriculum-integrated information literacy programmes.

There was an assessment of information literacy (INFOLIT) carried out within the CALICO tertiary institutions. According to Karelse (1998: xi), part of the INFOLIT project's mission is to advance information literacy for purposes of promoting quality education. This project therefore identified the need to comprehend the levels of information literacy among its primary constituents and this was done by investigating the state of information literacy among the students in the University of Stellenbosch, University of Western Cape, University of Cape Town, Peninsula Technikon and Cape Town Technikon. From the INFOLIT project, the researcher deduced that in order to understand the information literacy levels of a population group one needs to assess the information literacy levels of that particular group. It is with this background that the research was undertaken.

Karelse (1998: xi) holds that over the past decade, global developments and the reconstruction of South African society have heralded opportunities for fundamentally improving the quality of education. She mentions that educationalists are faced with the challenge of providing quality education in the context of South African historical imbalances with regard to educational provision, particularly as some of the vestiges of apartheid remain. In this circumstance, some races had the best learning resources while others were marginalised and disadvantaged with the provision of poor learning resources. Educationalists are concerned with the provision of greater access to education as well as ensuring learners' capacity to participate fully in the educational system. This capacity is integrally linked to a number of literacies, including the ability to learn and use information critically. There is also a shift towards student-centred, life-long learning which has placed the issue of information literacy onto the educational agenda.

The University of Cape Town (UCT) has also recognised the importance and the value of information and its effective access and use. This is evidenced by its newly reviewed mission statement, where UCT states that "Our mission is to be an outstanding teaching and research university, educating for life and addressing the challenges facing our society." (UCT, Department of Development and Public affairs, 1996: 01)

In this mission statement **educating for life** is defined as an educational process that inter alia provides "a foundation of skills, knowledge and versatility that will last a life-time, despite a changing environment" as well as "research-based teaching and learning" together with "critical enquiry in the form of the search for new knowledge and better understanding" without leaving aside "an active developmental role in our cultural, economic, political, scientific and social environment." The mission statement goes further to explain how people will be equipped with life-long skills thus: "to equip people with life-long learning skills we must and will, promote the love of learning, the skill of solving problems, and the spirit of critical enquiry and research." (UCT, Department of Development and Public affairs, 1996:01)

From the above literature, the researcher deduced that what may be termed the "information literacy issue", has not only become important in the 1990s because of the Information Age with its developments in information technologies which led to high influx of information production, but also due to the world recognition of information as an important commodity. There exists a situation which compels people to have critical information skills in order to use information properly to cope with the Information Age. South Africa as a country is not left behind, academics and librarians are cooperating to improve the learning process as well as the enhancement of the quality of education. Within South Africa, the Western Cape Province has also realised the significance of information literacy and this is evidenced by the CALICO INFOLIT project. UCT being in the Western Cape is a member of CALICO. Besides the CALICO membership, UCT on its own appreciates the global value of information and the significance of information access and use. It is with this background that this research was carried out with the intention of trying to find out if UCT undergraduate students are indeed being equipped with life-long learning skills.

1.2 STATEMENT OF THE PROBLEM

From the CALICO INFOLIT project, it is implied that in order to understand the levels of information literacy among certain groups or individuals, one needs to investigate the state of information literacy within such a group. Based on the CALICO INFOLIT study, this work therefore attempts to assess the levels of information literacy among the students in two UCT halls of residence.

There is no doubt that we are witnessing the era of information explosion as a result of the emerging global technological advancement. Information dissemination as well as information consumption is a necessity for every one not only to be able to effectively cope with the global challenges but more importantly to be able to survive in this dynamic society in which we live. In essence information becomes both the lifeblood of any society as a sine qua non for survival and an essential component of achieving development as we enter into the next millennium.

Therefore, this study investigated through an empirical research process, the relationship of students accessibility to and utilisation of greater volume of information to the degree of their academic performance in their studies at the university level, particularly at the University of Cape Town.

1.3 OBJECTIVES OF THE STUDY

This study was designed to achieve among other things, the following objectives:

1. To assess information utilisation of the undergraduate students being studied.

2. To determine if these students critically evaluate the information sources they use.

3. To determine whether information literacy skills of students have any bearing on their academic performance.

4. To make recommendations based on the findings, for the improvement of the existing information utilisation patterns of undergraduate students

1.4 SCOPE OF THE STUDY

Although UCT has both postgraduate and undergraduate students, for the purpose of this study, the researcher's aim was to survey the information literacy status of undergraduate students only. Undergraduate students were preferred to postgraduate students, as the researcher is of the opinion that postgraduate students have been exposed to academic learning and gained some research experience which enabled them to acquire information literacy skills. The first limitation is therefore the ***level of study***, as only undergraduates were selected.

Two UCT halls of residence were used for this study, namely Tugwell and Kopano. Tugwell is one of the female junior halls of residence of UCT, housing about 400 undergraduates. Kopano is one of the male junior halls of residence of UCT, housing 260 undergraduates. Tugwell and Kopano halls were chosen for this survey because they are easily accessible to the researcher and they have dinning halls where students can be found at one time in large numbers, which was convenient for data collection. Moreover, these residences accommodate a variety of students, with different races, languages, programmes and years of study. The second limitation of this study, therefore is the ***residence location*** of the students, as only those in the two residences mentioned above were surveyed.

1.5 SIGNIFICANCE OF THE STUDY

The study was undertaken to determine whether information literacy skills have any bearing on the students academic performance. The significance therefore, focuses on the ways of ensuring the patterns of library use, information sources use and information evaluation and checking whether these factors have any positive influence to the students' performance; and thus making use of the results of the study a set of recommendations that will develop the students information literacy skills.

1.6 RESEARCH QUESTIONS

This information literacy study, in the two halls of residence of UCT attempted to address the following research questions that emerged from the CALICO INFOLIT study as well as other readings on the subject.

The results of the study will provide data to answer the following research questions:-

1. Do the students being surveyed believe that they have studying/reading, expression and writing skills?
2. How much do students rely on the prescribed textbooks and course packs/readers given for their courses?
3. Do these students use and consult various categories of information sources?
4. How often do these students work on their own, in groups or consult other people when studying?
5. How often do these students use their libraries to find information they need?
6. Do these students approach and use information with critical evaluation skills?

7. Did these students use information in their academic decision making i.e. when choosing a career. place. programs and courses of study to pursue such a career?
8. Is there any significant relationship between information utilisation and the level of students academic performance?

1.7 DEFINITION OF TERMS

1.7.1 Academic performance

Academic performance, in this research is reflected by the end of the year academic (examination) results in percentages as published by UCT.

1.7.2 Information literacy

In order to come up with the definition of information literacy, several articles were read to establish what is meant by information literacy. Most of the definitions are encompassed in the following two definitions which have been found to supplement each other well. The first one is whereby Bruce (1994: 03) cited that an information literate person is one who:

- recognises the need for information,
- recognises that accurate and complete information is the basis for intelligent decision making,
- identifies potential sources of information,
- develops successful search strategies,
- accesses sources of information, including computer-based and other technologies,
- evaluates information,
- organises information for practical application,
- integrates new information into an existing body of knowledge, and
- uses information in critical thinking and problem solving

Sayed & De Jager (1997:12) came up with an operational definition of information literacy, which they declare must be understood in the context of South African higher education, whereby information literacy develops when situation and affective factors which impinge upon the teaching and learning process, together with the learner's prior learning experiences are recognised by learners and teachers alike. The definition stands thus:

"information literacy refers to the ability of learners to access, use and evaluate information from different sources, to enhance learning, solve problems and generate new knowledge."

For the purpose of this research, the following attributes, which are based on the above definitions, have been taken to form a definition of an information literate student: thus an information literate student is one who:

- Recognises information need;
- Uses information in crucial decision making, problem solving, presentations, as well as in the writing of essays, assignments, examinations, and reports;
- Identifies and accesses potential information sources, in various categories;
- Develops successful search strategies, i.e. finds, selects and retrieves information relevant to the identified information need from the major categories of information sources;
- Evaluates information by assessing its relevancy, accuracy, currency and authority.
- Organises, uses and presents information in his/her own words;
- Integrates new information into an existing body of knowledge.

1.8 STRUCTURE OF THE DISSERTATION

Chapter 1 provides the overview and the situation analysis of the study. It sets out the background to the research and states the research problem, it goes on to highlight the research questions and objectives. Terms used for the research are defined, including the limits of the study. Finally an explanation of the methodology used is outlined. **Chapter 2** comprises the literature review on information literacy and a brief discussion on academic performance, as they are concepts derived from the dissertation title; while **Chapter 3** is the discussion on information literacy and its role in higher education. **Chapter 4** gives the details of the research design and methodology, that is, designing the research instrument, the sample population, sampling method followed, data collection and problems encountered as well as the data analysis method. **Chapter 5** is mainly data analysis and pertinent discussions arising from the analysis of data. It reports all the findings of the research. **Chapter 6** covers the conclusions and recommendations derived from the study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The idea of information literacy has been influenced by five other concepts associated with elements of the emerging information society. These concepts are information technology literacy, computer literacy, library literacy, information skills and lifelong learning. They co-exist with the idea of information literacy with each one of them systematically differentiated from or incorporated into contemporary descriptions of information literacy. On the other hand one may say that the information literacy issue seems to have evolved as a result of its association with information technology literacy, computer literacy, learning to learn, library literacy and information skills (Bruce, 1997:20).

The aim of this chapter is to review the literature on information literacy and its associated concepts as viewed by Bruce (1997), and also to discuss academic performance. There was an attempt to give a picture of the notion of information literacy and to clarify how it is related or associated with these elements. The chapter starts with an outline of the concepts of computer literacy, information technology literacy, learning to learn or life-long learning, library literacy, and information skills. While these concepts are discussed, attempt has been made to show how each of them is related to information literacy. Then there is a discussion on information literacy itself. Finally, academic performance is outlined.

2.2 ELEMENTS ASSOCIATED WITH INFORMATION LITERACY

2.2.1 Computer literacy

Computer literacy is an understanding of what computer hardware and software can do as well as certain competence in using computers. The concept of computer literacy is often associated with personal computers, but may be interpreted as having a broader meaning. Over the years, there has been a shift in orientation from describing computer literacy in terms of operating computers to a focus on their application and use (Kuhlthau, 1990:16).

McClure (1994:117) views computer literacy as an extension of traditional literacy, requiring that individuals can complete basic tasks on a computer, such as word processing, creating and manipulating data on a spreadsheet, or using other types of software.

Some authors such as Breivik (1993:13) are of the opinion that computer literacy is a subset of information literacy. In some descriptions of information literacy, computer literacy plays an important role, while in other descriptions, computer literacy is not significant. However, it is acknowledged by many scholars such as Behrens (1990:355) that information literacy goes beyond computer literacy, and information literacy is distinct from but relevant to literacy and computer literacy. She holds that information technology and computers play a significant role in society today, and this has led some people to believe that if one has the ability to use computers, one will automatically be able to function in an information society. However, she argues that it should be noted that being computer literate does not make a person information literate; and not even artificial intelligence can replace all the (human) cognitive skills which are required in order to effectively utilise information.

Johnson and Eisenberg (1996:13) discuss the notion of computer literacy in as far as students are concerned. They hold that in order for students to be termed computer literate, they need to be able to use computers flexibly, creatively and purposefully. They argue that computer literacy encompasses being able to recognise what task one needs to accomplish, as well as determining whether a computer will help to do so and then be able to use the computer as part of the process of accomplishing that particular task. They maintain that true computer literacy is achieved when students integrate their individual computer skills within an information problem-solving process, because in this way students have genuinely applied various computer skills as part of a learning process. Finally they mention that computer literacy is associated with information literacy only when it is used in the process of information problem-solving.

2.2.2 Information Technology Literacy (ITL)

The Information Age is associated with many technologies being developed and used for information production, management, storage, dissemination and access. These

technologies range from personal computers and their softwares; mainframe computers; telecommunications; CD-ROMs; online databases as well as interactive videodiscs. In higher education, the Internet, gophers, and the World Wide Web (WWW) are used with the intention of supporting teaching and learning, research and academic communication (Bruce, 1997:21).

These information technologies make information resources available, especially the increasing amounts of information produced in the Information Age. As these technologies are being developed, people should become comfortable with using them because they hold new information resources, hence people who are comfortable with information technology take advantage of new information resources and find more efficient ways of using them.

Information technology on its own is under continual development and change, consequentially it also changes the environment at an ever-increasing rate, but its benefits cannot be ignored. Firstly, it is acknowledged that information technology provides improved opportunities for accessing information. Realizing these opportunities, however, requires knowledge and skills that are not only laborious to acquire, but also difficult to keep up to date. Secondly, information technology improves physical access to information. It does not necessarily improve intellectual access, however. Finally, information technology does not only provide a greater opportunity for peer learning and communication, but it also provides a mechanism for the networking of invisible colleges (Ford, 1995:100).

Information technology will enable students not to depend entirely on their lecturers as it provides for extensive information to be available elsewhere. It makes information not to be limited only to the lecturers. Therefore, it can lead to uprising of students.

Networking is hereby seen as another version of information technology, it is seen as an evolving term that includes various computers, telecommunications, cable televisions, and other technologies being connected or linked together for information communication purposes. Fundamentally, networking is another form of information technology. The significance of networking in people's lives is advocated by

McClure (1994:115) thus: "network literacy - the ability to identify, access and use electronic information from the network - will be a critical skill for tomorrow's citizens if they wish to be productive and effective in their personal and professional lives."

This confirms what Marshall McLuhan said regarding the theory of global village, which in essence is the application of modern technology to reduce the whole world into a small village. This could only enhance the opportunity of people at different geographical locations to communicate with one another as a process of sharing experience and knowledge. Therefore, students should be encouraged not to depend entirely on knowledge produced by their lecturers, but be quick witted to explore information on a global basis to improve the worth or stock of their knowledge.

After discussing information technology and networking, one may move onto the 'information technology literacy' concept. When going through the literature, one aspect of information technology literacy found, is that it is the knowledge about the characteristics and functionality of the various kinds of computer hardware and software that are currently available, and about the skills in keeping this knowledge up to date after the completion of formal education. Acquiring and maintaining this knowledge base is very challenging because of the current breadth of the field, and the continuing growth of information production. This aspect of information technology literacy is supported by Brannon (1998:01) with the view that 'information technology literacy includes competencies in productivity software such as word processing, spreadsheets, databases, and the creation of presentations together with competencies in the use of the Internet for the retrieval of information as well as understanding the hardware/software concepts and terminology coupled with understanding the impact of technology on society.'

According to Bruce (1997:21) the concept of information technology literacy focuses primarily on a person's ability to use the new and continually changing information technologies. She (1997:22) suggested a helpful description of information technology literacy, which encompasses eight competencies of information technology literacy, which are the ability to:

- Operate and communicate with technological devices
- Understand how subsystems fit together to form systems or networks
- Understand documentation and how to utilise applications software
- Understand the basic jargon or terminology of information technology
- Solve problems through the use of technology
- Identify and use alternate sources of information
- Discuss the history and future of information technology
- Have some insight into the ethical and human impact issues of information technology.

Although the notion of information literacy has not been discussed and will only appear at a later stage, it is important to see how information technology is related to information literacy because the main theme of this dissertation is on information literacy. Information technology and its uses are beneficial to the process of being information literate. This is pertinent in some definitions of information literacy. This is advocated by Sayed and De Jager (1997:08) when acknowledging that "many definitions of information literacy underplay the fact that central to the successful implementation of information literacy programmes and to the acquisition of such skills, is access to the relevant information technologies." The argument is further supported by Bruce (1995: 161) in her outline of characteristics of an information literate person; when stating that "the information literate person, uses a variety of information technologies and systems."

2.2.3 Information skills

Information skills may be said to include study skills, learning skills and communication skills as well as library skills. These involve such things as note taking, scan reading, current awareness, literature searching, essay writing and bibliographic citation (Downard, 1992:31). Information skills tend to focus on the intellectual processes of information use (Bruce, 1997:24). Eisenberg & Small (1993:296-270) describe information skills as comprising "information acquisition methods, information seeking process and information problem solving skills." They have highlighted specific aspects of information skills as involving "topic analysis, information seeking, storage, evaluation and presentation."

Behrens (1997:13) outlines a typology of information skills into three distinct stages. Viz:

Planning stage: here one defines the task at hand and decides on the appropriate strategy.

Retrieval stage: one locates information sources and selects information; basically this needs information gathering skills.

Organising stage: here one evaluates information, synthesises information, then one presents the task and evaluates the task.

Herring (1996:16-17) has expounded widely on information skills whereby he has cited a number of different scholars. He views information skills as skills which students use to identify the purpose of, locate, process and communicate information, concepts and ideas and then reflect on the effective application of these skills. He notes that the term 'information skills' is broad, incorporating a range of subordinate or prerequisite skills; those associated with reading, writing, searching, retrieving, organising, processing, thinking, analysing and presenting information. The argument put forward is that the term information skills is more inclusive than library skills or study skills in that it relates to the students' use of information resources in and outside libraries and schools. Information skills have been viewed as covering areas such as library-user education, reading development, experimental and research training, study skills and media literacy. There is a debate that the key focus of information skills teaching should be on the extent to which the use of information resources enhances understanding amongst students and that information skills must be taught as part of the curriculum, not as separate set of skills. Information skills are viewed as all the skills necessary for students to cope successfully within the information environment in which they find themselves.

There is an unresolved dichotomy and confusion between the notion of information skills as retrieval and location of information and the analysis and synthesis of information (Herring, 1996:16). However, one may view information skills as a combination of location, retrieval, analysis and synthesis of information.

From the above arguments information skills may be viewed as those skills that are essential in the process of information gathering and use. During this process, the task that needs the information is well defined followed by the appropriate strategies on how to gather the needed information. Then the needed information is located and selected based on the needs outlined when defining the task at hand. This is coupled with critical evaluation of the information found, and finally the information is used to solve the task. With regards to students, information skills become broad since they incorporate other skills such as reading and writing coupled with the searching, retrieval, organisation, processing, thinking, analysis and presentation of information.

2.2.4 Library literacy/skills

Bruce (1997:23) holds that the concept of library literacy can be defined as 'the ability to use libraries.' She mentions that there are two approaches used to interpreting the concept of library literacy or library skills. The first one focuses on the individual's ability to retrieve information from library resources. In this view, the library skills are seen as the ability to use the range of tools for accessing information available through libraries. The emphasis is on the effective use of the library tools and the location of the information required, rather than on problem solving, evaluation and information use. The second approach adds to the value of location skills, the notion of interpretation skills, here the location skills and the information interpretation skills of the individual are inseparable.

From some of the debates above, one gathers that information skills are not necessarily library skills hence the two should not be confused. However, library skills form a component of information skills. Basically information skills are exercised in any information environment while library skills are only used within a library situation. However, one has to note that a library situation is also an information environment. For instance, library skills are used when one is in the library, but information skills are needed when dealing with any information source, particularly those vast information sources such as the Internet. While library skills enable one to locate and select information in a library setting, information skills allow one to move onto the higher level of evaluating, analysing and synthesising the information that one has gathered.

2.2.5 Learning to learn and lifelong learning

Some scholars such as Naisbitt & Aburdene (1985:134) consider the idea of learning how to learn as acquiring self knowledge and being able to address questions like "how do I learn best?" and "where do I learn best?". According to these scholars, learning to learn is learning by "gathering information piece by piece, source by source, formulating and testing hypotheses" in the process. They argue that learning to learn prepares people to continue to learn in the information society that is continually changing, thus necessitating the regular updating of skills and knowledge. Therefore, learning to learn becomes the prerequisite to lifelong learning. In the process of learning how to learn, information gathering skills play a significant role.

The ALA Presidential Committee on Information Literacy (1989:01), statement on information literacy explained the idea of learning how to learn and has incorporated in it the meaning of lifelong learning. The statement stands thus:

> "To be information literate. a person must be able to recognise when information is needed and have the ability to locate, evaluate and use effectively the information needed..... Ultimately information literate people are those who have learned how to learn. They know how to learn because they know how information is organised, how to find information, and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find information needed for any task or decision at hand."

The statement above is considered to be highly authoritative since it has been frequently cited and referred to by many scholars. From this statement, it can be concluded that people who know how to learn are those who know how information is organised, how to find information and how to use information in such a way that others can learn from them. Such people are able to use information to generate new knowledge which benefits others. The above statement implies that people who have learned how to learn have been prepared for lifelong learning which means that they are able to always find information required for any task or decision at hand.

Curran (1993:262) is of the opinion that information literacy does not mean knowing how to read, nor does it mean knowing how to use the information place. It is not

synonymous with either library instruction or computer literacy, all these are just important links to information literacy. This argument implies that the concepts that have been discussed earlier in this chapter are just links to information literacy, therefore, the concept of information literacy still needs to be discussed explicitly to distinguish it from its links.

2.3 INFORMATION LITERACY

Since the 1970s, when the concept of information literacy was first considered, it has been interpreted and described in many different ways. When going through the literature one may note that most of the scholars who studied and wrote about information literacy prefer to describe information literacy rather than to define it.

In the 1990s, Rader (1990:20) defined information literacy as "understanding the processes and systems for acquiring current and retrospective information, such as systems and services for information identification and delivery"; as well as "the ability to evaluate the effectiveness and reliability of various kinds of information channels and sources, including libraries, for various kinds of information needs;" together with "mastering certain basic skills in acquiring and storing one's own information in such areas as databases, spreadsheets, as well as word and information processing."

At about the same time, Curran (1990:349) defined information literacy as the ability to:

- Recognise and accept that information is needed and to formulate information needs;
- Access one's information environment and locate the information needed;
- Retrieve the information located from information sources and services/systems;
- Process the information retrieved according to the information need(s) formulated;
- Use the information retrieved according to the information needs(s) formulated;
- Use the information processed in order to fulfill the initial information need(s).

About a year later, Bjorner (1991: 151) came up with a summary of the characteristics of information literacy, which she claimed to be widely accepted in the evolving understandings of the information literacy phenomenon. The summary stands thus:

- To be information literate is an acquirable characteristic of an individual
- Information literacy is action-oriented; it is demonstrated in problem-solving and decision making which enables others to learn from an information-literate individual
- Information literacy operates in a broader arena than just a single discipline; an information literate individual can always find information needed for a new task or decision, and skills are useful in occupational as well as personal activities.
- There are skills involved in the demonstration of information literacy and the skills once learned can be used throughout a lifetime
- The skills involved include finding and using information
- An information literate person is able to deal effectively with new technologies to handle information.

In 1992, Doyle carried out a study using the Delphi Technique. This study was aimed at reaching consensus among different scholars about the concept of information literacy. From this study, Doyle (1992:05) defined information literacy as an individual's ability to inter alia 'recognise a need for information; identify and locate appropriate information sources; know how to gain access to the information contained in those sources; evaluate the quality of information obtained; organise the information and use the information effectively.' In short, Doyle (1992:05) defines information literacy as the "ability to access, evaluate and use information from a variety of sources."

Later on Curran (1993:258), in his article "Information literacy and the public librarian" defines information literacy as "the ability to use information..." Within

the concept of information literacy came in a notion of information technology which was evident in Kanter's (1995:07) information literacy statement, which stands thus: "information literacy...is an awareness of the growing role of the technological enablers that allow a company to re-engineer the entire business process".

There is a notion of literacy within the issue of information literacy, this is evidenced by Makhubela & Koen (1995:14) who hold that information literacy contributes to higher level of literacy, they maintain that information literacy presupposes the possession of basic reading, writing and numeracy skills and contributes and advances on these literacies in the Information Age.

Sayed and De Jager (1997:5-6) reviewed some of the literature published from 1993-1995 on information literacy. They hold that the definitions of information literacy proposed in the literature they reviewed, can be situated on a continuum ranging from those which are narrow and specific to the more global and encompassing ones. They argue that while narrow and specific definitions emphasise mainly skills necessary to handle new forms of information technology and conceive of information literacy as mastery and understanding of technologies that transmit and offer information; global definitions emphasise access to sources of information, skills to locate information and critical evaluation of information.

Similarly, Bruce (1997:29-35) examined the different ways in which information literacy is described in the literature, whereby she argues that such literature arose out of scholarly reflection on the subject, as opposed to descriptions of education programs or research studies. These descriptions are as follows:

- **"Information literacy as using information technology"**, occurs when information literacy descriptions focus on the ability to use information technology. It is a systems-based approach, which concentrates on the knowledge and skills required to use such systems.

- **"Information literacy as including library and computer literacy"**, this is when information literacy is sometimes described as a combination of library literacy and computer literacy.

- **"Information literacy as acquiring mental models of information systems"**, this is whereby the idea of information literacy is seen to revolve around seeing the world as a configuration of information systems. Hence in order for one to be termed information literate, one must understand that information systems are the products of the need to communicate and must develop mental models of such systems.

- **"Information literacy as a combination of information and technology skills"**, it is a skill-based approach whereby the information literacy descriptions emphasise the skills and techniques required for using the wide range of information tools as well as primary sources.

- **"Information literacy as a process"** is when information literacy is described as the ability to apply information skills to a wide range of situations.

- **"Information literacy as an amalgam of skills, attitudes and knowledge"**; this is the view that information literacy is involving a combination of skills, attitudes and knowledge concerning information.

- **"Information literacy as actively engaging with information"**, whereby the focus is on the individual taking an active role in engaging with the information environment.

- **"Information literacy as the ability to learn"**, this is the skills-based approach characteristic of self-directed independent learners who are prepared for lifelong learning.

- **"Information literacy as the first component in the continuum of critical thinking skills"**, is when the focus is on the role of critical thinking skills that need to be mastered in order for one to be termed information literate.

- **"Information literacy as part of the literacy continuum"**, this approach describes information literacy as part of the literacy continuum.

Likewise, Sayed (1998:1-6) reviewed some of the recent literature on the definitions of information literacy. From this review, he found the following pertinent features to exist in most of the literature he reviewed:

- Information literacy is another form of basic literacy akin to reading and writing, so that if people are able to read and write they should be able to master the skills of managing and using information generated through new information technology.

- Information location skills play a significant role in information literacy, because for people to be termed information-literate, they should be able to locate various information sources. This requires knowing how to access these various information sources; and it includes, the ability to utilise a library, a computer, and the Internet.

- Critical thinking skills are crucial in information literacy, this is because it is important that the located and accessed information sources are critically evaluated, in a way that the information from such sources is used to solve a particular problem or task. This means that it is not enough just to locate information sources without being able to critically evaluate such sources and use them to solve a problem or perform a task.

- Information literacy definitions do not make a distinction between the concepts of information and knowledge. Many definitions assume that learners who are able to critically evaluate and use information are able to generate knowledge. Although this is true, it should be noted that "information is inert and passive,

whereas knowledge generation is a creative process requiring active engagement and critical thinking skills."

- Central to the definitions of information literacy is the generation of critical cognitive skills, and to many scholars this implies a change in the way the teaching-learning dynamic is conceived. Information literacy means doing away with the traditional lecture-led and textbook-centred notions of teaching and learning and move onto accommodating the impact of new information technologies whereby learning is conceived not as transmission of information, but rather as the generation of critical skills in learners to search for, evaluate and use information on their own.

- Information literacy is presumed to be directed towards the creation of independent learners or non-transmission modes of teaching. While information literacy is seen to generate civic-minded and knowledgeable citizens who are able to access and utilise information in order to enhance their civil participation; information literacy is also found to be central to economic development and growth of inter alia the individuals, companies and countries. Hence "the acquisition of information literacy is particularly vital in ensuring economic empowerment for the individual and economic prosperity for a nation."

The Sayed (1998) and Bruce (1997) literature reviews discussed above, have some pertinent features about the description of the term "information literacy". Both scholars highlighted that information literacy is a form of basic literacy, therefore, it cannot be separated from the literacy continuum. The location and use of a wide range or a variety of information sources, is also pertinent; this includes the ability to use information generated through information technology as well. Another pertinent phenomenon about information literacy is the use of a combination of skills; such skills are: **appropriate learning skills** that include those critical cognitive skills which help learners to be self-directed and independent in their learning process as well as in their future lives. **Critical thinking skills** that are used to evaluate the located and accessed information sources. **Information location skills** that enable

one to gather information from a wide range of sources including computers and modern technology.

It is acknowledged that the compound term "information literacy" has incorporated in it two other broad concepts of "information" and "literacy". Besides these two concepts there seem to exist other conceptions within the information literacy definitions, descriptions and debates. These conceptions are information technology, information sources, information process, information control, knowledge construction and knowledge extension, and the wisdom of using information wisely for one's own benefit and for the benefit of companies, countries and others.

Within the concept of information literacy, the main focus is on the entity of information. The physical format in which information is observed, the source in which information is obtained and the service or system (including aids, devices and appliances) through which information is retrieved, are secondary and complementary to the concept of being literate in information. In other words, concepts such as media literacy, library literacy and information technology literacy or computer literacy or information skills and lifelong learning (within the context of information services) should not be viewed as synonymous with information literacy, but rather as complementary facets of information literacy and as instrumental to information literacy (Marais, 1992:371).

2.4 ACADEMIC PERFORMANCE

Many societies maintain themselves through functional skills transmitted from one generation to another, therefore it can be said that in the learning process knowledge and information are transmitted from one generation to another. Therefore, it can be said that a society's continued existence depends on its people's performance, because if they perform excellently in their tasks they will be in a position to transmit excellent knowledge to the younger generation.

Sometimes people are motivated to perform better in their tasks when they think about the reward they will get after completing the task. This is supported by Georgopoulos et al. (1957:41) who emphasized that people are motivated to do things which they think have a higher probability of leading to rewards they value. One may

view students' reward as good performance in their studies. They may be motivated to work harder if they value the reward of good performance in their studies. Some scholars argue that employee dissatisfaction at work might lead to inefficient work performance. Similarly, a student dissatisfaction in his/her study environment might lead to poor academic performance. Nevertheless, there are many factors which impinge upon students good academic performance. While some may be related to their effective use of information, others may relate to their cognitive structures, good memory and application of critical thinking skills and to many factors that may be relevant to achieving good results.

"Information can be taken as the sole remedy for a situation of uncertainty" (Braimoh, 1986: 116). This is perhaps the reason why many scholars argue that solutions to problems cannot be reached without relevant information or in an information vacuum. In this light, students' knowledge of their performance results through a system of feedback is at least desirable, and perhaps necessary for successful goal orientation performance. The effect of feedback on performance has not only been studied in other areas of psychology, but particularly, also studied in teaching and academic performance. For example, Vanhoute, Hill and Parsons, (1975) studied feedback effect on academic performance and their results showed that feedback improves performance.

CHAPTER 3

INFORMATION LITERACY IN HIGHER EDUCATION

3.1 INTRODUCTION

This chapter considers the special nature of information literacy phenomenon, its role and contribution in institutions of higher learning. The first section examines the role of information literacy in higher education. This is followed by an examination of information literacy environments. Here the conducive learning environments for information literacy are considered. Thirdly information literacy programmes are examined. Here, the focus is on information literacy programmes, their aim in higher education, factors to be borne in mind when designing such programmes, and the information literacy education. Lastly, information literacy at the University of Cape Town, as an example of an institution of higher learning, is considered .

3.2 THE ROLE OF INFORMATION LITERACY IN HIGHER EDUCATION

Today, higher education needs to be prepared to teach and expose students to a world of ever changing information, which at times can be incredibly complex and overwhelming. There is a need to move beyond the traditional classroom setting, where courses are narrowed to a departmental focus and have become an abstraction from the real-life problem of information in the information society.

'The information society transcends all political, social and economic boundaries so that there is a global human interaction that has made the ability to access and use information crucial. At the same time, "information literacy, the ability to locate, process, and use information effectively", equips individuals to take advantage of the opportunities inherent in the global information society. Therefore, information literacy according to Breivik (1992:07) should be part of every student's educational experience' because "access to, and critical use of information and information technology is absolutely vital to lifelong learning and accordingly no graduate...can be judged educated unless he or she is information literate" (Bruce, 1995: 159)

The reason why graduates who are not information literate may not be judged educated might be that:

"information literacy in schools and tertiary institutions helps students gain critical skills through the discovery and use of appropriate information sources. This requires them to develop their curiosity and discover for themselves the nature of information in formats relevant to their course work and appropriate to their learning styles. It teaches them to develop information-seeking strategies, to challenge the credibility of sources, and to develop confidence in using resources available to them both and beyond the library. This factor is increasingly crucial as information technology is changing rapidly. Students who do not possess and develop good abilities as information consumers will be disadvantaged in their personal and work lives" (Michaelsen, 1995: 01).

Hancock (1993:02) advocates for information literacy in higher education by arguing that 'when students are information literate, they become more effective consumers of information sources. They learn to recognise that information is not only packaged in a variety of ways, but also packaged using variety of techniques. Information literate students are aware that information serves a variety of purposes and interests as such it contains a variety of value messages. Furthermore, information literate students are more critical when they make decisions about the information resources they use.'

On the whole 'information literacy in higher education is relevant to quality research, quality teaching and learning, as well as quality information environments. Quality research advances knowledge, and people doing research must therefore be able to access and use appropriate information resources and services. Furthermore, quality teaching prepares graduates for continued lifelong learning; because it must ensure that the students learn to learn from a wide range of information resources' (Bruce,1995:159).

Ultimately, when students graduate from higher institutions, in order to be judged educated, they have to be information literate, so that they can be considered independent learners with a social responsibility in the information society. The student who is information literate accesses information efficiently and effectively; evaluates information critically and competently and uses information accurately and creatively. An independent learner, is information literate and pursues information related to personal interests; appreciates literature and other creative expressions of information; and strives for excellence in information seeking and knowledge generation. The student with social responsibility contributes positively to the learning community and

to society, recognises the importance of information to a democratic society; practices ethical behaviour in regard to information and information technology and participates effectively, in groups, to pursue and generate information (ALA and Association for Educational Communications and Technology, 1998:1-2).

Although it may be the aim of many institutions of higher learning to produce independent lifelong learners to cope with the information complexities of their information society, if these institutions do not have appropriate learning resources, it may be impossible to achieve such an aim. There are certain learning environments that information literacy tends to favour. Thus the next discussion is on these learning environments.

3.3 INFORMATION LITERACY ENVIRONMENTS

'Information literacy as a concept is consistent with other educational reforms that emphasise resource-based learning. In such an educational environment the student, not the teacher, is central to the learning process. Teachers offer direction but do not provide all the information that students need. Instead, they guide students in finding, evaluating, and using information. The basic aim of information literacy is to enable people to become lifelong learners. The premise of this goal is that information literate individuals will be able to sift through the enormous amount of information available effectively, using appropriate sources to solve problems and make decisions in all areas of their lives' (Warmkessel and McCade, 1997:80-81).

Information literacy thrives well in a resource-based learning environment because in such a learning environment, teachers and students make decisions about appropriate sources of information and how to access them. Besides using only traditional print sources, they also use technological resources such as videotape, videodisc, CD-ROM, software tools and simulation/modelling tools. There is more use of computer networking and telecommunications for both data access and participation in learning communities. Multimedia technologies are used as materials for gathering data and as production tools. Furthermore, information literacy when accompanied by resource-based learning programs counteracts the information dependency created by traditional schooling, where students must rely on the teacher to dispense information. Information literacy requires active learning, hence students take more control of their

learning and the teacher is freed from the role of omniscient expert (Hancock, 1993:02).

There may exist well resourced teaching and learning conditions, with the latest technology, but if the information literacy endeavour is not well structured in a form of a systematic programme it will be difficult to monitor and evaluate the information literacy skills of the students. This may be the reason why some universities have embarked on information literacy programmes. Hence the next section is on information literacy programmes.

3.4 INFORMATION LITERACY PROGRAMMES

'The main goal of the information literacy programme is to increase the information literacy skills of the students and staff. The major outcome from the programme is improvement in the information literacy skills of the clientele. The effective strategies of such a programme include two issues. First, the clarification of the link between the programme and the university mission which assists library staff develop a programme relevant to client need and university management. Second, the development of a statement on information literacy which assists library staff and clients understand the programme's goals. The particular challenges that the information literacy programme may face include the process of ensuring that all appropriate links between the programme and the university's strategic plan are documented and promoted and establishing clearly defined goals for the programme. The general improvements that may be considered is marketing better the programme in university forums and seeking ways to effectively assess information literacy skills. (White, 1995:97).

The library by itself would not be able to teach information literacy since the skills are taught in relation to a subject - they have to be applied to some subject matter. Similarly, information science departments would not be able to teach information literacy without the input of the library user education programmes (Behrens,1997:11).

3.4.1 Designing information literacy programmes

'Information literacy programmes activities are designed to form a series of learning experiences targeted to particular client needs, (students' needs) and supporting a variety of different learning styles. Programme content and delivery are tailored to take into account time constraints, language and cultural backgrounds, and differences in level of study, incoming skills, subject interest and learning styles' (White, 1995:97).

When designing information literacy programmes, Bruce and Candy (1995:247) mentioned two factors to be borne in mind. One is the amount and complexity of information which people have to deal with is growing exponentially. As a result, no course of study, especially in higher education, is adequate unless it helps develop students' abilities to deal with burgeoning information in their fields. Two, educators in all parts of institutions need to work collaboratively to ensure that students graduating from higher education courses can recognise and solve information problems, and can learn from information resources.

Bruce and Candy (1995:248) stated further that the content of the information literacy programmes; the processes of learning about information from information itself are equally important because students need to learn how to learn about the world of information, as well as learning how to learn from it. They argued that the content of information literacy programmes need to look inter alia at how students can be helped to learn to think about problems as information problems; how students can be encouraged to recognise information problems, and to retrieve, evaluate, synthesise, communicate and manage information; how to help students learn to solve problems; how to actually encourage students to become familiar with information resources relevant to their discipline; how to help students learn about information generation and the information industry through studying subject matter; bearing in mind that students need to be introduced to relevant information technology and systems, by giving them opportunities to experiment with basic applications such as email, word processing, spreadsheets and databases.

Most of the South African institutions of higher learning are admitting students with different backgrounds and cultures. One of the reasons is that the country itself has a

Most of the South African institutions of higher learning are admitting students with different backgrounds and cultures. One of the reasons is that the country itself has a population comprising different racial groups. It is therefore crucial that any instructional process should be made to take into account that the students being instructed or trained are of different races and cultures. Hall (1991:317), opines that effective teaching is a matter of relationship, whether relationships are built in intensive classroom communication or in informal advice given after class, instructors must be aware of capturing all the teaching moments that are presented each day. In regard to teaching coloured people, those interpersonal relationships are imperative in creating an atmosphere where these individuals can best learn. Hall (1991) is of the view that the field of education in general, and bibliographic instruction in particular, have been prolific in proposing and implementing culturally congruent pedagogic models; and any instruction that take into account cultural diversity is vital but this needs to be supplemented by the instructor demonstrating personalised relationship with each student, that is, demonstrating with conviction that s/he cares about the students as people. Furthermore the instructional environment should have qualities of rapport, concern, empathy, and dedication coupled with high expectations that are imperative for instructors working in a culturally diverse environment.

Whether teaching a formal class in bibliographic instruction, instructing groups in the use of the library collections, or conducting a reference interview, it is the relationships that are developed and nurtured that are critical. Relationships are the key to effective pedagogy. In their work, librarians' interactions with people of different cultural backgrounds in a simple reference interview present opportunities to educate and not just to direct. As information professionals who are called upon to work with people who have traditionally been the informationally disadvantaged, e.g. the majority of black people in South Africa, it is urgent that we recognise the role personal relationships can play in the administration of our duties as librarians, as educators, and more importantly as human beings (Hall, 1991:324-5).

3.4.2 Information literacy expertise

In order to carry out effectively any kind of endeavour, trained personnel has to be available to help produce quality results. Similarly, when embarking on an information literacy programme, staff with appropriate knowledge and expertise is essential. Pavincich (1995:107) in the article *Information literacy at the University of Western Sydney, Napean* declares that there was a recognition that the creation and

conduct of successful information skills programmes demands the development of certain expertise in staff. In response to this need, all reference staff in this university were enrolled in a basic instructional methodology course. The course covered programme design, session planning, presentation skills and methods of evaluation.

On the issue of staff expertise, White (1995:104) advocates that 'the success of the information literacy programme depends on the effectiveness of librarians and support staff to develop, plan, implement and evaluate it. Staff training (at Curtin University of Technology) is therefore given top priority with the training emphasis being on communication, teaching for independent learning, and technology.'

Information literacy programmes are designed to help students and staff with their information skills. Any kind of venture targeted for a certain clientele, needs to be advertised so that it may be well known by the targeted information population. Therefore, some scholars are of the opinion that the information literacy programmes need to be marketed in order to attain maximum participation.

3.4.3 Marketing the information literacy programme

White (1995:104) contends that 'effective marketing of information literacy programmes' aims and activities is vital if positive outcomes are to be achieved. Marketing can be done by creative promotions through a variety of communication channels. She mentions that senior members of staff at Curtin University have positions on relevant national and state committees as well as holding positions on relevant committees such as the teaching and learning advisory committee, the communication skills working group, the open learning agency committee, the information technology committee and the open and flexible learning working group.

The above argument suggests two phenomena. First, marketing is essential for the achievement of outcomes for the information literacy endeavour. Second, one way of marketing the information literacy programme's activities and goals is by actively getting membership and enrolment in committees and working groups at university level, national and state levels, since these are forums with high potential for clientele. This needs to be done with creative promotion through a variety of communication channels. Such communication channels, according to White (1995:104), are for

example, bulletin boards, email, the home page on the World Wide Web, letter drops and handouts. She holds that one way of promoting the programme to every new student is through a colourful flier sent in the enrolment package, including an enthusiastic introduction to the Library and Information Service, and an explanation of the information literacy programme giving notification of forthcoming activities such as tours, CD-ROM sessions and OPAC demonstrations.

3.4.4 Information literacy education

Earlier, it was mentioned that information literacy programmes' activities are designed to form a series of learning experiences targeted at particular client needs. If information literacy programmes form learning experiences, it means they are educating, therefore, information literacy programmes are components of information literacy education.

In as far as information literacy education in universities is concerned, Bruce & Candy (1995:246), hold that the responsibility of such an endeavour does not properly belong to any one organisational unit in the university, whether this be the university library, a faculty of education or information technology, or a school of library and information science. They argue that in order for the principles of information literacy education to be effective, they must permeate curricula, and not be taught as a discrete unit, separated from learning the concepts of the discipline or profession concerned. Furthermore, no one lecturer or subject unit can be expected to single handedly produce information literate graduates. Information literacy education, to be effective must be accepted and shared as the responsibility of all members of the university community. Finally, information literacy education requires a shift in teaching style, from focusing on the transmission of content to focusing on the process of autonomous learning.

3.5 INFORMATION LITERACY AT THE UNIVERSITY OF CAPE TOWN

3.5.1 Information literacy Course

The importance of information literacy at the University of Cape Town (UCT) is expressed in the UCT mission to educate for lifelong learning. The School of Librarianship, now the Department of Information and Library Studies at UCT,

negotiated with the Faculty of Social Sciences and Humanities, with the aim of offering a single semester course starting in 1996 aimed at providing students with transferable learning and information skills. This course is known as "**Information Society: Tools and skills**" and its objective is to assist students in obtaining insight into their information needs and the ability to deal with such needs critically and resourcefully (De Jager and Nassimbeni, 1996: 05).

The course is aimed at introducing students to the information age and its impact on society. It was envisaged that participation should enable students to understand the functioning of the information society and to navigate the vast amount of information with which they are frequently confronted. Some of the issues addressed in lectures included the organisation and compilation of information, its presentation in both printed and electronic databases, networks, searching and the evaluation of information. This course has been part of an experiment in team teaching by the School of Librarianship, UCT, the University Libraries and the Writing Centre, which is part of UCT Academic Development Programme (De Jager & Nassimbeni, 1998: 133).

There are weekly practical sessions co-ordinated by members of UCT Library service and the Writing Centre. The practicals are directed at searching, selecting, retrieving and evaluating information from both printed and electronic sources. All the students were obliged to complete both introductory and more advanced sessions on the UCT on-line public access catalogue, on printed reference sources, on CD-ROM reference sources and the Internet. Furthermore, a project writing workshop was held for them and this project was mediated by the Writing Centre. Because the students are all from the Faculty of Social Sciences and Humanities, practical questions and examples were specifically directed at information sources in the broad area of social sciences (De Jager and Nassimbeni 1998: 134).

In addition, the students have a longer project which requires them to make use of all the skills learnt during practical sessions, and this counts towards 30% of their final marks. For this project, the students are each given a topic, from which they are firstly required to define the issues involved, then retrieve relevant references from the on-line catalogue and journal articles from the CD-ROM sources. They also have

to retrieve relevant information from the Internet. The items then have to be physically retrieved and evaluated. Finally an essay discussing the topic and its implications has to be written (De Jager and Nassimbeni, 1998: 134).

3.5.2 Information literacy programmes offered by the library service

The major library at UCT is called the Linear Library which has information in social sciences and humanities, engineering, science and technology. There are other smaller branch libraries which are specific to different subject fields. For instance, there is the Education Library which has information relevant to students and staff in the former Faculty of Education, Medical Library for the former faculty of Medicine, Music library for the former faculty of Music, Law Library and many others. In 1998, UCT changed its faculty structure. The former Faculties of Education and Music no longer exist they are now under the Faculty of Humanities. The former Faculty of Medicine is known as Faculty of Health Sciences. These changes do not impact on the present study as they took place after the investigation. It is necessary to acknowledge that UCT branch libraries might have other activities intended to assist students with their information needs, however, what is discussed ir the following paragraph is only relevant to the main Linear Library.

The Linear Library reference desk has an information and training librarian, who among other things is responsible for tutorials for undergraduates students on library use and information skills. "These tutorials may be described as user education and bibliographic instruction, but students are taught to look at the information sources in an inquisitive and critical way, thus analyse, synthesise and evaluate the information based on the information needs; which is moving onto the infor nation literacy" (Lister, 1998).

There are three reasons why it was found necessary to give these tutorials. First, some lecturers and tutors when realising that their students do not possess sufficient information skills to help them through with their academic work, approach the library to assist. Second, the ype of questions asked by undergraduates at the reference desk made librarians aware of the need to try to assist the students more intensively in order to gain library and information skills. Third, it is due to global awareness of the importance of information literacy in the information society and the

need to promote lifelong learning. This has also been realised by many institutions of higher learning, including UCT which recently drew a new mission statement emphasising on educating for life (Lister, 1998). This initiative has some bearing on information literacy and therefore should have affected some of the findings of this survey.

In conclusion, information literacy in universities may be developed from user education programmes that start with library orientation, followed by an intensive bibliographic instruction and then information skills. If one needs to embark on an information literacy programme in a university setting, one needs to be aware that such an endeavour can work better if the library service staff, the faculties and institutions of academic development, such as the Writing Centres are involved. A good example of such collaborative team work is how the information literacy programme is coordinated at UCT, by now the Department of Information and Library Studies, the Library Service and the Academic Development Writing Centre. It is not only the responsibility of libraries to produce information literate students, the inputs of teaching departments are equally needed since information literacy needs to be incorporated in the subject matter studied, in order for such an encounter to be rewarding.

It is inevitable that information literacy programmes, need to be well known, to both the students and staff, especially with regard to the activities and programme schedules so that they are in a position to be actively involved. There is no point of starting such a crucial programme and not to market it properly. Furthermore, this kind of a project works better if it fits with the mission and the strategic plan of the entire institution of higher learning. It is better to engage in an information literacy programme in an institution where top management staff recognise and respect the value of information in the information society. The investigation that is discussed in chapter 4 attempted to assess the extent to which undergraduate students in two residences at UCT thought of themselves as information literate.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

This chapter discusses the research design and methodology followed to carry out this study on information literacy and academic performance. The chapter outlines the methodology undertaken, followed by the research design, the survey population and its demographic profile. Then it moves on to discuss the research instrument and its validation. Finally the data collection process and data analysis method used are explained.

4.2 METHODOLOGY

The methodology chosen for conducting this information literacy investigation, takes cognisance of the research questions previously posed in section 1.6 and the most practical methods of investigation expounded in the literature survey. Although some researchers are of the opinion that a multi-method approach provides more comprehensive results when compared with a single research methodology, the single research methodology has been used for this research due to limitations of time and resources. The research instrument used is a questionnaire, which incorporates a quantitative approach in an attempt to provide an unbiased picture of the information literacy status of the students in Tugwell and Kopano, and also of the extent to which their levels of information literacy might influence their academic performance.

The questionnaire method was chosen over other investigative methods because of its appropriateness in relation to this research. Although Powell (1991: 84) is of the opinion that a mail questionnaire encourages frank answers and can guarantee anonymity for the respondent as it is completed in the absence of the researcher; questionnaires for this study were handed out directly to students. This was found advantageous in that it allowed the researcher to give out incentives to encourage quick filling of the questionnaire and to guarantee a high return of responses.

The questionnaire was therefore randomly distributed to nearly one third of the students in the Tugwell and Kopano halls of residence. The data obtained out of the

questionnaire will be described and analysed and the conclusions will be drawn out of which recommendations will be made.

4.3 RESEARCH DESIGN

There are a variety of techniques that can be used to collect data. The basic aim and purpose of many methods is to attempt to collect specific data from the public, therefore choosing the appropriate instrument for data collection is essential (Line, 1982:92). Among these techniques, two methods that are still preferred among the researchers and postgraduate students are surveys and experiments (Van der Merwe, 1996:283). This may perhaps be because of their relative ease of assessing information and the inexpensiveness of the overall operation of studies where surveys and experimental designs are used. The characteristics of surveys are that they are usually representative; they are either longitudinal or cross-sectional; and they are usually independent of a specific context (groups are statistically composed by means of sampling) (Van der Merwe, 1996:288).

It is acknowledged that 'observational and questioning techniques' are generally employed when one wants to obtain data directly and indirectly from respondents, thus getting primary source of data; whereas the examination and the analysis of documentary sources yield a secondary source of data' (Smith, 1983:18). For this research the questioning technique was preferred over the observation technique. The reason being that observation is time consuming and labour intensive. Due to time limitations, it was therefore regarded as an inappropriate method of carrying out this research successfully.

The questioning procedures can be divided into self-administered questioning methods and interview techniques. They are methods suitable for obtaining data on a wide range of phenomena and for providing data on the values, expectations and behavioural relationships of an individual (Smith, 1983:18).

Powell (1991:107) argues that the interview method almost always produces a better response rate due to the apparent personal contact between the interviewer and the interviewee, which helps to encourage persons to respond fully. The inherent personal contact also provides greater capacity for clarification of ambiguities and

misunderstandings than the questionnaires. Smith (1983:20) advocates the adoption of the interview method by stating that it enables the interviewer to probe when necessary; that is, the interviewer has a chance to ask for further clarification of answers and can obtain results with greater depth.

Although there are many factors that render the interview a suitable survey method, interviews still have some limitations. Personal interviews can be time consuming and expensive to conduct especially in a geographically scattered area (Busha and Harter, 1980: 78).

Some researchers such as Smith (1983: 20) are of the opinion that the interview method does not guarantee anonymity and it is open to many forms of bias as there is a social interaction between the interviewer and the respondents. As a result of its time consuming nature and the other limitations discussed above, the interview approach was discarded for this investigation.

Following a thorough examination of these techniques in relation to the research question and the type of population to be surveyed, the self-administered questionnaire was chosen. Bourque and Fielder (1995:03) maintain that there are two types of self-administered questionnaires. At one end are questionnaires that are completed by the respondent outside the presence of the surveyor or the monitoring personnel (mail-questionnaire). On the other hand are questionnaires that people answer in the presence of the surveyor or other supervising personnel. Here, it is argued that each person is expected to complete the questionnaire without consulting other persons in the group, but the surveyor or other supervisory person is available to provide introductory instructions, answer questions, and monitor the extent to which questionnaires are completed and individual respondents communicate with each other during the period of administration (Bourque and Fielder,1995:04).

For this research, the self-administered questionnaire was adopted and copies of the questionnaire were distributed in the presence of the researcher, hence there was some direct group administration. The reason for attempting to administer the group to some extent, was to try and overcome the shortfalls pertinent with self-administered questionnaires, especially those that are mailed to respondents.

Bourque and Fielder (1995: 14-21) discuss explicitly the disadvantages of the self-administered questionnaires. These shortfalls can be summarised thus:

- Self-administered questionnaires are administered to admittedly non-representative convenience samples, due to lack of complete lists of the populations under study and can be a problem to those researchers who want to use mail questionnaires to collect data from samples that can be considered representative of the population from which they were drawn.

- The greatest and most studied disadvantage to mail-questionnaires is their low response rate, as they often do not allow the researcher to incorporate incentives. Low response rate is sometimes associated with illiteracy and too much use of technical language. At other times a poorly constructed questionnaire with lack of focus on objectives as well as poor presentation and format can lead to the low response rate.

- Mail-questionnaires do not have a quick turnaround, one may sometimes wait for weeks and months to get the response back.

The researcher took serious notice of the above factors and tried to overcome them. First, the official lists of the students' full names, surnames and identification numbers in the two halls of residences were obtained from their residence supervisors. The aim was to know exactly the population size under the survey, so that sampling can be considered a fair representation of the entire population.

Second, the researcher took a long time designing the questionnaire with the purpose of making sure that it adhered to the research problem and only essential questions were asked. The questions were relevant, simple, unambiguous, well balanced and carefully positioned because the aim was to solicit only the data essential to the research problem. During the questionnaire construction, it was borne in mind that the questions should be interesting and easy to complete. Finally, the researcher

bought incentives for the survey population to encourage them to complete the questionnaire and to thank them for their time to make this study possible.

4.4 SURVEY POPULATION

Kopano had 260 students male students while Tugwell had 400 female students, which made a total of 660 students in all. Out of these 660 students, it was decided by the researcher to produce and distribute 200 questionnaires.

The ratio of distribution is :	Kopano	:	Tugwell
	260	:	400
	13	:	20

Therefore the plan was to distribute the questionnaires thus:

Kopano = 13/33 * 200 ~ 79; while Tugwell = 20/33*200 ~ 121. Therefore Kopano had 79 questionnaires while Tugwell was 121 questionnaires. Out of the 184 questionnaires that were returned, 73 were from Kopano, while 111 were from Tugwell. This means that the sample population consists of 73 males and 111 females. Their age ranged from 16 to 22 years.

4.5 RESEARCH INSTRUMENT

In order to understand and find the different levels of information literacy among the students in Tugwell and Kopano halls of residence of UCT, a number of questions were asked in the questionnaire. This questionnaire consisted of nine questions, and is presented in Appendix B.

Although the questionnaire consisted mainly of closed questions, it also included an open-ended question at the end. This open-ended question asked the students about any opinions they may have had about studying and learning at UCT. The nine questions that made up the questionnaire, were formulated to gather information considered to have had an important bearing on information literacy and academic performance of the respondents.

The first question was to ascertain their demographic details, that is, programme and year of study, race, language and self reported academic results in their major subjects. While results were needed to give a picture of how the students performed during the course of the year; race, language and year of study were important for this

investigation as they have a bearing on information literacy. In the monograph The segregated information highway, which is reported on the CALICO INFOLIT study, Sayed (1998:168) indicates that race featured strongly in students' information literacy abilities and needs.

The second question was to establish whether students think they have the ability to write, express themselves and study well for their academic assignments, as these have a bearing on academic performance.

Question 3 was meant to find out if students had prescribed textbooks and course packs for some of their courses and whether they found extra material to supplement the textbooks and the course packs. This was to ascertain how dependent these undergraduate students were on their textbooks and course packs. Question 4 was posed to find out whether they found and used different information sources. The use of various information sources is one of the aspects of information literacy. Question 5 was to find out how independent and interactive the students were when they were preparing for their academic work, as well as checking how often they consulted their lecturers and other experts in their field of study.

The aim of question 6 was to establish the rate of library use among the students, while question 7 was meant to find out if students evaluated the information sources they use to meet their information needs, and how well they incorporated new information and integrated such into their existing knowledge. Question 8 on the other hand was posed to establish the career status of the students and to see whether the students used information in their academic decision making.

4.6. INSTRUMENT VALIDITY

In research, it is common to carry out a pilot study. Such a study is for pre-testing the research instrument. For instance in this research the constructed questionnaire was tested for validity and reliability purposes to a population with characteristics similar to the sample population. Basically the instrument pre-testing provided the researcher with an opportunity to identify items that might be misunderstood, redundant, unnecessary and poor. In the pre-testing, forty students from Baxter Hall of residence were chosen randomly to complete the questionnaire and to make any comments on

how it could be improved. This process was found helpful as it generated useful comments, criticism and findings which allowed the researcher to refine and improve the original questionnaire. After the pre-testing process, the questionnaire was finalised; then Tugwell and Kopano students were surveyed.

4.7 DATA COLLECTION PROCESS

Earlier it was mentioned that official lists of the students residing in Tugwell and Kopano halls of residence were obtained from their respective residence supervisors. These lists were very helpful during the questionnaire distribution, as a reward was given to each student after filling the questionnaire, therefore the researcher had to make sure that students did not fill more that one questionnaire for the sake of getting more rewards. Secondly, Tugwell and Kopano dinning halls are not strictly used by their respective students only, but also used by other students from smaller neighbouring residences. The lists helped to ascertain that only the students in Tugwell and Kopano were surveyed.

For both residences, the questionnaires were distributed in the dinning halls at dinner time, (1700 to 1830 hours) since it was found to be the most convenient time. The researcher gathered from the lists and the residence supervisors that all students had opted to take dinner and almost all were present during this time. For Tugwell Hall, the date was Sunday, 20 September, 1998 for Kopano Hall, it was Tuesday, 22 September, 1998. During the questionnaire distribution, the students presented their identification cards, to the researcher who checked and deleted their names from the list while giving out a copy of the questionnaire.

The second data set comprises of the examination marks of the students from the Internet. On the questionnaire, the students were asked to provide their student identification numbers to enable the researcher to get their results on the Internet in order to correlate information literacy and academic performance. Data was collected from the Internet from the 15th December, 1998 – 20th January, 1999. Some students results were not readily available right from the beginning as they were owing fees to the university, so the researcher kept on checking during this period whether their results were on the Internet as they kept on paying.

4.7.1 Problems encountered

There were no serious problems encountered, one may mention that some students might have been absent during these times, others might have not liked the incentive given. One may also acknowledge that people generally do not like questionnaires. However, this questionnaire administration was a great success as a very satisfactory sample of 184/200 * 100 = 92% questionnaires was collected. The fact that all the students surveyed had not paid their fees when the examination results was a bid of a problem, however it was solved by using the marks they have indicated to score on the questionnaire.

4.8 DATA ANALYSIS METHOD

The data analyses which were derived from the computed tables of results were represented under different headings starting with the demographic profiles of the students and all other aspects contained in the information literacy instrument, to ascertain their significance to the sample students' information literacy skills. The data collected were tabulated into totals and percentages indicating "yes" or "often", "sometimes" and "never" to statements and questions for each section of the questionnaire.

CHAPTER 5

DATA ANALYSIS AND DISCUSSIONS

5.1 INTRODUCTION

This chapter is mainly on the analysis of the data and the discussions pertaining to the findings. It starts with demographic profiles of the students who responded to the questionnaire, followed by general data analysis, then goes onto academic performance, year of study, race, language and programme of study analysis.

5.2 DATA ANALYSIS

5.2.1 Demographic profiles of the students who responded to the questionnaire

The different demographic profiles of the students who responded to the questionnaire shall be outlined in tables 1.1 – 1.5 to follow

Table 1.1: Programme of study profile

Program	Total	%
BA	31	16.8
BBusSci	20	10.9
BCom	32	17.4
BMus	6	3.3
BSc	29	15.8
BScEng	23	12.5
BScQS	5	2.7
BSocSci	32	17.4
MBChB	6	3.3
Total	184	100

Table 1.1 shows a demographic profile of the various categories of programmes of study undertaken by the students who responded to the questionnaire item 1.1. Of the one hundred and eighty four (184) responses, the largest number came from commerce (BCom) and social science (BSocSci) students (17.4%), followed by arts (BA) students (16.8%), the science (BSc) students (15.8%), the engineering (BScEng) students (12.5%), the music (BMus) and medicine (MBChB) students (3.3%) and the quantity surveying (BScQS) students (2.7%) in that order.

Table 1.2: Year of study profile

Year	Total	%
Year 1	68	37.0
Year 2	73	39.7
Year 3	43	23.4
Total	184	100

The various levels of study undertaken by the students who participated in this research is shown in Table 1.2 above, which presents the students' responses to questionnaire item 1.2. Of the total surveyed, majority were second year students (39.7%), followed by first year students (37.0%) and the third and fourth year students (23.4%) being the minority. It is worth mentioning that the researcher found from the residence lists that the third year students were much fewer than the first and second year students. The researcher gathered from UCT Student Housing Office that these senior undergraduate students are also offered accommodation in senior self catering residences. This explains why the number of third students who responded to the questionnaire is the lowest of the other two year groups.

Table 1.3: Racial classification

Race	Total	%
African	96	52.2
White	58	31.5
Coloured	10	5.4
Indian	10	5.4
Chinese	10	5.4
Total	184	100

The various racial groups of the students surveyed are shown in Table 1.3 above, which has been constructed based on students' responses to item 1.3 of the questionnaire. The largest being the African students (52.2%), followed by white students (31.5%), and then Coloured, Indian and Chinese students (5.4%). Although the African students may not form the majority of the overall student population of UCT, they do form the bulk of the entire student population living in UCT halls of residence. On the contrary, the Coloured, Indian and Chinese students are very few in UCT halls of residence. This is reflected by the survey responses.

Table 1.6: Marks profile of the students from the Internet

Marks	Total	%
<50	7	4.8
50-59	48	33.1
60-69	69	47.6
70+	21	14.5
Total	145	100

Table 1.6 gives the marks of the students that were obtained from the Internet. Of the 184 students surveyed, 39 still had no marks published on the Internet. The reason for the absence of marks is that marks are not made public until all fee accounts with UCT are settled. For the purpose of this investigation, therefore, these (39/184*100= 21.2%) students' marks, missing from the Internet, were taken as reported in their questionnaires, which resulted with Table 1.7 below.

Table 1.7: Final marks profile of the students

Marks	Total	%
<50	7	3.8
50-59	65	35.3
60-69	82	44.6
70+	30	16.3
Total	184	100

Table 1.7 is the final marks of the students that were obtained from the Internet as well as from the questionnaire for those students whose marks were still not on the Internet on January 29, 1999. The table shows that most of the students scored marks in the range 60-69 (44.6%), followed by range 50-59 (35.3%), then 70+ (16.3%) and <50 (3.8%).

5.2.2 General data analysis

Table 2.1: General response on academic writing training

Academic writing training	N	% out of 184
Had Training on academic writing	109	59.2
Had training on referencing	74	40.2
Had training on studying skills	94	51.1

Table 2.1 shows the responses of the students on academic writing training. 59.2% of the students reported to have received formal training on academic writing, 51.1% on studying skills and 40.2% on referencing training in that order.

Table 2.2: General response on ability to express ideas, prepare reference lists and read and interpret graphs.

Academic writing ability	Rate of responses			Percent out of 184		
	Often	Some times	Never	%often	%some times	%never
Able to express one's own ideas	108	72	4	58.7	39.1	2.2
Able to express other writers' ideas	73	100	11	39.7	54.3	6.0
Able to prepare reference lists to attach to their written work	91	81	12	49.5	44.0	6.5
Able to read & interpret graphs	80	95	9	43.5	51.6	4.9

The students reported that they were often able to express their own ideas (58.7%), prepare reference lists to attach to written work (49.5%), read and interpret graphs (43.5%) and express other writers' ideas (39.7%) in that order.

Table 2.3: General textbooks and course packs use

	N	% out of 184
Have prescribed textbooks	180	97.8
Use prescribed textbooks	172	93.5
Supplement textbooks with extra material	102	55.4
Have course packs	155	84.2
Supplement course packs with extra material	59	32.1

Generally 97.8% of the students have indicated that they had the textbooks, and 93.5% of them used such textbooks while 55.4% of them supplemented the textbooks with extra material. On the issue of course packs, 84.2% have reported to have course packs in any one of their courses and only 32.1% of them reported that they supplemented the course packs with extra material.

Table 2.4: General rate of information sources use

Information source	Rate of use			% out of 184		
	Often	Some times	Never	%often	%some times	%never
Dictionary	92	69	23	50.0	37.5	12.5
Directory	39	69	76	21.2	37.5	41.3
Encyclopaedia	35	41	108	19.0	22.3	58.7
BORIS (library computer catalogue)	97	65	22	52.7	35.3	12.0
Books (other than prescribed textbooks	83	82	19	45.1	44.6	10.3
Journals	48	78	58	26.1	42.4	31.5
Newpapers/magazines	59	80	45	32.1	43.5	24.5
Tv/radio	50	68	66	27.2	37.0	35.9
Films/video	32	68	84	17.4	37.0	45.7
Reports	37	68	79	20.1	37.0	42.9
Internet	23	50	111	12.5	27.2	60.3
Other (CD-ROM)	5	11	168	2.7	6.0	91.3
Other (interviews)	7	12	165	3.8	6.5	89.7
Other (music)	4	1	179	2.2	0.5	97.3

From Table 2.4 above, it is clear that the students reported that they often used BORIS, the online, public access catalogue at UCT, (52.7%), followed by dictionaries (50.0%), books (45.1%), newspapers/magazines (32.1%), Tv/radio (27.2%) and Journals (26.1%) in that order. The students were also given an opportunity to mention other information sources that they used that were not necessarily on the list. Those other information sources were CD-ROM, interviews and music. The table shows that 2.7% of the students indicated to have used the CD-ROMS quite often, followed by interviews (3.8%) and music (2.2%).

Table 2.5 General preparation for an academic task

Question	Number of responses			% out of 184		
	Often	Some times	Never	%often	%some times	%never
Work on their own	121	60	3	65.8	32.6	1.6
Work in groups	16	82	86	8.7	44.6	46.7
Consult other students	39	135	10	21.2	73.4	5.4
Consult lecturers/tutors	20	126	38	10.9	68.5	20.7
Consult other experts in the field of study	11	57	116	6.0	31.0	63.0

The table shows that 65.8% of the students indicated that they often worked on their own when preparing for an academic task, 21.2% reported that they often consulted

other students, 10.9% often consulted lecturers and/or tutors, 8.7% often worked in groups and only 6.0% often consulted other experts in their fields of study.

Table 2.6: General rate of library use

Library use	Number of responses			% out of 184		
	Often	Some times	Never	%often	%some times	%never
Use short loan collection	87	71	26	47.3	38.6	14.1
Use open shelves	52	76	56	28.3	41.3	30.4
Find readings from articles references	42	69	73	22.8	37.5	39.7
Asked librarian for help	31	92	61	16.8	50.0	33.2
Find useful/relevant unprescribed material	41	90	53	22.3	48.9	28.8
Need information sources outside UCT libraries	13	30	141	7.1	16.3	76.6
	Total	% out of 184				
Borrowed material outside UCT libraries	13	7.1				
Had library orientation at UCT	107	58.2				

Table 2.6 shows that 47.3% of the students reported to often use the library's Short Loan Collection more than the Open Shelves (28.3%). 22.8% reported that they often looked for readings found in the articles they have read, this percent is almost equal to the 22.3% of the students who reported they often found useful and relevant material that was not prescribed in class. While it is only 16.8% which 'often' asked for the librarian's help, only 7.1% indicated to often need information sources outside UCT libraries, and 7.1% have tried to borrow material outside UCT libraries. Finally 58.2% of the students surveyed indicate that they had library orientation while at UCT.

Table 2.7: General information selection and evaluation

	Number of responses			% out of 184		
	Often	Some times	Never	%often	%some times	%never
Select information for needs	110	70	4	59.8	38.0	2.2
Evaluation relevance	102	79	3	55.4	42.9	1.6
Evaluate accuracy	70	109	5	38.0	59.2	2.7
Evaluate currency	86	90	8	46.7	48.9	4.3
Evaluate authority	61	92	31	33.2	50.0	16.8
Find and fit new information into existing knowledge	75	101	8	40.8	54.9	4.3

Table 2.7 shows that 59.8% students reported to often select information for their needs, this is followed by information relevance evaluation (55.4%), information currency evaluation (46.7%), finding and fitting new information into existing knowledge (40.8%), information accuracy evaluation (38.0%), and information authority evaluation (33.2%).

Table 2.8: General career and academic choices

Academic decision making	Total	% out of 184
Had career guidance	130	70.7
Have career confidence	132	71.7
Had SA universities' information	153	83.2
Used SA universities' information	152	82.6
Had UCT programs' information	106	57.6
Used UCT programs' information	94	51.1
Had sufficient courses' information	85	46.2
Used courses' information	76	41.3

From Table 2.8, 83.2 % of the students reported to have had information about South African universities and 82.6% did use such information to choose a place of study. 70.7% and 71.7% reported that they had career guidance and career confidence respectively. While 57.6% claimed they had UCT programs' information, 51.1% of them claimed to have used such information when choosing their programmes of study. Similarly, 46.2% indicated that they had sufficient courses' information and 41.3% of them used such information when registering for their courses. One would expect higher percentages of students to report that they had sufficient information about programmes and courses of study available at UCT because there is a series of student handbooks published and given to students every year.

Table 2.9: General comments about studying and/or learning at UCT

Comments about studying and/or learning at UCT	Total	%	% out of 67	% out of 184
Unfair UCT residence allocation	27	13.1	40.3	14.7
Use of student numbers on all academic work submitted	21	10.2	31.3	11.4
High noise levels in the libraries	38	18.4	56.7	20.7
Lack of seating space in the library during exam times	19	9.2	28.4	10.3
Lack of discussion rooms on campus	33	16	49.3	17.9
Poor BORIS	23	11.2	34.3	12.5
Unfair Library penalties	17	8.3	25.4	9.2
Efficient transport service on campus	15	7.3	22.4	8.2
Cooperative Campus Control Officers	13	6.3	19.4	7.1
Total	206	100	-	-

Table 2.9 represents the students' comments about studying at UCT, which was asked as an open ended item 9 of the questionnaire. Out of the 184 students who filled the questionnaire, only 67 of them answered this question. It is worth mentioning that some students raised more than one of these issues tabulated above. The most pertinent comment was the high noise level in the library (20.7%), followed by lack of discussion rooms on campus (17.9%), followed by residence allocation (14.7%) they perceived to be unfair. Here the major concerns were that there seem to be "white students residences" and "black students residences". The former are occupied mainly by white students, they have the best facilities and are usually closest to campus, whereas the latter are occupied by black students only, having poor facilities and farthest from campus.

Some students (12.5%) raised that BORIS needs improvement, they mentioned that it is slow, not user friendly and unreliable. They mentioned that sometimes it is down, while at other times it indicates that books are present while they are not in the library. BORIS was old and due for replacement, moreover it was not Year 2000 (Y2K) compatible. Hence BORIS is now being replaced in 1999. Whilst one acknowledged the problems BORIS had, this issue raised by the students is debatable, in terms of whether it was BORIS that was entirely unreliable, or it was the weak location skills of the students, or it was inefficiency of the library staff in shelf reading?

The other pertinent comment was that they wished to use student numbers only on all their academic work (11.4%) as this would reduce perceived bias. Lack of seating space (10.3%) in the library, especially during examination times was also reported, and 9.2% of the students were concerned about what they regarded as unfair library penalties. The concern was that they are often penalised for overdue or lost material and yet they claimed to have returned the material in time, this is reported to be common in the Short Loan Collection section. 8.2% of the 67 students are happy with the transport facilities on campus and 7.1% is happy with the Campus Control officers, with the way they are willing to safely escort them from campus during late hours.

5.3 ACADEMIC PERFORMANCE DATA ANALYSIS

All the tables on which the data analyses that follow, are based, are grouped together in Appendix C. The percentages for the tables 3.1-3.8 (see Appendix C) have been calculated out of the total (**n**) given. In summary, it means that out of the total number of the students surveyed, 7 had scored an average of less than 50% in their examinations, therefore their academic performance is in the category <50%, and for the category 50-59% it is the total of 65 students, category 60-69% has 82 students and 70% and above had 30 students. These tables were constructed with the aim of trying to trace any patterns of similarities and disparities among the students whose marks fall in the different categories in as far as their information use is concerned. It is recognised that only a small number of students scored below 50% (**n**=7), so that results from this category may be unreliable.

5.3.1 Academic performance and academic writing training

The students were asked if they had any formal training on academic writing, referencing and studying skills. Table 3.1 attempts to show whether there is any relationship between academic writing training and academic performance. Although it becomes clear that more than 50% of all respondents claimed to have had training in academic writing, more of the highest performers also claimed to have had training in academic writing. For instance, 66.7% under those who have had training with regard to 70+ performance is greater than those of 50-59 with 56.9% and <50% with 57.1%. Similarly, in as far as training in referencing is concerned, 46.7% of those who got 70+ indicated that they had this training, while it is only 28.6% of those who

performed in the range <50%. Nevertheless, training in studying skills is 53.3% of the 70+ performers and 42.9% of the <50% performers. It therefore does seem as if training in academic writing, referencing and studying skills correlates positively with high performance.

5.3.2 Academic performance and ability to express ideas, prepare reference lists and read and interpret graphs.

From Table 3.2, it is evident that more students who scored high marks, (60-69) and 70+claim that they are often able to express their own ideas when compared with lower achievers (70.7% and 63.3% vs 42.9% and 43.1%). It is worth noting that 28.6% of the lowest achievers indicated that they are never able to express their ideas, while none of the highest achievers are never able to express their own ideas. Similarly, most of the highest achievers (56.7%) claim that they are often able to express other writers' ideas and none of them have difficulty with expressing other writers' ideas. On the contrary, 14.3% of the lowest achievers claim that they are often able to express other writers' ideas, and 57.1% claim that they are never able to do so.

Likewise, more of the high achievers (66.7% and 64.6%), claim that they are often able to prepare reference lists, while few (23.1% and 42.9%) of the lower achievers have indicated that they are often able to prepare reference lists. On the other hand, more of the lower achievers showed that they are never able to prepare reference lists, while few of the high achievers indicated that they are never able to prepare reference lists (14.3% and 7.7% vs 6.1% and 3.3%). In as far as ability to read and interpret graphs is concerned, one may point out that 42.9% of lowest achievers indicated that they are never able to do so, while it was only 6.7% of the highest achievers who indicated disability to read and interpret graphs. These results confirm those of the INFOLIT study which found that "poor academic achievers experience more difficulty with reading and writing than those who score well." Sayed (1998:74).

5.3.3 Academic performance and textbooks/course packs use

The study between academic performance and textbooks/course packs use, can be seen in Table 3.3; which shows that nearly all students did indicate to have textbooks and more than 70% had course packs, however the percentages of the students who

and more than 70% had course packs, however the percentages of the students who supplement these information items with extra material is significantly higher with the students who scored high marks than it is with the students who scored less marks (76.7% vs 42.9%). It is worth noting that generally the percentages of students who supplement their textbooks with extra material is higher than the one of students who supplemented their course packs with extra material in each mark category. The students seem to rely on their course packs more than they do on their textbooks. This is because in all the marks ranges, percentages of students who have shown to supplement course packs are lower than the percentage which supplemented textbooks. For instance, while 76.7% of the highest achievers claimed to supplement textbooks with extra material, only 46.7% of them indicated to supplement course packs.

5.3.4 Academic performance and the rate of information sources use

The students were asked to rate how often they use information sources. Table 3.4 shows the students' response and compares it with the average marks they have scored in their examinations. 71.4% of the lowest achievers claim to have used the dictionary as well as the directory most often when compared with the students whose marks fall into the other categories. 70% of the highest achievers indicated to have used the online catalogue most often, followed by 57.3% of the 60-69 mark range, then 44.6% of students in the range 50-59 and finally 28.6% of the lowest achievers. This finding may be supported by the fact that of the highest achievers, 56.7% claimed to use books often, while only 33.8% of the low achievers (50-59%) claimed to do the same.

Journals are also some of the information sources used by the students surveyed. The 36.7% of the highest achievers claimed to have used the journals most often, while none of the lowest achievers indicated that they never used the journals in the past six months, and of those scoring 50-59%, only 20% had used journals often.

Although the encyclopaedia is one of the least used information sources by these students surveyed, it is worth mentioning that the high achievers have indicated to have used the encyclopaedia more often than the lower achievers (23.2% and 23.3% vs 12.3% and 14.3%).

5.3.5 Academic performance and library use

In Table 3.5, it is clear that a higher proportion of the students who scored high marks use the short loan collection and the open shelves more often than the students who scored lower marks. For those students who scored 70+, 63.3% of them have reported to use the short loan collection quite often, and 43.3% of them use the open shelves often. This is followed by students in the range 60-69 with 51.2% of them reporting to use the short loan collection often and 25.6% use the open shelves often. It is only 38.5% of the students who scored marks in the range 50-59 who reported to use the short loan quite often and 26.2% of them reported to have used the open shelves often. 14.3% of the students who scored <50 reported to use the short loan collection and open shelves quite often. One may recall that Self (1987) investigated the relationship between student grades and 'reserve material'. He found that students who use the reserve collection tended to have higher grades than the non-users. In as far as the use of the open shelves is concerned, one may point that De Jager (1997: 27) when studying library use and academic achievement, suggested that a positive relationship between the use of the open shelves and academic achievement might indeed be present in the subjects of history and sociology. The present findings therefore tend to confirm those of the earlier researchers.

A higher percentage (46.7%) of the students who score high marks have reported that they find readings from the references of the articles they have read, this is followed by 19.5% of the students whose scores range from 60-69, then 18.5% for 50-59 range and 0.0% of those who scored less than 50%. While 30.0% and 23.2% of the students who scored 70+ and 60-69 respectively, often find their own useful/relevant material which was not prescribed by their lecturers, only 20.0% and 0.0% of the students who scored 50-59 and <50 respectively often find their own useful/relevant material. It is worth recalling that Asheim (1959:14) found that 'students who perform better academically, read more non-prescribed material than the poorer students, who read very little of what was not specifically assigned'. This study also confirms those findings, as well as those of the INFOLIT survey which found a close correlation between greater library use and better academic performance (Sayed, 1998: 92).

5.3.6 Academic performance and academic task preparation

Table 3.6 makes it clear that academic work habits seem to correlate with performance. Of the high achievers, 76.7% claim to work on their own often and they rarely consult with their fellow students (10% claim "often"). The lowest achievers on the other hand, do not work on their own nearly as often (42.9%), but consult with their fellow students much more frequently (42.9% say "often"). The INFOLIT study also found that "poor academic performers...express a greater lack of academic confidence than the rest of the student body." (Sayed, 1998: 68). Therefore, poor academic performers should form a target group on which information literacy has to be promoted so that their confidence is boosted by equipping students with the skills and equipment to perform effectively while studying.

5.3.7 Academic performance and information evaluation

Table 3.7 illustrates that the highest percentage (66.7%) of students who reported to often select information for their needs comes from those students who scored 70+ in their examinations. This is followed by 61.5% of those who scored 50-59, then 57.1% of those who scored <50 and 56.1% of those who scored 60-69.

In as far as evaluating information relevance is concerned, 66.7% of the students who scored 70+ indicated to often evaluate information relevance, 54.9% and 52.3% of the students scoring within the ranges 60-69 and 50-59 respectively, often evaluate information relevance; finally only 42.9% of those who scored <50 often evaluate relevance.

Evaluating information accuracy is mostly done by students scoring 70+ (50%), followed by 42.9% of those scoring <50, then 38.5% of the range 50-59 and 32.9% of the range 60-69. Information currency is often evaluated by the students who scored 70+, this is evidenced by the 60%, followed 57.1% of those scoring <50, then 45.1% and 41.5% of the students in the range 60-69 and 50-59 respectively.

One may note that while 63.3% of the students who scored 70+ indicated that they "often" evaluate the authority of information they select, only the smaller percentages of 29.3% , 24.6% and 28.6% of the students scoring marks in the lower ranges indicated that they "often" evaluate the authority of the information they select.

Furthermore, half (50%) of the students scoring 70+ find and fit new information into existing knowledge, this is followed 42.9% of those scoring <50, then 40.2% of the students in the range 60-69, and 36.9% of the students within the range 50-59 reported to often find new information and fit it into their existing knowledge.

It is not surprising therefore, for one to conclude that the poorer academic performers claim to be least able to perform the academic tasks of the evaluation of relevance, accuracy, currency and authority which one would assume are prerequisite for academic achievement.

5.3.8 Academic performance and career and academic decision making

From Table 3.8, one may note that while the three lower marks categories have the highest percentages of the students reporting to have received career guidance, only 36.7% of the students who scored 70+ have reported to have received some career guidance. It is amazing that although a small percentage of the students scoring 70+ (36.7%) had career guidance, 83.3% of them have reported to be confident about their career choice. Furthermore, the results show that more than 50% of most students had UCT information, however fewer students reported to have used such information. The lowest achievers did not think they had enough information, while most of the highest achievers thought that they had enough information. One would therefore conclude that the lowest achievers were not aware of and did not use UCT information in the student's handbooks.

From the analysis of academic performance, (see table 3.1) one found that most of highest performers claimed to have had training on academic writing, referencing and studying skills, while only a few of the lower performers did the same. The poor achievers show lack of ability to express themselves, other writers' ideas, as well as referencing and reading and interpreting graphs. Yet most of the high achievers have shown abilities to do so. The results show that highest achievers claimed to supplement their textbooks and course packs with extra material. These show that high achievers do a lot more than lower achievers. Furthermore, some correlation seems to exist between library use, finding extra material and academic performance, since most of the high achievers did indicate greater library use and finding extra material more often than the low achievers. Academic habits correlate with

performance. Most of the high achievers show independent learning since they claimed to often work on their own, and least consult other students. On the other hand low achievers claimed to often work in groups and consult other students which shows that they are not independent in their learning. Poorer academic performers reported to be least able to perform the academic tasks of evaluating relevance, accuracy, currency and authority when interacting with information. Finally low academic performer seemed not to be aware of UCT information around them, (i.e. student handbooks) because they thought that they did not have this information and obviously did not use it.

5.4 YEAR OF STUDY DATA ANALYSIS

Tables 4.1-4.8 in Appendix C, show the results of the students' responses on the questionnaire analysed according to their year of study as reported by the students on the questionnaire. The aim was to find if the year of study could have any bearing on the information literacy skills of the students.

5.4.1 Year of study and academic writing training

Table 4.1 seems to suggest that there are no particularly significant differences in the extent to which students are perceived to have had training in academic writing and referencing during their three years of study. Third year students, however, seem to report less training in studying skills (34.9%) as opposed to first and second year students (55.9% or 56.2%) respectively. The researcher tentatively suggests that this result may reflect the fact that an information literacy initiative had been evident at UCT during the previous two years (see 3.5.2) and that third year students had not been exposed to it.

5.4.2 Year of study and ability to express ideas, prepare reference lists and read and interpret graphs

From Table 4.2, it is evident that most of the students in the different years of study thought that they are often able to express their own ideas. However, the percentage of third year students who are often able to express their own ideas is about 10% higher than the other year groups.

A higher percentage (69.8%) of the third year students is often able to prepare reference lists while in the case of second year students it is 50.7% and for the first year students it is 35.3%. This is perhaps due to the fact that third year students have generally had more practical experience because they have written more while studying at the university. One may say that the ability to reference properly, might come with more practice, therefore as the students proceed in their studies, they gain more practice on writing and referencing hence, they become more confident. It is an interesting observation, to find that more third year students (72.1%) are often able to read and interpret graphs, while only 33.8% and 35.6% of the first year and second year students are often able to read and interpret graphs. The reason might be that third year students have been more exposed to different information presentations since they have spent more time at the university. These findings seem to indicate that students become more able to express ideas, to reference and to interpret graphs as they progress through university.

5.4.3 Year of study and textbooks and course packs use

In Table 4.3, it is obvious that in all year groups, the majority of the students have shown that they have textbooks and course packs. A higher percentage of the third year students tends to supplement the textbooks with extra material while the percentages of the students who supplement course packs with extra material is generally lower across all the year groups.

5.4.4 Year of study and information sources use

When studying Table 4.4, one may find that students in all year groups primarily use dictionaries as information sources. This is followed by the use of the online catalogue BORIS. The students also read other books besides their prescribed textbooks, about 43% of first year students and second year students as well as 51% of the third years students often read books. Journals are often used by the third year students (44%) while only about 20% of the other two year groups indicated that they often use journals. Similarly more third year students (51%) have reported to often use the newspapers/magazines to find information, while it is 26% of the other two years groups which often uses this type of information sources. The reason for this might be due to the fact that more research is expected from third year students.

5.4.5 Year of study and library use

Table 4.5 shows the analysis of year of study and library use. It shows that the short loan collection is more often used by the first year students (51.5%) and second year students (54.8%) than it is used by the third year students (27.9%). This pattern of a decline in the rate of use of the short loan collection as the year of study increases, was also observed by Leibbrandt (1996:134) who speculated that the reason may be due to the fact that third year students conduct more independent research and are less dependent on recommended readings. Also, De Jager (1991:277) found that senior students were more likely to be engaged in research activities that involved broader library use and less reliance on the short loan collection. This is perhaps the reason why a higher percentage (37.2%) of third year students indicated to use the open shelves more often than first year (25%) and second year students (26%). Moreover, 46.5% of third year students reported to often find readings from the references of the articles they have read, while it is only 17.8% of second year students and 13.2% of first year students who did so. Furthermore, 39.5% of the third year students often find useful and relevant material that was not recommended, which shows that they tended to be more self reliant in searching for information. Although one acknowledges that generally it is very few students who indicated to need information sources outside UCT libraries, one may point out that the percentage of third year on this issue is still higher (16.3%) when compared with the other two: 5.6% for first years and 2.7% for second year students.

5.4.6 Year of study and Academic task preparation

Table 4.6 illustrates that the majority of the students surveyed often worked on their own regardless of their level of study, and only small percentages of students reported that they often worked in groups. A higher percentage of first years, however often worked in groups (16.2%) while 5.5% of the second year students and 2.3% of the third years students worked in groups. Between 66%-72% of all students, however, did show that they sometimes consulted their tutors.

5.4.7 Year of study and information selection and evaluation

The information selection and evaluation process coupled with the year of study is shown in Table 4.7. This table illustrates that more than 50% of the students in all the year groups claimed not only to be able to select information to meet their needs; but

also able to evaluate relevance when they are confronted with their information sources. On the other hand, while more than 50% of the third year students report that they often evaluated information accuracy, it is only around 30% of the first year and second year students who often evaluated accuracy.

The percentages of the students who evaluated the currency of the information they selected, seemed to increase with the year of study. This may mean that third year students (62.8%) are more conscious of how up to date information they consume is, they are perhaps more interested in keeping abreast with the current information. Higher percentages of both the second year students (35.6%) and the third year students (39.5%) indicated that they often questioned the authority of the information they come across. while it is only 26.5% of the first year students who often do so.

A higher percentage (46.5%) of third year students reported that they often find new information and fit it into their existing knowledge, while only 39.7% of the first years students and 38.4% of the second year students often find and fit new information into their existing knowledge.

5.4.8 Year of study and career and academic decision making

Table 4.8 shows that most of the students in all the year groups had some career guidance and are also confident about the career they wanted to follow. However, one may note that the percentages of students who claimed to be confident about the career they are following increase slightly with the level of study.

Year of study data analysis showed (see Table 4.1) that fewer third year students not received formal training on studying skills, when compared with first and second years. Third year students are however more often able to express themselves and other writers' ideas. (Table 4.2). Ability to prepare reference lists, to read and interpret graphs increases with the level of study. Self reliance and independent learning seem to increase with the level of study, this may be because more third year students supplemented their textbooks and course packs with extra material. Moreover, while third years claimed to least use the short loan collection of the library, they often used the library's open shelves. Furthermore, most third years showed ability to find readings from articles they have read as well as finding useful

relevant material that was not prescribed. Independent learning is more prominent within third year students since they least worked in groups. Third years information selection and evaluation is done much more often than the first and second years. One may therefore conclude that information literacy increases as students proceed up the academic ladder.

5.5 RACE DATA ANALYSIS

Tables 5.1 –5.8 in Appendix C show the results of the students' responses on the questionnaire analysed according to their race as reported by these students on the questionnaire. The aim was to find if there is any correlation between the information skills and race. From these tables, it is evident that most of the students surveyed have indicated they are Africans or White, and it is only the minority that showed to be Coloured, Indian or Chinese, therefore the percentages for the last three racial groups might not be as reliable as the percentages from the African and white races.

5.5.1 Race and academic writing training

From Table 5.1 it is obvious that all the groups claim to have had more formal training on academic writing, referencing and on studying skills than the Africans.

5.5.2 Race and ability to express ideas, prepare reference lists and read and interpret graphs

Table 5.2.1 gives the total number of students that have been surveyed, categorised according to race and Table 5.2.2 gives the percentages of the figures in Table 5.2.1. Table 5.2.2 illustrates that the White students (69%), the African Students (60%) and the Indian students (50%) surveyed indicated that they are often able to express their own ideas. However, only 40% of the Coloured students and 10% of the Chinese students surveyed who are often able to express their own ideas. The issue of confidence in English language as the medium of instruction might be playing a role here, as most of the White students speak English as their first language.

It is clear that most of the White students (52%) surveyed indicated that they are often able to express other writers' ideas, this is followed by the Indian students (40%), then the African students (35%), the Coloured students (30%) and Chinese students (20%). One may note that Table 5.2.2 shows that while the majority of the White students

surveyed are able to express themselves more often than the other racial groups, it is the small group of Chinese students surveyed who are least able to express their ideas. This is perhaps due to the language problem, because the medium of instruction is English which is a second language to most of the other racial groups and yet most of the White students surveyed indicated English as their first language. It is the majority of the White students (83%) who have reported that they are often able to prepare reference lists to attach to their written work, this is followed by Indian students (50%), then the Coloured students (40%), and the African students (32%) as well as the Chinese students (30%). Finally, the majority of Coloured and the Indian Students (70%) surveyed have reported that they are often able to read and interpret graphs.

5.5.3 Race and textbooks and course packs use

Table 5.3 shows that the majority of the students in all the racial groups surveyed reported to have prescribed textbooks for their courses and do use these books. However, it is 72.4% of the White students, 51% of the African students, 50% of the Chinese students, 40% of the Indian students and 30% of the Coloured students surveyed who supplemented their textbooks with extra material. Similarly most of the students surveyed have indicated to have course packs in at least one of their courses, but it is only 50% of the Chinese students, and less than 40% of all the other students who supplemented their course packs with extra material.

5.5.4 Race and information sources use

While Table 5.4.1 gives the totals for the comparison between race and information sources use, Table 5.4.2 shows the percentages of the figures in Table 5.4.1 calculated out of the total numbers (**n**). While more than 40% of the students in all the other groups claim to have used the dictionary more often, only 30% of the Indian students indicated to have done so. Similarly, more than 50% of the students in the other groups claim to have used the online catalogue more often than the Indian students (40%). Few African students (15%) have reported to have used the encyclopaedia often. Extra books other than the prescribed textbooks, are least used by the Coloured and Indian students, since only 20% of them have reported to have used them often.

5.5.5 Race and library use

Table 5.5.2 shows the percentages of the figures in Table 5.5.1 which are the totals obtained after analysing data on race and library use. From Table 5.5.2, it is clear that the short loan collection is mostly used by the Chinese students (60%), followed by the African students (51%), then the White students (43%), Indian students (40%) and the Coloured students (30%). The open shelves are mostly used by the African students (31%) as well as the Indian and Chinese students (30%) and the White (24%) and Coloured (20%) students. Generally, the percentages for the students who ask for the librarian's help are low, which means that students rarely approached their librarians. Around 20% of the students in each racial group surveyed have indicated to often find readings from the references of the articles they have read. While 50% of the Chinese, 40% of the Indians and 34% of the White students that have been surveyed have indicated to often find their own useful/relevant material, only 20% of the Coloured and 10% of the African students reported to often find their own material that was not recommended. One may note that very few students reported to needing information sources outside UCT, and the majority of them indicated that they had library orientation at UCT.

5.5.6 Race and academic task preparation

Table 5.6.2 which are the percentages of the totals in Table 5.6.1, shows that 70% of the Indian, 68% of the African, 66% of the White, 60% of the Chinese and 50% of the Coloured students surveyed, reported to work on their own often when preparing for an academic task. The majority of the students across the racial groups surveyed seemed to work on their own, they sometimes or rarely worked in groups, consulted other students, lecturers/tutors and other experts.

5.7 Race and information selection and evaluation

Table 5.7.2 which indicates the percentages of totals in Table 5.7.1, which is the totals obtained when analysing data on race and information selection and evaluation. This table shows that most students reported that they often select information to meet their needs, and often evaluate relevance. Of all the groups most of the White students (62%) reported that they often evaluated information currency. In as far as evaluating information authority as well as finding new information and fitting it into existing

knowledge. it is only the minority of the African students (around 30%) who often do so.

5.5.8 Race and career and academic decision making

From Table 5.8, one may highlight that the majority of the students across the racial groups showed to have received some career guidance and expressed confidence about the career they intended following. However, most of the African students showed that they did not have enough information about programmes and courses of study offered at UCT, therefore their choice of programmes and courses was probably not based on adequate information. This issue is astonishing because students are given Student Handbooks, which contain information about UCT and its faculties programmes and courses. Maybe some of the students do not read these handbooks, or find it difficult to interpret them. This may need to be investigated.

One may conclude that comparatively, the majority of African students reported that they did not receive training on academic writing. Although the sample size is very small, the Chinese students showed difficulties in expressing themselves, probably because of language difficulty. Most of the White students have shown to find extra material to supplement their textbooks and course packs, and they reported to often evaluate information currency. There is no clear pattern from the findings of race and library use. Finally, although the majority of the students indicated that they had sufficient information about UCT programmes, it is only a few African students who reported so, this implies that their choice of programmes and courses of study was not based on sufficient information. The findings of this study tend to support Sayed' s (1998:168) contention, mentioned in 4.4 of this thesis, that race features strongly in information literacy.

5.6 LANGUAGE DATA ANALYSIS

Tables 6.1 - 6.8 in Appendix C show data analysed according to the first language indicated to be spoken by the students surveyed. The percentages have been calculated out of the totals (**n**) which is the total number of the students who have indicated to speak the tabulated languages. For the purpose of this dissertation, the languages referred to as "other" is the total number of students who have indicated speaking French and Italian, this can be verified in Table 1.4; and the language

referred to as Chinese language is the combination of all the different languages mentioned to be spoken by the Chinese students surveyed.

From Tables 6.1 – 6.8, it is evident that most of the students surveyed have indicated English and African languages as their first languages, and it is only the minority groups who speak Chinese, Afrikaans and "other" languages (French and Italian). Consequently, the percentages of the Chinese, Afrikaans and the "other" languages as well as the conclusions drawn from these percentages might not be reliable.

5.6.1 Language and academic writing training

Table 6.1 shows that all the percentages of the first English language speakers, who have indicated to have received formal training on academic writing, referencing and studying skills is higher than the percentages of the first African language speakers.

5.6.2 Language and ability to express ideas, prepare reference lists and read and interpret graphs

Table 6.2.2 indicates the percentages for the totals shown in Table 6.2.1. It shows that students who speak English or an African language claim to be able to express their own ideas more often than the others, apart from those speaking "other" languages, where the sample is very small. As far as the ability to express other writers' ideas is concerned, however, more English speakers (48.8%) claim that they are able to do this often than any of the others. Furthermore, 71.3% of the English language speakers are often able to prepare reference lists while this is the case with 30% of the Chinese and African languages speakers.

5. 6.3 Language and textbooks and course packs use

From Table 6.3, one may gather that most of the students have prescribed textbooks and do use them, and similarly this is the case in as far as course packs are concerned. It is 50.6% and 58.8% of the students who have African and English Languages as their first language respectively, who supplement the textbooks with extra material.

5.6.4 Language and information sources use

From Table 6.4.2, which indicates the percentages from Table 6.4.1, it is evident that more than 50% of the students surveyed, that do not have English as a first language

use the dictionary "often". Directories are used "often" by 40% or less in all the language groups. While 20% of the Chinese language students, and about 16% of the English and African language students use the encyclopaedia most often, 50% of the "other" and 80% of the Afrikaans language students used the encyclopaedia "often".

In as far as the use of BORIS catalogue is concerned, it is 48.2% of the African languages students who used most often, while it is all more than 50% of the students speaking the rest of the languages who used this information source most often. 40% or more of the students in all the languages often used books, with the exception of 20% of the Afrikaans language students. However, it is 80% of the Afrikaans students who indicated to use journals most often, this is followed by the 50% of the "other" languages, then 29.4% of the African languages students, and 20% of the English language students and the least being 10% of the Chinese students.

In the case of newspapers and magazines, none (0%) of the students whose languages fall in the category "other" languages indicated to use this source often, but more than 20% of the students in the other language categories did indicate to have used these sources of information most often. While none of the Chinese language students do not often use the radio or television for information, more than 20% of the students speaking African, English and "other" languages have shown to use these sources quite often, furthermore, 60% of the Afrikaans students have indicated to use these sources. Reports are least used by the students who speak English language (15%), whereas more than 20% of the students in the other languages indicated to use this source often. Finally the Internet is least used by the African languages students (4.71%), and yet it is often used by the "other" languages students (75%).

The divergent differences in the students' exposure to different media across the heterogeneous cultures and nationalities could be viewed against the background of the different family backgrounds, economic resource based and exposure through ownership of most of the sophisticated hardware technologies. For example, a student from a predominantly illiterate family may be restricted in terms of world view as compared to a student from a literate family notwithstanding their level of worth. Similarly, some of the nationalities have strong economic and technological bases than the others. This may manifest in form of greater per capita income for each of

the students and the early exposure to technological use even from infant stage, while others may grow up to adulthood stage before ever coming into contact with and utilisation of these different media.

5.6.5 Language and academic task preparation

From Table 6.5.2, which shows the percentages for the totals indicated in Table 6.5.1, it is evident that more than 50% of the students in all the language groups indicated in the table have reported to work on their own often. Few students of all language groups indicated that they work in groups often. The lowest percentage of English first language students indicated that they often consult other students when preparing for an academic task.

5.6.6 Language and library use

From Table 6.6.2, which indicate the percentages of the totals indicated in Table 6.6.1, one may note that while 35% of the English language students reported to often use the Short Loan Collection, more than 50% of the students who speak the rest of the languages use this section of the library "often". The open shelves section of the library is least often used by the Chinese language students (3.53%), the Afrikaans students (2.35%) and the "other" languages students (2.35%), whereas it is 22.4% of the English language and 30.6% of the African languages students who have reported to often use the open shelves section of the library. While 27.1% of the African languages students and 15.3% of the English language students reported to 'often' find readings of the references of the articles they have read, it is only less than 3% of the students speaking the rest of the languages who often do so. Very few students have shown to need information sources outside UCT 'often'. This may result from different orientations among the students who may be more comfortable with knowledge seeking through technological adventures than developing reading culture through endless perusal of books in an isolated environment such as the library.

5.6.7 Language and information selection and evaluation

Table 6.7.2 indicates the percentages for the totals shown in Table 6.7.1. It shows that more than 50% of most of the students speaking the different languages have reported to often select information to meet their needs, as well as evaluate information relevance. Information currency is 'often' evaluated by 50% of English language and 44.7% of the Afrikaans language students; much less by everybody else except the

"other" languages group. 20% of the students who speak Chinese and Afrikaans languages, 38.8% of the African languages, 46.3% of the English languages and 50% of the "other" languages often find and fit new information into their existing knowledge.

5.6.8 Language and career and academic decision making

From Table 6.8, it is clear that majority of the students claim that they received some career guidance and are confident about the careers they intended following. They also had South African universities' information and used this information when looking for a place of study. One may mention that it is only 35.3% of the African languages students who used the UCT programmes' information, and yet one would expect higher percentages because the students are given students' handbooks which contain information about UCT. This supports the findings in the discussion of Table 5.8 where it was found that African students claimed not to have enough information about UCT courses and programmes.

One may highlight that while the students who speak English indicated to have had formal training on academic writing, referencing and studying, the majority of the African students still claim to lack these skills. English speakers have shown ability to express themselves, prepare reference lists and read and interpret graphs. Comparatively, most of the African students reported to supplement their textbooks and course packs with extra material.

5.7 PROGRAMME OF STUDY DATA ANALYSIS

Tables 7.1-7.8 in Appendix C, represent data analysis of programmes of study and information literacy. From these tables it becomes obvious that the sample size for the BScQS, BMus and MBChB are very small hence the results and conclusions drawn from these results might not be reliable.

5.7.1 Programme of study and academic writing training

Table 7.1 shows that most of the students in the different programmes of study have received some training on academic writing, referencing and studying skills. However, one may mention that it is only 17.4% and 16.7% of the BScEng and MBChB students respectively, who indicated that they had training on referencing.

5.7.2 Program of study and ability to express ideas, prepare reference lists and read and interpret graphs

Table 7.2.2 indicates the percentages of the totals presented in Table 7.2.1. It is clear from this table that most of the students across the different programmes think that they are often able to express their ideas. However, all of the BScQS students surveyed, have shown that they sometimes are able to express their own ideas, which means that at other times they are not able to express their own ideas. While more than 30% of the students in the other programmes have indicated that they are often able to express other writers' ideas, it is only 16.7% of the BMus and 21.7% of BScEng, students who are often able to express other writers' ideas. Furthermore, it is only 29% of the BA students who are often able to prepare reference lists, while more than 40% of the students in the other programmes have shown that they are often able to prepare reference lists. The least of the students reporting to be able to read and interpret graphs, comes from the BA (19.4%) and the BSocSci (15.6%) students, and most of the students indicating to be able to read and interpret graphs comes from the BScsQS (80%), BScEng (65.2%) and BSc (58.6%) students.

The differences in the orientation of students across disciplines could be because of their initial background and the course requirements. It is inevitable for students in the natural and applied sciences, as well as in engineering to be more mathematically and technically inclined because of the nature of the courses, than would ordinarily be the case for students for the arts and social science students. While the former would need accuracy and precision in their calculations it may not be so demanded in the latter disciplines.

5.7.3 Program of study and textbooks and course packs use

Table 7.3 shows that most of the students in all the different programmes of study have prescribed textbooks and they use them. It is evident from Table 7.3 that all the students doing MBChB (100%) and 80% of the BScQS students have shown to supplement their textbooks with extra material, this is followed by BCom students (56.3%), then BSc students (48.3%), BSocSci students (47%) and lastly the BBusSci students (45%) Although most of the students in the other programmes of study reported to have course packs in at least one of their courses, the BMus students surveyed indicated that they do not have course packs. Most of the students that find

extra material to supplement these course packs came from the MBChB (50%) students, then the BA (42%) as well as the BScQS (40%) students.

5.7.4 Program of study and information sources use

Table 7.4.2 show the percentages of the totals in Table 7.4.1. Out of the students surveyed, the dictionary is 'often' used by BA students (71%), while only about 34% of the BSc and BScEng students claim to often do so. The online catalogue and the books are 'often' used by BSocSci students (78.1% and 71.9% respectively), while only 21.7% of the BScEng students 'often' do so. More of the BSocSci students (40.6%) reported to have often used the journals, while it is 12.5% of the BCom students claiming to have used journals often.

It is obvious that the challenges of different courses may be a determining factor for greater exposure of students to more literature in the library to supplement what ever the volume of course packs that may have been supplied. For instance, the medical students seem not of have had any alternative but to read additional materials in the library compared to the other colleagues. This might be because professionally, extra reading could make them compete favourably internationally as the practice of medicine requires a lot of knowledge acquisition since they deal with human lives as compared to social phenomena.

5.7.5 Program of study and academic task preparation

From Table 7.5.2 one gathers that most of the students in all the programmes often work on their own when preparing for an academic task and very few of them seem to work in groups. It is evident from this Table 7.5.2 that most of the BA students have reported to have consulted other students (96.8%) although they have reported that they sometimes or never worked in groups. 33.3% of the MBChB students who have reported to often consult their lecturers/tutors, but this result may be unreliable as the numbers are very small. Fewer students consult other experts, the highest percentage of the students who have reported to consult other experts often comes from the BScQS students (20%). The others say "sometimes".

5.7.6 Program of study and library use

Table 7.6.2 gives the percentages of the figures shown in Table 7.6.1. It shows that while more than 40% of the students in all the programmes of study reported to use the short loan collection most often, it is only 35% of the BBusSci students who often

used the short loan collection. Most of the students who have reported to often find readings from the references of the articles they have read come from BScQS and BSocSci students (40%) and (40.6%) respectively. While more than 40% of the BSocSci and BScQS students often find their own relevant/useful material, only 5% of the BBusSci surveyed are able to do so. The surveyed students rarely need information sources outside UCT libraries. While more than 50% of the students from the different programmes have reported to have attended UCT library orientation, it is only 35% of the BA students who have indicated that they did attend the library orientation.

5.7.7 Program of study and information selection and evaluation

Table 7.7.2 indicates the percentages of the totals in Table 7.7.1, and it illustrates that more than 50% of the students in all the programmes of study surveyed are often able to select information to meet their needs, except for the 33.3% of the MBChB students. Although more than 50% of the students in the other programmes of study surveyed, have shown that they are often able to evaluate information relevance, it is only 33.3% of the MBChB and 37.9% of the BSc students who have indicated that they are often able to evaluate information relevance. More than 30% of the students in the large sample groups of programmes of study surveyed, reported that they are often able to evaluate accuracy of information they access. With regard to the question of the evaluation of information currency, apart from the small sampled group in which 16.7% of the MBChB students indicated that they are often able to evaluate information currency, more than 50% of the students in the other programmes claimed that they often evaluated the currency of the information they utilise.

5.7.8 Program of study and career and academic decision making

From Table 7.8, it is evident that most (>50%) of the students from the different programmes of study surveyed, had career guidance, are confident about the careers they are following, had South African universities' information and used this information when choosing a place to study, had UCT programmes and courses' information and did use this information.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS PERTAINING TO THE RESPONSES OF THE STUDENTS IN THE SURVEY

6.1.1 Conclusions pertaining to the general data analysis

Following the responses from the questionnaire that was administered to the students in Tugwell and Kopano Halls of residence of UCT, it is pertinent to say that:

a) To some extent undergraduates claim to have received training on academic writing, referencing and studying skills, as more than 40% of the total sample reported to have received this kind of training.

b) Most of the undergraduates students are often able to express their own ideas more than they are able to express other writers' ideas. This is supported by the "often" response of 58.7% to the former and 39.7% to the later issue.

c) Most of the undergraduate students claim to have prescribed textbooks and course packs as indicated by 97.8% and 84.2% responses. However, the students who supplement the textbooks and the course packs are fewer; 55.4% for the former and 32.1% for the latter. There seems to be more dependency on the course packs than there is on the prescribed textbooks.

d) The most used information sources are BORIS, the online catalogue, dictionaries, books, followed by newspapers and magazines, Tv/radio and Journals.

e) 65.8% of the undergraduate students indicated that they often prefer to work on their own rather than working in groups with (8.7%), particularly when preparing for an academic task. 10.9% said that they often consult their lectures/tutors or other experts in their field of study, many others did so "sometimes". Those who preferred to often consult other students constitute 21.2%. With this result, it

seems that there is not enough interaction between the students and their lecturers and tutors.

f) The undergraduate students tend to use the short loan collection more than they use the open shelves in the library. This is shown by 47.3% of the total sample response for the former and 28.3% for the latter. Only a few students (22.8% and 22.3%) often find material that was not prescribed or recommended in class, either by following up on the readings on the articles they have read, or by finding their own useful material in any way. These factors show that undergraduates are more dependent on their reading lists. Nevertheless, the undergraduate students do not need and borrow material outside UCT libraries, only 7.1% of the total sample surveyed has indicated to need and borrow information outside UCT libraries.

g) To a certain extent, undergraduate students evaluate information relevance and they select information to meet their needs. The reason for this is supported by 55.4% and 59.8% responses respectively, indicating that they "often" select information to meet their needs, as well as evaluate the relevance of the information they select

h) Most of the undergraduate students say they have received career guidance and are confident about the career they intend to follow. Furthermore, they had information about other South African universities and they used this information when choosing a place to study. To some extent they had and used sufficient information about the programmes of study available at UCT. The fact that more than 50% of the respondents rated this question positively could be a testimony.

i) Although one acknowledges the fact that out of the 184 students surveyed, only a few (67) passed their opinion about studying and learning at UCT, one may seriously consider the following issues: that the students are not only concerned about the high noise levels in the library, but also with procedures of residence allocation, lack of discussion rooms on campus as well as the perceived poor library computer catalogue system (BORIS), which is at present (mid –1999) being replaced. There is also a concern about perceived unfair library penalties imposed on them by the library staff, as well as the plea for the university to adopt

a policy of letting students use their identification numbers only, instead of their names on their academic work, as they believe that this would help to reduce bias.

6.1.2. Conclusions pertaining to academic performance data analysis

a) Most of the students who have performed best in their end of the year UCT examinations, i.e. scored 70+%, have reported to have received formal training on academic writing (66.7%). One may suggest that some correlation might exist between good academic writing and academic performance. Although the questionnaire did not ask students how long and where was the academic writing training was offered; one may point that some departments hold seminars for their students on how they should reference their work. It is possible that these seminars contribute positively towards students academic performance.

b) The greater proportion of students who scored high marks (70+% and 60-69%) are more often able to express both their own ideas when compared with students who score lower marks (50-59% and <50%). This is confirmed by the total sample response rate of 63.3% and 70.7% for the high marks and 42.9% and 43.1% for the lower marks. One may further point out that the proportions of students who are often able to express other writers' ideas, increase as the marks increase. Most of the students who have scored high marks (60-69 and 70+) are more often able to prepare reference lists than the students who have scored low marks. One may therefore suggest that there seems to be a correlation between academic achievement and certain activities that reflect information literacy in students, such as the ability to express ideas and to prepare reference lists. (see Table 3.2)

c) The majority of the students who have scored higher marks supplemented textbooks with extra material, while it is only the minority of the students who scored lowers marks who supplemented their books with extra material. Moreover, the number of students who supplement their course packs with extra material, increases with the marks. One might therefore draw the rather obvious conclusion that students who work more, achieve better results!

d) The number of students who use BORIS very often increases with their academic performance. i.e. most of the students who performed better seem to have used BORIS a lot. Furthermore, most of the students with high performance often used books, other their prescribed textbooks, than the students with lower performance. Moreover, the use of journals also increases with performance. The use of Tv/radio as the information source increases as the performance decreases. (See Table 3.4). This still indicates that students who supplement their textbooks and course packs with extra reading material achieve better results.

e) As the performance of the students increase, the rate of use of the library's short loan collection increases. The students who scored 70+ have used the open shelves more often than the students who have scored lesser marks, especially <50. The rate of finding readings from the references of the articles read, as well as the rate of finding useful/relevant material that was not recommended together with the rate of asking for the librarian's help seem to increase with the students performance (see Table 3.5). Therefore, one may say that there exists some positive correlation between academic performance and library use.

f) The students who scored the highest marks, 70+ seem to have critical information evaluation skills. They often select information to meet their needs, they "often" evaluate information relevance, evaluate accuracy, evaluate currency, evaluate authority and fit new information into their existing knowledge. (see Table 3.7)

g) It is not clear whether there exists any relationship between academic performance and career and academic decision making as the findings do not reveal any clear pattern. But from Table 3.8, one may conclude that most of the highest performers have career confidence and used UCT's programmes and courses' information when compared with lower performers.

6.1.3. Conclusions pertaining to Year of Study data analysis

a) Most of the younger students, i.e. first and second year students, say that they have received formal training on studying skills, and very few third years (34.9%) claimed to have had training on how to study.

b) Comparatively, third year students say they are more often able to express their own ideas as well as other writers' ideas than the other year groups. Ability to prepare reference lists increases with the year of study, this is testified by 35.3% of the first year students, 50.7% of the second year students and 69.8% of the third year students that were surveyed. Similarly, the ability to read and interpret graphs increases as the level of study increases. (see Table 4.2)

c) Supplementing textbooks and course packs with extra material is mostly done by third year students, followed by second year students and then first year students. Therefore, as the level of study increases the students seem to become more self reliant.

d) The books, journals, newspapers/magazines, Tv/radio and the Internet are the most commonly used information sources by the third year students and used more frequently by them than by first and second year students. (see Table 4.4)

e) The rate of the use of the short loan collection in the library declines with the year of study, while the rate of use of the open shelves increases with the year of study. This phenomenon was also observed at UCT by De Jager (1991) and Leibbrandt (1996). Furthermore, the ability to find readings from article references as well as the ability to find useful/relevant information that was not recommended increases with the year of study. Although the students who have indicated that they often need and have borrowed information sources outside UCT are few, their percentages tend to grow with the year of study as well. (See Table 4.5)

f) Most of the students prefer to work on their own, however, of those who work in groups, their numbers seem to decline with the year of study. The students tend to work on their own as they proceed into higher levels; possibly as a result of increasing levels of academic skills and confidence.

g) Most of the third year students often select information for their needs. They often evaluated information relevance, accuracy, currency, and fit new information into existing knowledge. The third year students are more critical in their information selection and use. (See Table 4.7)

h) The findings for year of study and career and decision making, are confusing and do not have any clear pattern, however, one may say that career confidence seems to increase with the level of study.

6.1.4 Conclusions pertaining to Race data analysis

a) While more than 60% of the other racial groups surveyed have been trained on academic writing, it is only 46.9% of the African students who have been trained on academic training. Therefore, majority of the African students have never been trained on academic writing.

b) Although the sample is very small, Chinese students have difficulties expressing themselves, this may be caused by language difficulties.

c) Most of the White students supplement their textbooks with extra material, while few Coloured students supplement their textbooks. Although the students tend not to supplement course packs with extra material, the majority of the students who did so are Chinese and White. (see Table 5.3)

d) The Coloured and the Chinese students often use dictionaries more than the other racial groups. Books are least used by the Coloured and Indian students while journals are least used by Indian and Chinese students. (See Table 5.4).

e) Findings of the race and library use analysis do not bear any clear pattern.

f) Although the race and information selection and evaluation did not yield clear patterns, one may say that most of the Coloured and White students are often able to select information to meet their needs. The Coloured students often evaluate information relevance, while the White students often evaluate information currency.

g) While the majority (>70%) of the students in other racial groups had sufficient information about the programmes offered at UCT, very few African students have reported to have and used this information when choosing their programmes

of study. This means that the choice of programmes of study of these students did not seem to be based on sufficient information.

6.1.5 Conclusions pertaining to language data analysis

a) Comparatively, fewer students who indicated speaking an African language as their first language received formal training on academic writing, referencing and writing, than those speaking African language. One may therefore conclude that majority of the African languages speakers, who happen to be African students, still claim to lack the skills for academic writing. (See Table 6.1).

b) The students that have indicated to speak an African language as their first language are not often able to express both their own ideas and other writer's ideas, when compared with most of the English language students, who are not only often able to express their own ideas as well as other writers' ideas; but also able to prepare reference lists, read and interpret graphs. (See Table 6.2.2)

c) While it is acknowledged that majority of the students surveyed have and use textbooks and course packs, it is only a few of the students who speak African languages who supplement their course packs with extra material, when compared with the students speaking the other four languages.

d) The majority of the students who speak English, African, Chinese and Afrikaans languages, do not often work in groups, however, majority of the students who speak the "other" languages work in groups.

6.1.6 Conclusions pertaining to programme of study data analysis

In as far as the research questions and objectives of this study are concerned, one may conclude that some of the students surveyed believed they have studying/reading and expression skills. However, other students do not perceive themselves having these skills. Majority of the students indicated that they have textbooks and course packs, and quite a considerable number of them do supplement these sources with extra material. However a significant number of them relies heavily on their textbooks and course packs. Comparatively, these students seem to rely more on their course packs than they do on their textbooks.

The students that were surveyed seem to use and consult different information sources. The most frequently used is BORIS, followed by dictionaries, then books. They least used Internet and CD-ROMs. Seemingly, they least used electronic sources (except for BORIS) and mostly used printed sources. The reason why they least used the Internet could be attributed to the fact that undergraduates at the time of the survey were not accessing Internet easily at UCT. But towards the end of 1998 the first Student Learning Centre at Baxter Hall, UCT was opened where undergraduate students have access to computers and the Internet.

Most of the students work on their own when studying, it is only a minute number which never works on its own. However, they sometimes work in groups and consult other students as well as their lecturers and tutors, but they less frequently consult other experts in their field of study. About their library use, one may state that they often use the Short Loan Collection more than the open shelves, and they sometimes ask for librarian's help, and most of them never need nor borrow information sources outside UCT libraries. When looking at Table 2.7 **general information selection and evaluation**, the figures in the "often" and "sometimes" columns are much greater than the figures in the "never" column. Therefore one may conclude that the students surveyed use information with critical evaluation skills and fit new information into their existing knowledge, but it is only very few of them who do not do so. To a certain extent these students used information in their academic decision making, when choosing a career, place to study, programs and courses of study.

6.2 RECOMMENDATIONS

6.2.1 Recommendations pertaining to the conclusions of the research

From the conclusions and discussions of this study, one may make the following recommendations:

1. The students tend not to be very eager to consult the university academic staff or the librarians, this is evidenced by low percentages of the students who have indicated to often consult their lecturers or tutors when preparing for an academic task. Similarly, the percentages of the students who often asked for help from librarians is low. Therefore, one may recommend that undergraduate students

need to be encouraged to make use of academic and library staff to assist them in their learning endeavours.

2. The undergraduate students, especially the African students need professional guidance on how to critically select, evaluate and use information to help solve their problems and tasks. Furthermore, these students have to be encouraged to read their handbooks since they contain valuable information about the rules and regulations, fees, residences, faculties, programmes and courses information of the University of Cape Town; the information that they claim not to have had.

3. BORIS, the library computer catalogue, needs to be improved because the students are concerned that it is too slow, and sometimes down. Presently, (mid – 1999) this system is being replaced, and one of the reasons is that it is not Year 2000 (Y2K) compatible. There is also the concern that some books may appear to be in the library on BORIS, and yet the students could not find them in the shelves. On this issue, one may recommend that students' library skills need improvement, or the library staff need to improve their shelf reading and reshelving; or students need to be taught not to deliberately mis-shelve the books in the library for selfish reasons.

4. The library staff need to look carefully at the way they handle the returning books and other materials so that they do not penalise wrongly the students about the overdue books or lost books.

5. Although this point has no direct bearing on information literacy, the Student Housing Department of UCT, may need to evaluate and look into its residence allocation procedures, since there is a substantial number of the students who are not satisfied with the residence allocation process. The issue of residence allocation based on merit already puts some classes of students at an advantage over others. In essence, the further one is to the university campus in terms of residence, the greater the adverse effect ultimately on the students, particularly with regard to performance. Students living far from campus may be demotivated to consistently use and read in the library because of the distance. This could even kill initiatives and enthusiasm to enhance their reading culture since they are not in contact with the library and its facilities as a result of their place of abode.

6.2.2. Recommendations for further investigation

Following the empirical survey carried out on information literacy and academic performance of the undergraduate students of the Tugwell and Kopano Halls of residence of the University of Cape Town, this study has demonstrated the value of questioning undergraduate students on their information use. This is important because with such discovery, one will be able to say what the ideal characteristics of undergraduates who use information appropriately for the Information Age should be. For, if no knowledge of the nature of the students' effective information use is sought, the mission statement outlined by UCT to educate for life might be unachievable. Thus an effective programme of information use can be best constructed on the basis of investigation rather than on perceived knowledge.

Although the issue of unfair library penalties and residence allocation procedures may not have direct bearing on information literacy, these two allegations raised by some of the students surveyed, may be investigated. The former issue, if it could be shown to exist, might scare the students from using the library, especially those students wno are struggling financially.

The departments of Education and Library and Information Studies at UCT could advise the government through the Ministry of Education to revisit its matric curriculum by incorporating a subject on library use for students. The reason being that the reading culture and critical information utilisation should be infused at the matric level before coming to the University.

At the university level, a curriculum that will introduce first year students to the information world should be developed. One may recommend the course such as the "Information Society: tools and skills" discussed in section 3.5.1 to be offered to all the first year students. Other library and information science courses, which could assist the students to effectively explore all the information sources around them, and critically evaluate the information they use, should become part of the curriculum. Such a course needs to be a core course, taken and evaluated through examination.

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APPENDICES

A, B AND C

UNIVERSITY OF CAPE TOWN

SCHOOL OF LIBRARIANSHIP

September 10, 1998

Dear resident:

RE: PLEASE ASSIST YOUR FELLOW STUDENT BY COMPLETING THIS QUESTIONNAIRE

I am a masters student at the University of Cape Town, School of Librarianship. I am carrying out a survey of undergraduate students for my dissertation. Could you please assist me by filling in this questionnaire as frankly as you can. I fully guarantee that the information collected will be treated with confidentiality and anonymity.

Your cooperation in this matter will highly be appreciated.

Sincerely,

Constance Makotoko
UCT, student

234 LIESBEEECK GARDENS •DURBAN RD, MOWBRAY • 7710
PHONE: 650 2994 • FAX: 650 3758

Questionnaire to undergraduate students at UCT

1. **Please place a tick [√] in the appropriate box**

1.1 Please state your program of study. (e.g. BSc, BA, BSocSci etc.)

1.2 For which year are you registered?

First year [ ] Second year [ ] Third year [ ]

1.3 Race:

African [ ] White [ ] Coloured [ ] Indian [ ] Other.....

(The above question is not meant to offend or discriminate in any way, but is for statistical purposes only.)

1.4 What is your first language ?

English [ ]

African language [ ]

Other; please specify.....

1.5 On average, what have most of your results in your major or intended major subjects been this year?

-40%	40-49%	50-59%	60-69%	70-74%	+75%
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

2. Please circle YES or NO

2.1 Have you ever received formal training in:

academic writing (e.g. writing essays/reports)?	Y	N
referencing/citation styles?	Y	N
reading/studying skills?	Y	N

Which of the following are you able to do?

	Often	Sometimes	Never
2.2 Express your own ideas in writing	[ ]	[ ]	[ ]
2.3 Express other writers' ideas in your own words	[ ]	[ ]	[ ]
2.4 Prepare a list of references or bibliographies to attach to your written work	[ ]	[ ]	[ ]
2.5 Read & interpret information from charts/diagrams/graphs	[ ]	[ ]	[ ]

3. Please circle Yes or No

3.1 Are there prescribed textbooks in any of your courses?	Y	N
3.1.1 If yes, do you use such prescribed textbooks?	Y	N
3.1.2 If yes, do you still find extra material to supplement the textbooks?	Y	N
3.2 I am given course packs/readers in at least one course	Y	N
3.2.1 I still find extra material to supplement such a course pack	Y	N

4. Please indicate, how many of the following have you used to find information in the past six months?

	Often	Sometimes	Never
Dictionary	[ ]	[ ]	[ ]
Directory	[ ]	[ ]	[ ]
Encyclopaedia	[ ]	[ ]	[ ]
BORIS (computer catalogue in the library)	[ ]	[ ]	[ ]
Books (other than prescribed textbooks)	[ ]	[ ]	[ ]
Journals	[ ]	[ ]	[ ]
Newspapers/magazines	[ ]	[ ]	[ ]
Tv/radio	[ ]	[ ]	[ ]
Films/video	[ ]	[ ]	[ ]
Reports	[ ]	[ ]	[ ]
Internet	[ ]	[ ]	[ ]
Other (please specify.....)	[ ]	[ ]	[ ]

5. When preparing for an academic task (e.g.essay/ report/ examination), rate how often you do the following:

	Always	Sometimes	Never
Work on your own	[ ]	[ ]	[ ]
Work in groups	[ ]	[ ]	[ ]
Consult other students	[ ]	[ ]	[ ]
Consult the lecturer/tutor	[ ]	[ ]	[ ]
Consult other experts	[ ]	[ ]	[ ]

6. How many of the following have you used or done in the past six months? Please rate yourself.

	Often	Sometimes	Never
6.1 Used the short loan/reserve collection in the library to find required readings	[ ]	[ ]	[ ]
6.2 Used open shelves to find relevant readings	[ ]	[ ]	[ ]
6.3 Looked for other readings from references found in articles you have read	[ ]	[ ]	[ ]
6.4 Asked a librarian for help	[ ]	[ ]	[ ]
6.5 Found useful/relevant material that was not specifically prescribed	[ ]	[ ]	[ ]
6.6 While at UCT, did you need information sources outside the library to find material related to your course work?	[ ]	[ ]	[ ]
6.7 Have you ever tried to borrow material from any library other than UCT libraries?		Y	N
6.8 Have you attended a library orientation session at UCT?		Y	N

7. Which of the following are you able to do?

	Often	Sometimes	Never
7.1 Select information to meet your needs (e.g. to help answer essay question)	[ ]	[ ]	[ ]
7.2 Evaluate the relevance of information in relation to your subject or topic of interest	[ ]	[ ]	[ ]
7.3 Evaluate the accuracy (e.g. truth, reasonableness) of information	[ ]	[ ]	[ ]
7.4 Evaluate the currency (e.g. up to dateness) of information	[ ]	[ ]	[ ]
7.5 Evaluate the authority (e.g. author's credentials) of information	[ ]	[ ]	[ ]
7.6 Find new information and fit it into your existing knowledge	[ ]	[ ]	[ ]

8. Please circle YES or NO

8.1 Have you ever received any career guidance?	Y	N
8.2 Are you confident about the career you want to follow?	Y	N
8.3 Before you applied to study at UCT, did you have information about other South African universities offering your program?	Y	N
8.3.1 If yes, did you apply to study at UCT after using such information?	Y	N
8.4 When choosing a program of study, did you have information about other programs offered at UCT?	Y	N
8.4.1 If YES, was your choice based on such information?	Y	N
8.5 Would you say you had sufficient information about courses in your program before registering?	Y	N
8.5.1 If YES, did you use such information to choose courses?	Y	N

8.2 If you do not mind, please state your student number below (e.g. MKTCON002)

.....

(I do assure you that this information will be treated confidentially.)

9. Please note below or on the back of this page any comments that you may have on studying or learning at UCT.

Thank for your co-operation.

APPENDIX C: TABLES FOR CHAPTER 5

Table 3.1: Academic performance and academic writing training

Training	< 50% n=7		50-59% n=65		60-69% n=82		70+% n=30	
	Total	%	Total	%	Total	%	Total	%
Had training on academic writing	4.0	57.1	37.0	56.9	48.0	58.5	20.0	66.7
Had training on referencing	2.0	28.6	25.0	38.5	33.0	40.2	14.0	46.7
Had training on studying skills	3.0	42.9	33.0	50.8	42.0	51.2	16.0	53.3

Table 3.2: Academic performance and ability to express ideas, prepare reference lists and read and interpret graphs.

Academic studying	< 50% n=7			50-59% n=65			60-69% n=82			70+% n=30			<50 %			50-59 %			60-69 %			70+ %		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Able to express one's own ideas	3	2	2	28	36	1	58	23	1	19	11	0	42.9	28.6	28.6	43.1	55.4	1.5	70.7	28.0	1.2	63.3	36.7	0 0
Able to express other writers' ideas	1	2	4	21	41	3	34	44	4	17	13	0	14.3	28.6	57.1	32.3	63.1	4.6	41.5	53.7	4.9	56.7	43.3	0.0
Able to prepare reference lists	3	3	1	15	45	5	53	24	5	20	9	1	42.9	42.9	14.3	23.1	69.2	7.7	64.6	29.3	6.1	66.7	30.0	3.3
Able to read and interpret graphs	2	2	3	37	27	1	24	55	3	17	11	2	28.6	28.6	42.9	56.9	41.5	1.5	29.3	67.1	3.7	56.7	36.7	6.7

Table 3.3: Academic performance and textbooks/course packs use

Textbooks and course use	< 50% n=7		50-59% n=65		60-69% n=82		70+% n=30	
	Yes	%	Yes	%	Yes	%	Yes	%
Have prescribed textbooks	7.0	100.0	64	98.5	79	96.3	30	100.0
Use prescribed textbooks	7.0	100.0	60	92.3	76	92.7	29	96.7
Supplement textbooks	3.0	42.9	22	33.8	54	65.9	23	76.7
Have course packs	5.0	71.4	58	89.2	71	86.6	21	70.0
Supplement course packs	1.0	14.3	16	24.6	28	34.1	14	46.7

Table 3.4: Academic performance and the rate of information sources use

Information sources' use	< 50 % n=7			50-59 % n=65			60-69 % n=82			70+ % n=30			<50 %			50-59 %			60-69 %			70+ %		
	often	sometimes	never	often	sometimes	never	often	sometimes.	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes.	never	often	sometimes	never
Dictionary	5	2	0	29	28	8	43	28	11	15	11	4	71.4	28.6	0.0	44.6	43.1	12.3	52.4	34.1	13.4	50.0	36.7	13.3
Directory	5	0	2	14	25	26	15	33	34	5	11	14	71.4	0.0	28.6	21.5	38.5	40.0	18.3	40.2	41.5	16.7	36.7	46.7
Encyclopaedia	1	1	5	8	16	41	19	18	45	7	6	17	14.3	14.3	71.4	12.3	24.6	63.1	23.2	22.0	54.9	23.3	20.0	56.7
BORIS (computer catalogue)	2	3	2	29	27	9	47	26	9	21	7	2	28.6	42.9	28.6	44.6	41.5	13.8	57.3	31.7	11.0	70.0	23.3	6.7
Books	3	1	3	22	34	9	41	35	6	17	12	1	42.9	14.3	42.9	33.8	52.3	13.8	50.0	42.7	7.3	56.7	40.0	3.3
Journals	0	3	4	13	26	26	24	36	22	11	6	13	0.0	42.9	57.1	20.0	40.0	40.0	29.3	43.9	26.8	36.7	20.0	43.3
Newspaper /magazine	3	2	2	16	33	16	27	35	20	10	13	7	42.9	28.6	28.6	24.6	50.8	24.6	32.9	42.7	24.4	33.3	43.3	23.3
Tv/radio	3	1	3	20	23	22	21	30	31	6	14	10	42.9	14.3	42.9	30.8	35.4	33.8	25.6	36.6	37.8	20.0	46.7	33.3
Film/video	2	2	3	10	27	28	17	28	37	3	11	16	28.6	28.6	42.9	15.4	41.5	43.1	20.7	34.1	45.1	10.0	36.7	53.3
Reports	1	1	5	15	15	35	15	42	25	6	10	14	14.3	14.3	71.4	23.1	23.1	53.8	18.3	51.2	30.5	20.0	33.3	46.7
Internet	2	1	4	2	10	53	14	27	41	5	12	13	28.6	14.3	57.1	3.1	15.4	81.5	17.1	32.9	50.0	16.7	40.0	43.3

Table 3.5: Academic performance and library use

Library use	< 50 % n=7			50-59 % n=65			60-69 % n=82			70+ % n=30			<50 %			50-59 %			60-69 %			70 + %		
	often	some times	never	often	some times	never	often	some times	never	often	some times	never	often	some times	never	often	some times	never	often	some times	never	often	some times	never
Short Loan collection	1	3	3	25	28	12	42	31	9	19	9	2	14.3	42.9	42.9	38.5	43.1	18.5	51.2	37.8	11.0	63.3	30.0	6.7
Open shelves	1	2	4	17	27	21	21	37	24	13	10	7	14.3	28.6	57.1	26.2	41.5	32.3	25.6	45.1	29.3	43.3	33.3	23.3
Readings from articles references	0	2	5	12	24	29	16	32	34	14	11	5	0.0	28.6	71.4	18.5	36.9	44.6	19.5	39.0	41.5	46.7	36.7	16.7
Librarian's help	1	3	3	8	36	21	16	42	24	6	11	13	14.3	42.9	42.9	12.3	55.4	32.3	19.5	51.2	29.3	20.0	36.7	43.3
Found own useful/relevant material	0	5	2	13	30	22	19	37	26	9	18	3	0.0	71.4	28.6	20.0	46.2	33.8	23.2	45.1	31.7	30.0	60.0	10.0
Needed information outside UCT libraries	0	1	6	6	12	47	5	14	63	2	3	25	0.0	14.3	85.7	9.2	18.5	72.3	6.1	17.1	76.8	6.7	10.0	83.3
Total	3	16	23	81	157	152	119	193	180	63	62	55	-	-	-	-	-	-	-	-	-	-	-	-

Library use	< 50 % n=7		50-59 n=65		60-69 n=82		70+ n=30	
	Yes		Yes	%	Yes	%	Yes	%
Borrowed mat. Outside UCT	0	0	5	7.7	4	4.88	4	13.3
Attended UCT library orientation	4	57.1	36	55	46	56.1	21	70

Table 3.6: Academic performance and academic task preparation

Academic task preparation	< 50 % n=7			50-59 % n=65			60-69 % n=82			70+ % n=30			<50 %			50-59 %			60-69 %			70 + %		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Work on their own	3	4	0	47	17	1	48	32	2	23	7	0	42.9	57.1	0.0	72.3	26.2	1.5	58.5	39.0	2.4	76.7	23.3	0.0
Work in groups	0	7	0	8	45	12	7	7	68	1	23	6	0.0	100.0	0.0	12.3	69.2	18.5	8.5	8.5	82.9	3.3	76.7	20.0
Consult other students	3	4	0	10	50	5	23	58	1	3	23	4	42.9	57.1	0.0	15.4	76.9	7.7	28.0	70.7	1.2	10.0	76.7	13.3
Consult lecturer/tutor	0	6	1	4	43	18	14	56	12	2	21	7	0.0	85.7	14.3	6.2	66.2	27.7	17.1	68.3	14.6	6.7	70.0	23.3
Consult other experts	1	3	3	1	21	43	8	31	43	1	2	27	14.3	42.9	42.9	1.5	32.3	66.2	9.8	37.8	52.4	3.3	6.7	90.0

Table 3.7: Academic performance and information evaluation

Information evaluation	< 50 % n=7			50-59 % n=65			60-69 % n=82			70+ % n=30			< 50 %			50-59 %			60-69 %			70 + %		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes.	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Select information for needs	4	3	0	40	22	3	46	35	1	20	10	0	57.1	42.9	0.0	61.5	33.8	4.6	56.1	42.7	1.2	66.7	33.3	0.0
Evaluate relevance	3	4	0	34	31	0	45	34	3	20	10	0	42.9	57.1	0.0	52.3	47.7	0.0	54.9	41.5	3.7	66.7	33.3	0.0
Evaluate accuracy	3	4	0	25	39	1	27	53	2	15	13	2	42.9	57.1	0.0	38.5	60.0	1.5	32.9	64.6	2.4	50.0	43.3	6.7
Evaluate currency	4	3	0	27	34	4	37	42	3	18	11	1	57.1	42.9	0.0	41.5	52.3	6.2	45.1	51.2	3.7	60.0	36.7	3.3
Evaluate authority	2	4	1	16	38	11	24	43	15	19	7	4	28.6	57.1	14.3	24.6	58.5	16.9	29.3	52.4	18.3	63.3	23.3	13.3
Find and fit new information into existing knowledge	3	3	1	24	39	2	33	45	4	15	14	1	42.9	42.9	14.3	36.9	60.0	3.1	40.2	54.9	4.9	50.0	46.7	3.3

Table 3.8: Academic performance and career and academic decision making

Career and academic decision	< 50 % **n=7**		50-59 % **n=65**		60-69 % **n=82**		70+ % **n=30**	
	Yes	%	Yes	%	Yes	%	Yes	%
Had career guidance	5	71.4	52	80.0	62	75.6	11	36.7
Career confidence	5	71.4	47	72.3	55	67.1	25	83.3
Had SA universities information	7	100.0	56	86.2	67	81.7	23	76.7
Used SA universities information	6	85.7	56	86.2	67	81.7	23	76.7
Had UCT programs information	4	57.1	15	23.1	62	75.6	25	83.3
Used UCT programs information	3	42.9	34	52.3	40	48.8	17	56.7
Had sufficient courses information	2	28.6	29	44.6	33	40.2	21	70.0
Used courses information	2	28.6	25	38.5	32	39.0	17	56.7

Table 4.1: Year of study and academic writing training

Academic Writing training	Year 1 **n=68**		Year 2 **n=73**		Year 3 **n=43**	
	Yes	%	Yes	%	Yes	%
Had training on academic writing	42	61.8	40	54.8	27	62.8
Had training on referencing	29	42.6	30	41.1	15	34.9
Had training on studying skills	38	55.9	41	56.2	15	34.9

Table 4.2: Year of study and ability to express ideas, prepare reference lists and read and interpret graphs

Academic studying	Year 1 **n=68**			Year 2 **n=73**			Year 3 **n=43**			Year1 %			Year 2 %			Year 3 %		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Able to express one's own ideas	39	26	3	40	32	1	29	14	0	57.4	38.2	4 4	54.8	43.8	1.4	67.4	32 6	0 0
Able to express other writer's ideas	23	39	6	26	43	4	24	18	1	33.8	57.4	8.8	35.6	58.9	5.5	55.8	41.9	2.3
Able to prepare reference list	24	40	4	37	32	4	30	9	4	35.3	58.8	5.9	50.7	43.8	5.5	69.8	20.9	9.3
Able to read and Interpret graphs	23	39	6	26	46	1	31	10	2	33.8	57.4	8.8	35.6	63.0	1.4	72.1	23.3	4.7

Table 4.3 Year of study and textbooks and course packs use

Textbooks and course use	Year 1 **n=68**		Year 2 **n=73**		Year 3 **n=43**	
	Yes	%	Yes	%	Yes	%
Have prescribed textbooks	68	100	72	98.6	40	93.0
Use prescribed textbooks	64	94.1	70	95.9	38	88.4
Supplement textbooks	34	50	37	50.7	31	72.1
Have course packs	57	83.8	64	87.7	34	79.1
Supplement course packs	16	23.5	23	31.5	20	46.5
Total	239	-	266	-	163	-

Table 4.4: Year of study and information sources use

Information sources' use	Year 1 n=68			Year 2 n=73			Year 3 n=43			Year 1 %			Year 2%			Year 3 %		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Dictionary	40	24	4	34	29	10	18	16	9	59	35	5.9	46.6	40	14	42	37	21
Directory	15	30	23	13	24	36	11	15	17	22	44	34	17.8	33	49	26	35	40
Encyclopaedia	20	20	28	11	17	45	4	4	35	29	29	41	15.1	23	62	9.3	9.3	81
BORIS (computer catalogue)	33	26	9	44	21	8	20	18	5	49	38	13	60.3	29	11	47	42	12
Books	29	33	6	32	33	8	22	16	5	43	49	8.8	43.8	45	11	51	37	12
Journals	14	25	29	15	34	24	19	19	5	21	37	43	20.5	47	33	44	44	12
Newspapers/magazines	18	32	18	19	35	19	22	13	8	26	47	26	26	48	26	51	30	19
Tv/radio	17	24	27	18	25	30	15	19	9	25	35	40	24.7	34	41	35	44	21
Films/video	15	19	34	6	33	34	11	16	16	22	28	50	8.22	45	47	26	37	37
Reports	13	23	32	15	25	33	9	20	14	19	34	47	20.5	34	45	21	47	33
Internet	6	14	48	4	23	46	13	13	17	8.8	21	71	5.48	32	63	30	30	40

Table 4.5: Year of study and library use

Library use	Year 1 **n=68**			Year 2 **n=73**			Year 3 **n=43**			Year 1 %			Year 2 %			Year 3 %		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Used Short Loan collection	35	25	8	40	26	7	12	20	11	51.5	36.8	11.8	54.8	35.6	9.6	27.9	46.5	25.6
Used Open shelves	17	28	23	19	31	23	16	17	10	25.0	41.2	33.8	26.0	42.5	31.5	37.2	39.5	23.3
Found readings from articles references.	9	28	31	13	25	35	20	16	7	13.2	41.2	45.6	17.8	34.2	47.9	46.5	37.2	16.3
Asked for librarian's help	12	38	18	14	34	25	5	20	18	17.6	55.9	26.5	19.2	46.6	34.2	11.6	46.5	41.9
Found own useful/relevant unprescribed material	11	39	18	13	32	28	17	19	7	16.2	57.4	26.5	17.8	43.8	38.4	39.5	44.2	16.3
Needed information outside UCT libraries	4	8	56	2	6	65	7	16	20	5.9	11.8	82.4	2.7	8.2	89.0	16.3	37.2	46.5

Library use	Year 1 **n=68**		Year 2 **n=73**		Year 3 **n=43**	
	Yes	%	Yes	%	Yes	%
Borrowed material outside UCT	4	5.9	2	2.7	7	16.3
Attended UCT library orientation	39	57.4	43	58.9	25	58.1

Table 4.6: Year of study and Academic task preparation

Academic task preparation	Year 1 **n=68**			Year 2 **n=73**			Year 3 **n=43**			Year 1%			Year 2 %			Year 3 %		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Work on their own	44	22	2	47	26	0	30	12	1	64.7	32.4	2.9	64.4	35.6	0.0	69.8	27.9	2.3
Work in groups	11	27	30	4	37	32	1	18	24	16.2	39.7	44.1	5.5	50.7	43.8	2.3	41.9	55.8
Consult other students	14	49	5	14	55	4	11	31	1	20.6	72.1	7.4	19.2	75.3	5.5	25.6	72.1	2.3
Consult lecturer/tutor	8	45	15	6	52	15	6	29	8	11.8	66.2	22.1	8.2	71.2	20.5	14.0	67.4	18.6
Consult other experts	5	18	45	3	26	44	3	13	27	7.4	26.5	66.2	4.1	35.6	60.3	7.0	30.2	62.8

Table 4.7: Year of study and information selection and evaluation

Information evaluation	Year 1 n=68			Year 2 n=73			Year 3 n=43			Year 1 %			Year 2 %			Year 3 %		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Select information for needs	35	30	3	46	27	0	29	13	1	51.5	44.1	4.4	63.0	37.0	0.0	67.4	30.2	2.3
Evaluate relevance	37	31	0	38	32	3	27	16	0	54.4	45.6	0.0	52.1	43.8	4.1	62.8	37.2	0.0
Evaluate accuracy	24	42	2	23	47	3	23	20	0	35.3	61.8	2.9	31.5	64.4	4.1	53.5	46.5	0.0
Evaluate currency	26	39	3	33	37	3	27	14	2	38.2	57.4	4.4	45.2	50.7	4.1	62.8	32.6	4.7
Evaluate authority	18	39	11	26	33	14	17	20	6	26.5	57.4	16.2	35.6	45.2	19.2	39.5	46.5	14.0
Find and fit new information into existing knowledge	27	37	4	28	43	2	20	21	2	39.7	54.4	5.9	38.4	58.9	2.7	46.5	48.8	4.7

Table 4.8: Year of study and career and academic decision making

	Year 1 **n=68**		Year 2 **n=73**		Year 3 **n=43**	
	Yes	%	Yes	%	Yes	%
Had career guidance	51	75.0	50	68.5	29	67.4
Career confidence	45	66.2	52	71.2	35	81.4
Had SA universities' information	60	88.2	58	79.5	35	81.4
Used SA universities'. information	60	88.2	57	78.1	35	81.4
Had UCT programs information	43	63.2	42	57.5	21	48.8
Used UCT programs information	39	57.4	37	50.7	18	41.9
Had sufficient courses information	32	47.1	36	49.3	17	39.5
Used courses information	27	39.7	32	43.8	17	39.5

Table 5.1: Race and academic writing training

Academic Writing training	African n=96		White n=58		Coloured n=10		Indian n=10		Chinese n=10	
	Yes	%	Yes	%	Yes	%	Yes	%	Yes	%
Had training on academic writing	45	46.9	40	69.0	6	60	9	90.0	9	90.0
Had training on referencing	34	35.4	26	44.8	3	30	8	80.0	3	30.0
Had training on studying skills	44	45.8	32	55.2	6	60	7	70.0	5	50.0

Table 5.2.1: Race and ability to express ideas, prepare reference lists and read and interpret graphs (totals)

	African n=96			White n=58			Coloured n=10			Indian n=10			Chinese n=10		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Able to express their own ideas	58	36	2	40	16	2	4	6	0	5	5	0	1	9	0
Able to express other writer's ideas	34	55	7	30	25	3	3	7	0	4	5	1	2	8	0
Able to prepare reference lists	31	59	6	48	7	3	4	5	1	5	4	1	3	5	2
Able to read and interpret graphs	38	52	6	25	33	0	7	3	0	7	2	1	3	5	2

Table 5.2.2: Race and ability to express ideas, prepare reference lists and read and interpret graphs (percentages)

	African n=96			White n=58			Coloured n=10			Indian n=10			Chinese n=10		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Able to express their own ideas	60	37.5	2.1	69	27.6	3.4	40	60	0	50	50	0	10	90	0
Able to express other writer's ideas	35	57.3	7.3	52	43.1	5.2	30	70	0	40	50	10	20	80	0
Able to prepare reference lists	32	61.5	6.3	83	12.1	5.2	40	50	10	50	40	10	30	50	20
Able to read and interpret graphs	40	54.2	6.3	43	56.9	0	70	30	0	70	20	10	30	50	20

Table 5.3: Race and textbooks and course packs use

Textbooks and course use	African n=96		White n=58		Coloured n=10		Indian n=10		Chinese n=10	
	Yes	%	Yes	%	Yes	%	Yes	%	Yes	%
Have prescribed textbooks	95	99	57	98.3	9	90.0	9	90.0	10.0	100
Use prescribed textbooks	92	95.8	55	94.8	8	80.0	8	80.0	9.0	90
Supplement textbooks with extra material	49	51	42	72.4	3	30.0	4	40.0	5.0	50
Have course packs	83	86.5	48	82.7	8	80.0	9	90.0	7.0	70
Supplement course packs with extra material	26	27.1	22	37.9	3	30.0	3	30.0	5.0	50

Table 5.4.1: Race and information sources use (totals)

Information sources' use	African n=96			White n=58			Coloured n=10			Indian n=10			Chinese n=10		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Dictionary	45	42	9	30	19	9	7	2	1	3	3	4	7	3	0
Directory	16	39	41	16	17	25	3	4	3	2	5	3	2	4	4
Encyclopaedia	14	25	57	12	12	34	3	1	6	4	0	6	2	3	5
BORIS (computer catalogue)	50	41	5	32	15	11	5	4	1	4	3	3	6	2	2
Books	46	38	12	29	24	5	2	7	1	2	7	1	4	6	0
Journals	28	31	37	16	19	23	2	4	4	1	5	4	1	5	4
Newspapers/magazines	34	41	21	18	23	17	3	4	3	2	7	1	2	5	3
Tv/radio	34	28	34	10	25	23	3	6	1	3	5	2	0	4	6
Films/video	22	37	37	7	19	32	0	6	4	2	4	4	1	2	7
Reports	21	39	37	11	17	30	0	4	6	4	3	3	2	5	3
Internet	4	10	82	7	27	24	4	4	2	5	4	1	3	5	2

Table 5.5.1 Race and library use (totals)

Library use	African n=96			White n=58			Coloured n=10			Indian n=10			Chinese n=10		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Used Short Loan collection	49	34	13	25	22	11	3	7	0	4	4	2	6	4	0
Used Open shelves	30	35	31	14	28	16	2	5	3	3	3	4	3	5	2
Found readings from articles' references	23	35	38	13	24	21	2	4	4	2	2	6	2	4	4
Asked for librarian's help	17	54	25	7	24	27	2	4	4	2	4	4	3	6	1
Found own useful/relevant unprescribed material	10	68	18	20	19	19	2	2	6	4	1	5	5	0	5
Needed information outside UCT libraries	3	9	84	5	9	44	2	5	3	1	4	5	2	3	5

Table 5.5.2: Race and library use (percentages)

Library use	African n=96			White n=58			Coloured n=10			Indian n=10			Chinese n=10		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Used Short Loan collection	51	35.4	14	43	37.9	19	30	70	0	40	40	20	60	40	0
Used Open shelves	31	36.5	32	24	48.3	28	20	50	30	30	30	40	30	50	20
Found readings from articles references	24	36.5	40	22	41.4	36	20	40	40	20	20	60	20	40	40
Asked for librarian's help	18	56.3	26	12	41.4	47	20	40	40	20	40	40	30	60	10
Found own useful/relevant unprescribed material	10	70.8	19	34	32.8	33	20	20	60	40	10	50	50	0	50
Needed information outside UCT libraries	3.1	9.38	88	8.6	15.5	76	20	50	30	10	40	50	20	30	50

Library use	African n=96		White n=58		Coloured n=10		Indian n=10		Chinese n=10	
	Total	%	Total	%	Total	%	Total	%	Total	%
Borrowed material outside UCT libraries	0	0	3	5.2	5	50	2	20.0	3	30.0
Attended UCT library orientation	60	62.5	29	50.0	6	60	4	40.0	8	80.0

Table 5.6.1 Race and academic task preparation (totals)

Academic task preparation	African n=96			White n=58			Coloured n=10			Indian n=10			Chinese n=10		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Work on their own	65	28	3	38	20	0	5	5	0	7	3	0	6	4	0
Work in groups	12	41	43	3	23	32	0	5	5	1	8	1	0	5	5
Consult other students	20	69	7	10	47	1	2	7	1	3	6	1	4	6	0
Consult lecturer/tutor	14	64	18	3	42	13	1	7	2	1	5	4	1	8	1
Consult other experts	9	29	58	1	16	41	0	5	5	1	3	6	0	4	6

Table 5.6.2: Race and academic task preparation (percentages)

Academic task preparation	African n=96			White n=58			Coloured n=10			Indian n=10			Chinese n=10		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Work on their own	68	29.2	3.1	66	34.5	0	50	50	0	70	30	0	60	40	0
Work in groups	13	42.7	45	5.2	39.7	55	0	50	50	10	80	10	0	50	50
Consult other students	21	71.9	7.3	17	81	1.7	20	70	10	30	60	10	40	60	0
Consult lecturer/tutor	15	66.7	19	5.2	72.4	22	10	70	20	10	50	40	10	80	10
Consult other experts	9.4	30.2	60	1.7	27.6	71	0	50	50	10	30	60	0	40	60

Table 5.7.1: Race and information selection and evaluation (totals)

Information evaluation	African n=96			White n=58			Coloured n=10			Indian n=10			Chinese n=10		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Select information for needs	57	36	3	37	21	0	7	3	0	5	4	1	4	6	0
Evaluate relevance	55	38	3	34	24	0	7	3	0	4	6	0	2	8	0
Evaluate accuracy	36	58	2	21	35	2	5	5	0	4	5	1	4	6	0
Evaluate currency	38	51	7	36	22	0	4	6	0	5	5	0	3	6	1
Evaluate authority	26	50	20	23	27	8	5	5	0	4	5	1	3	5	2
Find and fit new information into existing knowledge	33	56	7	31	27	0	5	5	0	4	5	1	2	8	0

Table 5.7.2: Race and information selection and evaluation (percentages)

Information evaluation	African n=96			White n=58			Coloured n=10			Indian n=10			Chinese n=10		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Select information for needs	59	37.5	3.1	64	36.2	0	70	30	0	50	40	10	40	60	0
Evaluate relevance	57	39.6	3.1	59	41.4	0	70	30	0	40	60	0	20	80	0
Evaluate accuracy	38	60.4	2.1	36	60.3	3.4	50	50	0	40	50	10	40	60	0
Evaluate currency	40	53.1	7.3	62	37.9	0	40	60	0	50	50	0	30	60	10
Evaluate authority	27	52.1	21	40	46.6	14	50	50	0	40	50	10	30	50	20
Find and fit new information into existing knowledge	34	58.3	7.3	53	46.6	0	50	50	0	40	50	10	20	80	0

Table 5.8: Race and career and academic decision making

	African **n=96**		White **n=58**		Coloured **n=10**		Indian **n=10**		Chinese **n=10**	
	Yes	%	Yes	%	Yes	%	Yes	%	Yes	%
Had career guidance	59	61.5	47	81.0	8	80.0	9	90.0	7	70.0
Career confidence	70	72.9	40	69.0	8	80.0	8	80.0	6	60.0
Had SA universities' information	81	84.4	48	82.8	8	80.0	8	80.0	8	80.0
Used SA universities' information	81	84.4	48	82.8	8	80.0	8	80.0	7	70.0
Had UCT programs information	38	39.6	45	77.6	7	70.0	9	90.0	7	70.0
Used UCT programs information	30	31.3	45	77.6	5	50.0	8	80.0	6	60.0
Had sufficient courses information	39	40.6	32	55.2	7	70.0	4	40.0	3	30.0
Used courses information	35	36.5	28	48.3	6	60.0	4	40.0	3	30.0

Table 6.1: Language and academic writing training

Academic writing training	African n=85		English n=80		Chinese n=10		Afrikaans n=5		Other n=4	
	Total	%	Total	%	Total	%	Total	%	Total	%
Had training on academic writing	40	47.1	52	65	9	90	4	80	4	100
Had training on referencing	30	35.3	36	45	3	30	3	60	2	50
Had training on studying skills	37	43.5	53	66	5	50	3	60	4	100

Table 6.2.1: Language and ability to express ideas, prepare reference lists and read and interpret graphs (totals)

	African n=85			English n=80			Chinese n=10			Afrikaans n=5			Other n=4		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Able to express their ideas	52	31	2	50	28	2	1	9	0	2	3	0	3	1	0
Able to express other writer's ideas	30	48	7	38	39	3	2	8	0	1	3	1	2	2	0
Able to prepare reference lists	27	54	4	57	20	3	3	5	2	2	1	2	2	1	1
Able to read and interpret graphs	33	48	4	40	40	0	3	5	2	3	1	1	1	1	2

Table 6.2.2: Language and ability to express ideas, prepare reference lists and read and interpret graphs (percentages)

	African n=85			English n=80			Chinese n=10			Afrikaans n=5			Other n=4		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Able to express their ideas	61.2	36.5	2.35	62.5	35	2.5	10	90	0	40	60	0	75	25	0
Able to express other writer's ideas	35.3	56.5	8.24	47.5	48.8	3.8	20	80	0	20	60	20	50	50	0
Able to prepare reference lists	31.8	63.5	4.71	71.3	25	3.8	30	50	20	40	20	40	50	25	25
Able to read and interpret graphs	38.8	56.5	4.71	50	50	0	30	50	20	60	20	20	25	25	50

Table 6.3: Language and textbooks and course packs use

Textbooks and course packs use	African n=85		English n=80		Chinese n=10		Afrikaans n=5		Other n=4	
	Total	%	Total	%	Total	%	Total	%	Total	%
Have prescribed textbooks	84	98.8	78	98	10	100	4	80	4	100
Use prescribed textbooks	79	92.9	76	95	9	90	4	80	4	100
Supplement textbooks with extra material	43	50.6	47	58.8	5	50	3	60	4	100
Have course packs	73	85.9	66	83	7	70	5	100	4	100
Supplement course packs with extra material	20	23.5	27	33.8	5	50	3	60	4	100

6.4.1: Language and information sources use (totals)

Information source's use	African n=85			English n=80			Chinese n=10			Afrikaans n=5			Other n=4		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Dictionary	44	28	13	36	35	9	7	3	0	3	2	0	2	1	1
Directory	16	33	36	18	28	34	2	4	4	2	1	2	1	3	0
Encyclopaedia	14	23	48	13	12	[illegible]	2	3	5	4	1	0	2	2	0
BORIS (computer catalogue)	41	36	8	44	25	11	6	2	2	3	1	1	3	1	0
Books	40	33	12	35	39	6	4	6	0	1	3	1	3	1	0
Journals	25	30	30	16	41	23	1	5	4	4	0	1	2	2	0
Newspapers/magazines	34	38	13	21	31	28	2	5	3	2	2	1	0	4	0
Tv/radio	27	26	32	19	35	26	0	4	6	3	1	1	1	2	1
Films/video	15	37	33	14	25	41	1	2	7	1	1	3	1	3	0
Reports	21	29	35	12	32	36	2	5	3	1	1	3	1	1	2
Internet	4	10	71	12	32	36	3	5	2	1	2	2	3	1	0

6.4.2: Language and information sources use (percentages)

formation source's use	African n=85			English n=80			Chinese n=10			Afrikaans n=5			Other n=4		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Dictionary	51.8	32.9	15.3	45	43 8	11	70	30	0	60	40	0	50	25	25
Directory	18.8	38.8	42.4	23	35	43	20	40	40	40	20	40	25	75	0
Encyclopaedia	16.5	27.1	56.5	16	15	69	20	30	50	80	20	0	50	50	0
BORIS (computer catalogue)	48 2	42 4	9 41	55	31 3	14	60	20	20	60	20	20	75	25	0
Books	47.1	38 8	14.1	44	48 8	7 5	40	60	0	20	60	20	75	25	0
Journals	29 4	35 3	35.3	20	51 3	29	10	50	40	80	0	20	50	50	0
Newspapers/magazines	40	44.7	15.3	26	38 8	35	20	50	30	40	40	20	0	100	0
Tv/radio	31 8	30.6	37.6	24	43 8	33	0	40	60	60	20	20	25	50	25
Films/video	17.6	43.5	38.8	18	31 3	51	10	20	70	20	20	60	25	75	0
Reports	24.7	34.1	41.2	15	40	45	20	50	30	20	20	60	25	25	50
Internet	4.71	11.8	83.5	15	40	45	30	50	20	20	40	40	75	25	0

Table 6.5.1: Language and academic task preparation (totals)

Academic task preparation	African n=85			English n=80			Chinese n=10			Afrikaans n=5			Other n=4		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Work on their own	65	17	3	43	37	0	6	4	0	4	1	0	3	1	0
Work in groups	9	41	35	3	33	44	0	5	5	1	3	1	3	0	1
Consult other students	20	58	7	10	68	2	4	6	0	3	1	1	2	2	0
Consult lecturer/tutor	11	56	18	3	59	18	1	8	1	3	1	1	2	2	0
Consult other experts	9	29	47	1	20	59	0	4	6	1	0	4	0	4	0

Table 6.5.2: Language and academic task preparation (percentages)

Academic task preparation	African **n=85**			English **n=80**			Chinese **n=10**			Afrikaans **n=5**			Other n=4		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Work on their own	76.5	20	3.53	54	46.3	0	60	40	0	80	20	0	75	25	0
Work in groups	10.6	48.2	41.2	3.8	41.3	55	0	50	50	20	60	20	75	0	25
Consult other students	23.5	68.2	8.24	13	85	2.5	40	60	0	60	20	20	50	50	0
Consult lecturer/tutor	12.9	65.9	21.2	3.8	73.8	23	10	80	10	60	20	20	50	50	0
Consult other experts	10.6	34.1	55.3	1.3	25	74	0	40	60	20	0	80	0	100	0

Table 6.6.1: Language and library use (totals)

Library use	African **n=85**			English **n=80**			Chinese **n=10**			Afrikaans **n=5**			Other **n=4**		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Used Short Loan collection	47	25	13	28	40	12	6	4	0	3	1	1	3	1	0
Used Open shelves	26	28	19	19	39	22	3	5	2	2	2	1	2	2	0
Found readings from articles' references	23	35	27	13	27	40	2	4	4	3	2	0	1	1	2
Asked for librarian's help	17	43	25	8	41	31	3	6	1	1	1	3	2	1	1
Found own useful/relevant unprescibed material	10	57	18	24	28	28	5	0	5	1	4	0	1	1	2
Needed information outside UCT libraries	3	9	73	7	18	55	2	3	5	0	0	5	1	0	3

Table 6.6.2: Language and library use (Percentages)

Library use	African **n=85**			English **n=80**			Chinese **n=10**			Afrikaans **n=5**			Other **n=4**		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Used Short Loan collection	55.3	29.4	15.3	35	50	15	60	40	0	60	20	20	75	25	0
Used Open shelves	30.6	32.9	22.4	22	45.9	26	3.53	5.88	2.35	2.4	2.35	1.18	2.35	2.35	0
Found readings form articles' references	27.1	41.2	31.8	15	31.8	47	2.35	4.71	4.71	3.5	2.35	0	1.18	1.18	2.35
Asked for librarian's help	20	50.6	29.4	9.4	48.2	36	3.53	7.06	1.18	1.2	1.18	3.53	2.35	1.18	1.18
Found own useful/relevant unprescibed material	11.8	67.1	21.2	28	32.9	33	5.88	0	5.88	1.2	4.71	0	1.18	1.18	2.35
Needed information outside UCT libraries	3.53	10.6	85.9	8.2	21.2	65	2.35	3.53	5.88	0	0	5.88	1.18	0	3.53

Library use	African **n=85**		English **n=80**		Chinese **n=10**		Afrikaans **n=5**		Other **n=4**	
	Total	%	Total	%	Total	%	Total	%	Total	%
Borrowed material outside UCT libraries	0	0	8	10	3	30	0	0	2	50
Attended library orientation at UCT	60	70.6	30	38	8	80	5	100	4	100

Table 6.7.1: Language and information selection and evaluation (totals)

Information evaluation	African **n=85**			English **n=80**			Chinese **n=10**			Afrikaans **n=5**			Other **n=4**		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Select information for needs	46	36	3	52	28	0	4	6	0	5	0	0	3	0	1
Evaluate information relevance	45	38	2	50	30	0	2	8	0	3	2	0	2	1	1
Evaluate information accuracy	36	49	0	26	52	2	4	6	0	1	1	3	3	1	0
Evaluate information currency	38	40	7	40	40	0	3	6	1	1	4	0	4	0	0
Evaluate information authority	25	45	15	31	41	8	3	5	2	2	0	3	0	1	3
Find and fit new information into existing knowledge	33	48	4	37	43	0	2	8	0	1	3	1	2	0	2

Table 6.7.2: Language and information selection and evaluation (percentages)

Information evaluation	African **n=85**			English **n=80**			Chinese **n=10**			Afrikaans **n=5**			Other **n=4**		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Select information for needs	54.1	42.4	3.53	65	35	0	40	60	0	100	0	0	75	0	25
Evaluate information relevance	52.9	44.7	2.35	63	37.5	0	20	80	0	60	40	0	50	25	25
Evaluate information accuracy	42.4	57.6	0	33	65	2.5	40	60	0	20	20	60	75	25	0
Evaluate information currency	44.7	47.1	8.24	50	50	0	30	60	10	20	80	0	100	0	0
Evaluate information authority	29.4	52.9	17.6	39	51.3	10	30	50	20	40	0	60	0	25	75
Find and fit new information into existing knowledge	38.8	56.5	4.71	46	53.8	0	20	80	0	20	60	20	50	0	50

Table 6.8: Language and career and academic decision making

Career and academic decisions	African n=85		English n=80		Chinese n=10		Afrikaans n=5		Other n=4	
	Total	%	Total	%	Total	%	Total	%	Total	%
Had career guidance	53	62.4	63	79	7	70	3	60	4	100
Have career confidence	67	78.8	52	65	6	60	3	60	4	100
Had SA universities' information	77	90.6	61	76	8	80	4	80	3	75
Used SA universities' information	77	90.6	61	76	7	70	3	60	2	50
Had UCT programmes' information	37	43.5	54	68	7	70	5	100	3	75
Used UCT programmes' information	30	35.3	51	64	6	60	4	80	3	75
Had sufficient courses' information	35	41.2	44	55	3	30	2	40	1	25
Used courses information	35	41.2	35	44	3	30	2	40	1	25

Table 7.1: Programme of study and academic writing training

Academic Writing training	BSc n=29		BCom n=32		BScEng n=23		BScQS n=5		BA n=31		BBusSci n=20		BMus n=6		BSocSci n=32		MBChB n=6	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Had training on academic writing	19	65.5	16	50	14	60.9	4	80	12	38.7	15	75	3	50	19	59.4	4	66.7
Had training on referencing	11	37.9	10	31.3	4	17.4	5	100	8	25.8	12	60	3	50	20	62.5	1	16.7
Had training on studying skills	13	44.8	19	59.4	5	21.7	4	80	18	58.1	11	55	5	83.3	16	50	3	50

Table 7.2.1: Program of study and ability to express ideas, prepare reference lists and read and interpret graphs (totals)

Academic studying	BSc n=29			BCom n=32			BScEng n=23			BScQS n=5			BA n=31			BBusSci n=20			BMus n=6			BSocSci n=32			MBChB n=6		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Ability to express one's own ideas	21	8	0	21	11	0	11	10	2	0	5	0	21	10	0	10	8	2	3	3	0	17	15	0	4	2	0
Ability to express other writer's ideas	12	15	2	15	16	1	5	15	3	2	3	0	17	12	2	7	12	1	1	5	0	12	18	2	2	4	0
Ability to prepare reference list	17	7	5	15	13	4	15	4	4	4	1	0	9	20	2	11	8	1	3	3	0	16	15	1	3	3	0
Ability to read and Interpret graphs	22	7	0	9	23	0	17	6	0	2	3	0	6	20	5	13	6	1	2	3	1	5	25	2	4	2	0

Table 7.2.2: Program of study and ability to express ideas, prepare reference lists and read and interpret graphs (percentages)

Academic studying	BSc n=29			BCom n=32			BScEng n=23			BScQS n=5			BA n=31			BBusSci n=20			BMus n=6			BSocSci n=32			MBChB n=6		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Ability to express one's own ideas	72.4	27.6	0	65.6	34.4	0	47.8	43.5	8.7	0	100	0	67.7	32.3	0	50	40	10	50	50	0	53.1	46.9	0	66.7	33.3	0
Ability to express other writer's ideas	41.4	51.7	6.9	46.9	50	3.1	21.7	65.2	13	40	60	0	54.8	38.7	6.5	35	60	5	16.7	83.3	0	37.5	56.3	6.3	33.3	66.7	0
Ability to prepare reference list	58.6	24.1	17.2	46.9	40.6	13	65.2	17.4	17	80	20	0	29	64.5	6.5	55	40	5	50	50	0	50	46.9	3.1	50	50	0
Ability to read and interpret graphs	75.9	24.1	0	28.1	71.9	0	73.9	26.1	0	40	60	0	19.4	64.5	16	65	30	5	33.3	50	16.7	15.6	78.1	6.3	66.7	33.3	0

Table 7.3: Program of study and textbooks and course packs use

Textbooks and course use	BSc n=29		BCom n=32		BScEng n=23		BScQS n=5		BA n=31		BBusSci n=20		BMus n=6		BSocSci n=32		MBChB n=6	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Have prescribed textbooks	27	93.1	32	100	23	100	5	100	30	97	20	100	6	100	31	97	6	100
Use prescribed textbooks	27	93.1	31	96.9	21	91	5	100	27	87	18	90	6	100	31	97	6	100
Supplement textbooks	14	48.3	18	56.3	12	52	4	80	18	58	9	45	6	100	15	47	6	100
Have course packs	24	82.8	28	87.5	15	65	4	80	30	97	20	100	0	0	30	94	4	66.7
Supplement course packs	9	31	9	28.1	6	26	2	40	13	42	5	25	0	0	12	38	3	50

Table 7.4.1: Program of study and information sources use (totals)

Information sources' use	BSc n=29			BCom n=32			BScEng n=23			BScQS n=6			BA n=31			BBusSci n=20			BMus n=6			BSocSci n=32			MBChB n=6		
	often	some times	never	often	some times	never	often	sometimes	never	often	sometimes.	never	often	sometimes	never	often	sometimes	never	often	some times	never	often	sometimes	never	often	sometimes	never
Dictionary	10	12	7	13	17	2	8	5	10	2	3	0	22	9	8	11	7	2	4	2	0	18	12	2	4	2	0
Directory	3	14	12	7	13	12	5	7	11	0	4	1	7	11	13	7	6	7	1	4	1	7	12	13	2	3	1
Encyclopaedia	6	5	18	3	6	23	2	3	18	0	1	4	6	6	19	5	4	11	3	2	1	7	7	18	3	2	1
BORIS (computer catalogue)	14	10	5	14	15	3	5	14	4	4	1	0	17	11	3	9	5	6	5	1	0	25	6	1	4	2	0
Books	14	13	2	12	17	3	5	15	3	0	2	3	15	14	2	5	10	5	6	0	0	23	8	1	3	3	0
Journals	8	10	11	4	11	17	7	7	9	1	2	2	7	16	8	2	10	8	3	2	1	13	18	1	3	2	1
Newspapers/magazines	11	11	7	11	14	7	5	10	8	2	3	0	6	12	13	6	9	5	2	2	2	15	14	3	1	5	0
Tv/radio	13	7	9	10	12	10	6	11	6	1	2	2	10	10	11	5	7	8	0	2	4	5	13	14	0	4	2
Films/video	10	10	9	6	11	15	3	9	11	1	2	2	[illegible]	[illegible]	21	4	6	10	0	2	4	5	16	11	0	5	1
Reports	11	13	5	4	13	15	8	8	7	1	2	2	1	10	20	5	7	8	1	4	1	4	8	20	2	3	1
Internet	2	8	19	4	5	23	4	5	16	1	2	2	5	6	20	2	8	8	1	2	3	3	13	16	1	1	4

Table 7.4.2: Program of study and information sources use (percentages)

Information sources' use	BSc n=29			BCom n=32			BScEng n=23			BScQS n=6			BA n=31			BBusSci n=20			BMus n=6			BSocSci n=32			MBChB n=6		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Dictionary	34.5	41.4	24.1	40.6	53.1	6.3	34.8	21.7	43	40	60	0	71	29	26	55	35	10	66.7	33.3	0	56.3	37.5	6.3	66.7	33.3	0
Directory	10.3	48.3	41.4	21.9	40.6	38	21.7	30.4	48	0	80	20	22.6	35.5	42	35	30	35	16.7	66.7	16.7	21.9	37.5	41	33.3	50	17
Encyclopaedia	20.7	17.2	62.1	9.38	18.8	72	8.7	13	78	0	20	80	19.4	19.4	61	25	20	55	50	33.3	16.7	21.9	21.9	56	50	33.3	17
BORIS (computer catalogue)	48.3	34.5	17.2	43.8	46.9	9.4	21.7	60.9	17	80	20	0	54.8	35.5	9.7	45	25	30	83.3	16.7	0	78.1	18.8	3.1	66.7	33.3	0
Books	48.3	44.8	6.9	37.5	53.1	9.4	21.7	65.2	13	0	40	60	48.4	45.2	6.5	25	50	25	100	0	0	71.9	25	3.1	50	50	0
Journals	27.6	34.5	37.9	12.5	34.4	53	30.4	30.4	39	20	40	40	22.6	51.6	26	10	50	40	50	33.3	16.7	40.6	56.3	3.1	50	33.3	17
Newspapers/magazines	37.9	37.9	24.1	34.4	43.8	22	21.7	43.5	35	40	60	0	19.4	38.7	42	30	45	25	33.3	33.3	33.3	46.9	43.8	9.4	16.7	83.3	0
Tv/radio	44.8	24.1	31	31.3	37.5	31	26.1	47.8	26	20	40	40	32.3	32.3	35	25	35	40	0	33.3	66.7	15.6	40.6	44	0	66.7	33
Films/video	34.5	34.5	31	18.8	34.4	47	13	39.1	48	20	40	40	9.68	22.6	68	20	30	50	0	33.3	66.7	15.6	50	34	0	83.3	17
Reports	37.9	44.8	17.2	12.5	40.6	47	34.8	34.8	30	20	40	40	3.23	32.3	65	25	35	40	16.7	66.7	16.7	12.5	25	63	33.3	50	17
Internet	6.9	27.6	65.5	12.5	15.6	72	17.4	21.7	70	20	40	40	16.1	19.4	65	10	40	40	16.7	33.3	50	9.38	40.6	50	16.7	16.7	67

Table 7.5.1 Program of study and academic task preparation (totals)

Academic task preparation	BSc n=29			BCom n=32			BScEng n=23			BScQS n=5			BA n=31			BBusSci n=20			BMus n=6			BSocSci n=32			MBChB n=6		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Work on your own	18	11	0	25	7	0	15	6	2	3	2	0	22	9	0	8	11	1	6	0	0	21	11	0	3	3	0
Work in groups	2	16	11	5	10	17	2	8	13	0	5	0	0	9	22	3	15	2	0	5	1	2	10	20	2	4	0
Consult other students	7	20	2	9	22	1	8	12	3	1	4	0	30	1	7	5	15	0	1	5	0	6	24	2	2	3	1
Consult lecturer/tutor	5	20	4	2	24	6	3	12	8	1	3	1	1	25	5	1	12	7	0	6	0	5	21	6	2	3	1
Consult other experts	5	5	19	1	14	17	1	5	17	1	0	4	0	12	19	0	8	12	0	1	5	3	7	22	0	5	1

Table 7.5.2 Program of study and academic task preparation (percentages)

Academic task preparation	BSc n=29			BCom n=32			BScEng n=23			BScQS n=5			BA n=31			BBusSci n=20			BMus n=6			BSocSci n=32			MBChB n=6		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Work on your own	62.1	37.9	0	78.1	21.9	0	65.2	26.1	8.7	60	40	0	71	29	0	40	55	5	100	0	0	65.6	34.4	0	50	50	0
Work in groups	6.9	55.2	37.9	15.6	31.3	53	8.7	34.8	57	0	100	0	0	29	71	15	75	10	0	83.3	16.7	6.25	31.3	63	33.3	66.7	0
Consult other students	24.1	69	6.9	28.1	68.8	3.1	34.8	52.2	13	20	80	0	96.8	3.23	25	25	75	0	16.7	83.3	0	18.8	75	6.3	33.3	50	17
Consult lecturer/tutor	17.2	69	13.8	6.25	75	19	13	52.2	35	20	60	20	3.23	80.6	16	5	60	35	0	100	0	15.6	65.6	19	33.3	50	17
Consult other experts	17.2	17.2	65.5	3.13	43.8	53	4.35	21.7	74	20	0	80	0	38.7	61	0	40	60	0	16.7	83.3	9.38	21.9	69	0	83.3	17

Table 7.6.1: Program of study and library use (totals)

Library use	BSc n=29			BCom n=32			BScEng n=23			BScQS n=5			BA n=31			BBusSci n=20			BMus n=6			BSocSci n=32			MBChB n=6		
	often	some times	never	often	Some times	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Short Loan collection	12	13	4	13	11	8	5	14	4	2	3	0	17	11	3	7	8	5	3	2	1	25	6	1	3	3	0
Open shelves	10	9	10	8	20	4	2	6	15	2	2	1	8	11	12	5	8	7	3	2	1	12	16	4	2	2	2
Readings from articles refs.	8	10	11	8	8	16	6	3	14	2	3	0	2	19	10	2	10	8	1	5	0	13	7	12	0	4	2
Librarian's help	3	15	11	7	14	11	2	10	11	1	2	2	6	17	8	1	11	8	3	3	0	8	17	7	0	5	1
Found own useful/rel. mat.	7	15	7	5	17	10	4	13	6	2	2	1	7	13	11	1	6	13	1	5	0	13	10	9	1	4	1
Needed info Outside UCT	3	3	23	0	4	28	2	1	20	1	4	0	2	5	24	1	4	15	2	3	1	2	3	27	0	3	3

Table 7.6.2: Program of study and library use (percentages)

Library use	BSc n=29			BCom n=32			BScEng=23			BScQS n=5			BA n=31			BBusSci n=20			BMus n=6			BsocSci n=32			MBChB n=6		
	often	some times	never	often	some times	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	some times	never	often	sometimes	never	often	sometimes	never
Short Loan collection	41.4	44.8	13.8	40.6	34.4	25	21.7	60.9	17	40	60	0	54.8	35.5	9.7	35	40	25	50	33.3	16.7	78.1	18.8	3.1	50	50	0
Open shelves	34.5	31	34.5	25	62.5	13	8.7	26.1	65	40	40	20	25.8	35.5	39	25	40	35	50	33.3	16.7	37.5	50	13	33.3	33.3	33
Readings from articles refs.	27.6	34.5	37.9	25	25	50	26.1	13	61	40	60	0	6.45	61.3	32	10	50	40	16.7	83.3	0	40.6	21.9	38	0	66.7	33
Librarian's help	10.3	51.7	37.9	21.9	43.8	34	8.7	43.5	48	20	40	40	19.4	54.8	26	5	55	40	50	50	0	25	53.1	22	0	83.3	17
Found own useful/rel. mat.	24.1	51.7	24.1	15.6	53.1	31	17.4	56.5	26	40	40	20	22.6	41.9	35	5	30	65	16.7	83.3	0	40.6	31.3	28	16.7	66.7	17
Needed info. Outside UCT	10.3	10.3	79.3	0	12.5	88	8.7	4.35	87	20	80	0	6.45	16.1	77	5	20	75	33.3	50	16.7	6.25	9.38	84	0	50	50

Library use	BSc n=29		BCom n=32		BScEng n=23		BScQS n=5		BA n=31		BBusSci n=20		BMus n=6		BSocSci n=32		MBChB n=6	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Borrowed mat. Outside UCT	0	0	0	0	1	4.3	2	40	2	6.5	2	10	3	50	3	9.4	0	0
Attended UCT library orientation	22	75.9	24	75	13	57	4	80	11	35	10	50	5	83.3	15	47	3	50

Table 7.7.1: Program of study and information selection and evaluation (totals)

Information evaluation	BSc n=29			BCom n=32			BScEng n=23			BScQS n=5			BA n=31			BBusSci n=20			BMus n=6			BSocSci n=32			MBChB n=6		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Select information for needs	19	10	0	17	13	2	16	5	2	3	2	0	17	14	0	13	7	0	3	3	0	20	12	0	2	4	0
Evaluate relevance	11	17	1	17	15	0	15	6	2	4	1	0	22	9	0	9	11	0	3	3	0	17	14	1	2	3	1
Evaluate accuracy	12	16	1	13	19	0	11	10	2	0	5	0	11	20	0	8	12	0	2	3	1	12	19	1	1	5	0
Evaluate currency	12	16	1	13	18	1	14	6	3	3	2	0	17	14	0	10	9	1	2	3	1	14	17	1	1	5	0
Evaluate authority	11	12	6	13	17	2	8	10	5	0	4	1	7	19	5	6	13	1	2	3	1	13	11	8	1	3	2
Find and fit new information	8	19	2	15	14	3	11	10	2	2	3	0	12	19	0	7	13	0	3	3	0	16	15	1	1	5	0

Table 7.7.2: Program of study and information selection and evaluation (percentages)

Information evaluation	BSc n=29			BCom n=32			BScEng n=23			BScQS n=5			BA n=31			BBusSci n=20			BMus n=6			BSocSci n=32			MBChB n=6		
	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never	often	sometimes	never
Select information for needs	65.5	34.5	0	53.1	40.6	6.3	69.6	21.7	8.7	60	40	0	54.8	45.2	0	65	35	0	50	50	0	62.5	37.5	0	33.3	66.7	0
Evaluate relevance	37.9	58.6	3.45	53.1	46.9	0	65.2	26.1	8.7	80	20	0	71	29	0	45	55	0	50	50	0	53.1	43.8	3.1	33.3	50	17
Evaluate accuracy	41.4	55.2	3.45	40.6	59.4	0	47.8	43.5	8.7	0	100	0	35.5	64.5	0	40	60	0	33.3	50	16.7	37.5	59.4	3.1	16.7	83.3	0
Evaluate currency	41.4	55.2	3.45	40.6	56.3	3.1	60.9	26.1	13	60	40	0	54.8	45.2	0	50	45	5	33.3	50	16.7	43.8	53.1	3.1	16.7	83.3	0
Evaluate authority	37.9	41.4	20.7	40.6	53.1	6.3	34.8	43.5	22	0	80	20	22.6	61.3	16	30	65	5	33.3	50	16.7	40.6	34.4	25	16.7	50	33
Find and fit new information	27.6	65.5	6.9	46.9	43.8	9.4	47.8	43.5	8.7	40	60	0	38.7	61.3	0	35	65	0	50	50	0	50	46.9	3.1	16.7	83.3	0

Table 7.8: Program of study and career and academic decision making

	BSc n=29		BCom n=32		BScEng n=23		BScQS n=5		BA n=31		BBusSci n=20		BMus n=6		BSocSci n=32		MBChB n=6	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Had career guidance	21	72.4	24	75	16	70	5	100	17	55	13	65	6	100	24	75	4	66.7
Have career confidence	20	69	25	78.1	17	74	4	80	18	58	15	75	4	66.7	23	72	6	100
Had SA university information	24	82.8	30	93.8	20	87	4	80	21	68	17	85	5	83.3	26	81	6	100
Used SA university information	24	82.8	30	93.8	20	87	4	80	20	65	17	85	5	83.3	26	81	6	100
Had UCT programs information	20	69	21	65.6	11	48	4	80	14	45	10	50	5	83.3	16	50	5	83.3
Used UCT programs information	16	55.2	20	62.5	10	43	3	60	12	39	10	50	5	83.3	15	47	3	50
Had sufficient courses information	14	48.3	17	53.1	12	52	1	20	12	39	12	60	5	83.3	9	28	3	50
Used courses information	13	44.8	14	43.8	11	48	0	0	9	29	12	60	5	83.3	9	28	3	50