

**Access barriers: an investigation into the availability and accessibility of high-demand materials in the Short Loan Centre of an academic library**

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## **Abstract**

Academic libraries in South Africa are facing the challenge of tighter budgets, increasing student enrolments, greater diversity in students' backgrounds and library experience, and a call for greater accountability to all the stakeholders. The effectiveness of a library service can be measured in terms of the availability and accessibility of library materials, two attributes of a library's document delivery capability. This study focused on the availability of prescribed materials for undergraduate students in an academic library. It involved a micro-evaluation of the immediate materials availability rate in a short loan collection, by using a combination of a quantitative simulation study, and a qualitative user survey. Generally, the availability rates determined were high, which suggests a high degree of collection adequacy. However, the user study confirmed that many SLC users experienced difficulties in using the system, indicating a need for continuous user education programmes and constant dialogue between the staff and the users concerning future service improvements. The study indicated that overall materials availability rates can be misleading if accepted at face value. A introspective analysis of the reasons for the non-availability of high-demand materials revealed hidden access barriers such as poor information retrieval skills on the part of the users and certain inefficient organisational procedures on the part of the library. The study reiterates the fundamental importance of constructive communication between the various stakeholders in meeting the educational goals of the institution and the necessity of regular library performance evaluation to ensure a dynamic, proactive service. The co-existence of print-based and electronic resources in the foreseeable future underscores the importance of convenience and accessibility factors in making required documents available to the users.

## Summary

Academic libraries in South Africa are facing the challenge of tighter budgets, increasing student enrolments, greater diversity in students' backgrounds and library experience, and a call for greater accountability to all the stakeholders. The effectiveness of a library service can be measured in terms of the availability and accessibility of library materials, two attributes of a library's document delivery capability. This study focused on the availability of high-demand materials for undergraduate students in an academic library. It involved a micro-evaluation of the immediate materials availability rate in a short loan collection, by using a combination of a quantitative simulation study, and a qualitative user survey.

Availability studies are labour-intensive, expensive, and time-consuming, and their value questionable. However, despite the pitfalls of sampling errors, subjectivity, and misleading results, this investigation proved that such studies have the potential to reveal the many hidden factors that may ultimately influence availability rates. If a multi-method approach is applied and the stakeholders consulted, availability studies are useful for weeding obsolete items, for duplicating high-demand items, and for developing and maintaining a relevant collection.

Detecting and analysing the causal factors inhibiting access to materials are crucial aspects of an availability study, and Kantor's branching diagram proved to be a practical tool for displaying the results. A difficulty encountered in this study was the issue of multiple copies and how to account for the limited copies of core monographs and the abundant photocopies of single articles, so that the results would accurately reflect the availability rates across format. The results of the

user survey was compared to those of the simulation study for a “richer” picture of the obstacles to access and availability of undergraduate materials in an academic library in a developing country.

The study indicated that overall materials availability rates can be misleading if accepted at face value. A introspective analysis of the reasons for the nonavailability of high-demand materials revealed hidden access barriers such as poor information retrieval skills on the part of the users and inefficient organisational procedures on the part of the library. Generally, the availability rates determined were high, which suggests a high degree of collection adequacy. However, the user study confirmed that on an individual basis the availability rates experienced by the users themselves, are frequently much lower than those recorded in the literature. This scenario is precipitated by the various educational backgrounds of the students, as well as possible language barriers. Many frequent SLC users experienced difficulties in using the system, indicating a need for continuous user education programmes and constant dialogue between the staff and the users concerning future service improvements.

The study reiterates the fundamental importance of constructive communication between the various stakeholders in meeting the educational goals of the institution. The SLC needs to operate in partnership with the students and the lecturers to facilitate optimal access to prescribed materials and to extend subject coverage to a wider range of resources. The most prominent findings concern the new trends in the use of the SLC; the reasons for the high availability rates and low circulation statistics determined; the importance of communication in optimising availability; the SLC users’ profiles and the need for

information literacy; the library barriers to availability; and the challenge of print-based and electronic resources.

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## **Chapter 1: Introduction**

### **1.1 Background to the study**

Most academic libraries operate reserve or short loan collections, where material deemed to be in heavy demand is held in a different location from the rest of the library stock. These items are available for short loan periods or for use in the library only. Increasing enrolments of students, the high cost of buying textbooks and academic pressure for essential background reading, compel the optimal use of the short loan collection. Clarke (1994:19) believes that "the Third World experience of the 1990s is such that the reserve collection for wide-ranging socio-economic reasons has become the saving grace for the majority of undergraduates". Availability studies that include analyses of the unavailability of high-demand items, can highlight the problems of the "informal borrowing", theft, or mutilation of material that results when large numbers of students require a single copy simultaneously (Clarke, 1994:21). Such studies can also reveal other access barriers to high-demand materials, such as inadequate communication between students, librarians, and teaching staff concerning essential reading materials, and the students' poor information retrieval skills.

At the University of Cape Town (UCT), recent investigations into the performance evaluation of the Linear Library's various activities (Research Surveys 1994; De Jager 1995) suggest that availability studies be undertaken in the main library to determine materials availability rates for popular items. Research Surveys (1994) conducted quantitative and qualitative surveys amongst small samples of students, staff and researchers who used the library and noted the high use of the Short Loan Centre (SLC) amongst undergraduate students, and the perturbing

problem of the non-availability of texts for study purposes. De Jager (1991; 1992; 1994) noted that there were frequent complaints about insufficient material and inadequate duplication of high-demand materials.

In a recent thesis investigating the potential use of performance indicators in the Linear Library at UCT, De Jager (1995:244) proposes that "an availability investigation be launched to establish the percentage availability of undergraduate reading materials in various subject fields". She suggests compiling a representative sample of bibliographic references from the recommended reading lists issued to students for various courses, to investigate the extent to which short loan materials are available. These suggestions merit further consideration and are pursued in this availability study of high-demand materials in an academic library. A case study, based on the SLC of the Linear Library at UCT, while focusing on local circumstances, will nevertheless reveal common problems associated with the availability of high-demand materials in a university library and will present comparable methods of investigation for future studies.

## **1.2 Problem statement**

The Linear SLC accounted for 54.5% of the total number of items issued in the Linear Library in 1992; for 48.46% of the total Linear Library material circulated in 1994; and for 42% in 1995 (cf. 4.4.1; Baker, 1996:4). This endorses the findings of other studies that the SLC should be recognised as the main medium through which many undergraduate students access prescribed texts, and it should be strengthened as a source for heavily-used materials (Research Surveys, 1994:14; De Jager, 1995:191).

Allardice (1987) and Cuthbertson (1992) have highlighted the role of the university library in South Africa in providing educational support for undergraduate students, particularly disadvantaged students with little or no previous library experience. The SLC should regularly be evaluated to ensure that it is addressing the most urgent needs of these undergraduate students in terms of stock, availability and service. There is concern that over-use of the SLC is tantamount to spoonfeeding and a disservice to the students who could benefit from broader, more comprehensive library and research exposure, especially with the recent emphasis on resource-based learning (De Jager, 1995:38). A possible solution to this problem would be to expand subject availability outside the SLC, and to develop greater information literacy skills (cf. 5.3.1) amongst the students. The reasons for the declining trend in the use of the SLC, evident in the circulation statistics over the past few years, need to be investigated with the materials availability rates.

Under-use of the reserve or short loan collection may indicate that the material is no longer relevant and should be weeded, or that the students lack the knowledge and skills required to make full use of the service. An important aspect of collection management is to ensure that the library operations make the collections as accessible as possible for the users. Availability studies are potentially useful and enlightening for collection management purposes if the factors that impede access to the required items are revealed. Remedial action such as weeding of the collection, and the implementation of continuous user education programmes, will help to restore the relevancy of the core collection, and will promote the use of the information resources.

### **1.3 Research questions and study objectives**

This availability study in the SLC of the Linear Library at UCT will attempt to address the following research questions and study objectives that emerged as a result of discussions with the SLC librarians and a perusal of the plethora of reading matter on the subject.

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

- Which departments make the most use of the SLC and are there different needs concerning the use of the SLC according to faculty?
- How do materials availability rates across different subjects compare?
- What are the reasons for the non-availability of materials in the SLC?
- To what extent does availability rate fluctuate during typical and busy periods?
- How can the need for duplication or weeding of library materials be predicted?
- What is the effect of different loan periods on the availability of materials?
- What can be done to improve availability rates in the SLC?

## 1.4 Structure of the dissertation

The methodology chosen for conducting this availability study, takes cognisance of the research questions previously posed (cf. 1.3), and the most practical methods of investigation expounded in the literature survey. To overcome the shortcomings of any single research methodology, a multi-method approach provides more comprehensive results. The research methodology entails a case study that incorporates quantitative and qualitative methods in an attempt to construct a "rich picture" of materials availability in the SLC at UCT.

**Chapter 1** provides the situation analysis for the study and sets out the aims and objectives of the investigation into the availability rates of the SLC. **Chapter 2** comprises a literature review of the rationale for library evaluation and an extensive survey of specific availability studies within the parameters of library performance and evaluation. A "key methodological decision [for an availability study] is the source of the items to be tested" (Van House, Weil & McClure, 1990:61) and the research method most germane to the local circumstances. These issues are discussed more fully in the literature review in **Chapter 2** and in the relevant quantitative and qualitative investigations in **Chapters 4** and **5**. **Chapter 3** relates the results of a survey of faculties for background information concerning individual departments' use of the SLC; the teaching methods applied; and the prescribed reading for coursework requirements.

**Chapter 4** presents the quantitative simulation study into the availability of high-demand, undergraduate materials, during typical times of the first semester 1996. The quantitative simulation study was conducted along the lines suggested by Lancaster (1993:135-138) and De Jager (1995:244), by using as a checklist, a random selection of items from the

reading lists of the departments that use the SLC. Kantor's branching diagram was used to determine the reasons for non-availability, for diagnostic purposes. Subjective variations in user behaviour proved to be minimal, as the investigator conducted the study and followed up on the items not immediately available.

**Chapter 5** outlines the mostly qualitative user survey (using questionnaires and interviews) that was administered amongst a random sample of users of the SLC to determine the extent of user satisfaction or frustration in acquiring prescribed texts. The need for continuous user education programmes is enumerated in the context of recent initiatives into information literacy training. **Chapter 6** summarises the main findings, conclusions, and recommendations of the various investigations.

The aim of this study is essentially to produce valid, accurate data of the availability rates of high-demand items in the UCT main library to highlight the strengths and weaknesses of the system, and to form the basis of replicable performance indicators for continued assessment at regular intervals. It is the researcher's contention that there are many "hidden" factors that determine availability rates, and that these factors need to be addressed when assessing the performance of the service. The communication between the students, teaching staff and library staff, is of fundamental importance to the effectiveness of SLC, as will be seen in the subsequent chapters.

In keeping with the guidelines suggested by the Joint Fundings' Ad-hoc Group on Performance Indicators (1995) for academic libraries, the empirical research was conducted in such a way as to be as non-intrusive, economical, simple, and context-sensitive as possible. Every attempt was made to consider the proposed research questions when

analysing and interpreting the findings within the current and future concepts of the SLC.

## **1.5 The Short Loan Centre at the University of Cape Town**

### **1.5.1 Context and operational procedures**

The library system at the UCT consists of the central Linear Library and a number of branch libraries, departmental libraries, and special collections. The Linear Library hosts the Jagger SLC, predominately used by undergraduate students. The primary mission of the SLC is to provide high-demand materials to undergraduate students for short loan periods. This study collection consists of those items that are in heavy demand for assignments, tutorials, and examination purposes in the faculties of the Arts, Social Science and the Humanities, and Commerce.

The materials housed in the SLC circulate according to limited loan periods, usually for a couple of hours, overnight or weekends to maximise student access to these core items. Most items may be borrowed on a 3-hourly basis throughout the day but may not be removed from the library. Material that is in particularly heavy demand may have a restricted loan period of 1-hour. Overnight issues are made from 15h00 onwards and may then be removed from the library. Overnight loans are due back the following morning, except for Friday afternoon issues, when books may be kept until Monday morning. For overdue items borrowed from the SLC, fines are charged at the rate of 50c per hour or part thereof for each item up to a maximum of R25,00 (University of Cape Town, 1996:50).

Certain monographs are available for a 3-day loan period. The SLC does not house these books, although they are processed in the SLC.

These books are kept on the open stacks in the main Linear Library and are issued there. The SLC staff have little control over the 3-day loan items and the availability of these materials may well be influenced due to their location (cf. 3.4.2.1). Serious students are able to access these materials for a longer period that is more conducive to critical reading and research, and thus the 3-day materials are more available to them than they would be if restricted to 1- or 3-hour loan periods in the SLC. However, some students complain that the 3-day loan materials are less available because they are more difficult to access physically, and because they can more easily be illegally removed from the open shelves or hidden in the Linear Library (cf. 5.4).

SLC items may be reserved for specific times or for overnight use, but reservations fall away one hour after the reservation time. The opening hours of the SLC are the same as the rest of the main library: from 08h30 to 22h00 from Monday to Thursday; from 08h30 to 18h00 on Fridays; and from 08h00 to 12h30 on Saturdays. Monographs, journals and photocopies are kept in an open access area in the SLC facility where users may select what they need from the shelves. The shelf arrangement is such that books and journals on the same subject are shelved together according to class number, but in separate sequences according to format. Photocopies (mostly of journal articles) are stored alphabetically by author, in the filing cabinets. Videos are kept in closed access behind the loan desk as they pose a security problem. It is the policy of the Library not to provide prescribed textbooks that the students are expected to purchase themselves. Lecturers often provide their own personal copies of textbooks for SLC use by students because of the expense involved in buying them. These copies, together with some other 1-hour items, are kept behind the loan desk.

Online Public Access Catalogues (OPACs) are available in the SLC and at the Linear Reference desks for searching purposes. The UCT libraries use the BookPlus automated library system and BORIS (*BOR*rower's *I*nformation *S*ystem) is the online catalogue that enables users to search by title, author, author/title keyword, subject, keywords, or series. BORIS provides users with onscreen information with regard to the availability and accessibility of sought items. The status of the items that the library owns is provided (for example: on loan, reserved, awaiting cataloguing, missing, or on order), and the exact location is given (shelf number, specific library). In addition, the number of copies for specific titles is also recorded. The menu screens are self-explanatory and have built-in facilities for more sophisticated Boolean searching.

In order to derive the most benefits from the SLC, students are advised to do their recommended reading consistently in order to avoid the last minute rush; to bring their reading lists with them when searching for SLC items so that they have the correct citations; and to refer to the OPACs to save time when looking for the desired items (UCT Libraries, 1993).

The SLC provides guidelines for the teaching staff as to the requesting and processing requirements for materials to be placed on short loan. Regarding duplication, a ratio of one copy per twenty students is targeted, for the most essential material. However, economic constraints limit the total number of copies that can be made available and often the ratio is considerably higher. Requests for material to be placed on Short Loan for fewer than ten students are not accepted. SLC titles are not automatically returned to the open shelves at the end of each semester. Printouts and usage statistics are sent to the lecturers in November of each year, indicating the usage of each item requested by the lecturers. The printouts are supposed to be returned to the SLC, updated for the

following year, with the designated period and expected number of students enrolled for the course stipulated. An independent study conducted by Coopers and Lybrand (1996:2), suggests that this activity is “non-value adding” and that it should be substantially reduced in cost-saving measures for the library.

The SLC staff stress the necessity of being informed by the lecturers in plenty of time concerning required reading, as this is essential for the effective functioning of the system. Sometimes titles need to be recalled, photocopies need to be made, and the administrative procedures may in themselves cause delays in the final availability of the items. Deadlines are given as to the notice required to ensure that high-demand items are available to the students when sought. Up to two weeks is required for items in UCT libraries that may have to be recalled or processed; up to six months for items that may have to be obtained overseas because they are not held locally or because there are insufficient copies available locally. Private copies and seminar papers can usually be processed at short notice. A “seminar file” can be opened for specific courses and added to at regular intervals as needed. Under provisions of the Copyright Licensing Agency’s (CLA) scheme (cf. 1.6.1), articles are photocopied with the permitted number of copies made, collated, barcoded, incorporated into the database, and inserted in folders in the filing cabinets in the SLC. The procedures are repeated for each one of the copies requested and placed in the SLC.

An average of 3500 new requests for material to be placed on SL is received annually, while an average of 4000 updated requests for material to remain on SL, and 2200 requests for items to be weeded, are received annually. Decisions are made by the library staff on the basis of the returned and completed printouts sent to about 700 lecturers who use the SLC facilities. The circulation of SLC material averages 210 000 per

annum. The substantial administrative and processing costs in the SLC include the photocopying, barcoding and creation of bibliographic records for photocopies, the recall and transferring of materials from the main library and other branch libraries, the processing of journals and videos, plus the issuing of overdue notices and fines, weeding of obsolete material and the reparation of damaged photocopies (Baker, 1995).

### **1.5.2 Future scenarios for the SLC**

Recent research (Research Surveys, 1994; De Jager, 1995) into the UCT SLC system has highlighted the security problems of theft, deliberate misshelving, and mutilation of materials, encountered with the present open shelf concept, as well as the lack of study facilities such as insufficient OPAC terminals, no seating and poor lighting. Alternative concepts for the SLC of the future that will set the precedent for the SLCs of the branch libraries, are being considered by the UCT Libraries' Strategic Planning Committee for recommendation to the Senate Library Committee on improved services in the Linear Library. The SLC staff have identified the following three alternative directions for the system of the future: a closed access SLC, an undergraduate centre with a reserve section, or an electronic reserve system, based on a networking concept.

#### **1.5.2.1 Closed access**

The closed access SLC concept implies that materials would be used in the centre during the day and would only be used outside the centre when issued for overnight use. The SLC will need redesigning to provide more space for photocopiers, seating facilities and additional BORIS terminals, and to upgrade the general condition of the centre

including the lighting, layout and storage arrangements. The concept of a closed access system has not received much support from the users according to Research Surveys (1994).

### **1.5.2.2 Undergraduate Centre**

In line with the trend of establishing an undergraduate centre in large academic libraries, either separately or within the main library (cf. 1.6.2), a proposal was put to the Library Committee concerning the transformation of the SLC into an undergraduate centre with a reserve section, by the SLC librarian in 1995. This concept has vast financial, staffing, and information technology implications, but it will specifically address the needs of undergraduate students and provide basic information literacy training, leaving more advanced training to the Reference Section of the main library. The SLC staff envisage the undergraduate centre as having the capacity for video viewing facilities, personal computers and printers, and a large study area. These proposals are endorsed in the library's strategic planning exercise for organisational change (University of Cape Town Planning Unit, 1996:3).

### **1.5.2.3 Networking**

The concept of moving towards an electronic reserve system by networking components of the SLC through the campus local area network (LAN) is receiving attention for implementation on a trial basis (*Brief for building sub-committee*, 1996: Doc 11). Networking of Short Loan entails scanning the current photocopy collection, and exam papers, into a database, through OCR (optical character recognition). The database would have a fileserver, to support the amount of text and images scanned. Adobe Acrobat would convert the data, using PDF protocol, to 'print' the documents as a file that could be accessed on the

World Wide Web (Baker, 1996:1). Electronic reserve systems have been successfully implemented elsewhere in the world (see Butler, 1996; Goodram, 1996), but the financial, staffing, space and IT implications are considerable. The scanning of photocopies through optical character recognition (OCR) into an electronic database that could eventually be accessed remotely would solve many of the storage problems in the SLC and would enable simultaneous multiple access to individual titles. However, it is not feasible to scan the monograph collection and thus only half of the SLC can be networked. As noted in 5.3.3, the monograph collection in the SLC renders the most serious availability problems. Security, copyright, and materials availability issues still need to be addressed, and the current campus network needs to be upgraded to support an electronic Short Loan. Additional funding is required to convert hard copies onto the network, to provide sufficient personal computers and printers for users, and to support the demand for ongoing user training and staff maintenance of the electronic SL system.

Many of the common problems that affect the availability of study materials in academic libraries are apparent in the literature on library evaluation. Research into the reasons for the non-availability of items provides insight for improving library services.

## 1.6 Glossary of terms used and review of related concepts

### 1.6.1 Glossary of terms used

**Academic and faculty status:** a member of the lecturing or teaching staff of the university. The British and South African terms such as undergraduate, postgraduate, and academic are preferred to the American equivalents of freshman, graduate, and faculty. American terms are left in their original forms in the quotations cited. In this study, “faculty” is used to denote the discipline of study, such as the Arts Faculty, the Science Faculty, the Social Science and the Humanities Faculty, and the Commerce Faculty.

**Accessibility of materials:** the extent to which an item that is not immediately found can be traced and made available.

**Availability of materials:** a measure of the extent to which the needs of users for specific documents are promptly satisfied. The library must have acquired the item and processed it, and the user must be able to find it at the location reflected on the catalogue record.

**Circulation interference:** the extent to which required items are not available because they are on loan. Buckland (1975) measured circulation interference when he compared the effects of variable loan periods and duplication of copies on the availability of popular items. Circulation interference is expected to account for a significant amount of non-availability in a short loan collection.

**Copyright Act provisions:** The Copyright Act, No.98 of 1978, and various amendments including the Copyright Amendment Act, No. 61 of 1989, govern copyright in South Africa. The UCT libraries use the interpretation of these Acts as guidelines for the use and reproduction of materials for teaching, research and study purposes. With regard to reserve and short loan collections, copyright permission is necessary for the making of multiple copies of articles or sections of monographs that are still in print and available for sale in bookshops. Single photocopies of a “reasonable portion” ( 10% or one chapter, whichever is less), of a literary work may be made for a user only if it is for private study or research. Copeling (1978) and Musiker (1987) can be consulted for a fuller description of the copyright regulations and for the implications for lecturers and librarians.

**Copyright Clearing Centre:** In response to the increasing demand for textbooks and course readers that are tailored for a specific course, many academic institutions are co-operating with publishers for copyright permission so that materials from various sources can be collated into customised texts. It is envisaged that the digitisation and networking of customised course readers will provide current, on-demand publishing that “could be a solution for hard-up and (full-up) university resource centres and libraries, where emphasis is shifting from holdings to access” (Marcus & Raven, 1996:34). Already in the USA and in the UK, software technology is being developed to forward royalties directly to the publisher and to charge students automatically for printing and copyright fees.

It is envisaged that copyright issues will be addressed at UCT and other Western Cape tertiary institutions through the newly established Copyright Clearing Centre under the auspices of CALICO (cf. **Appendix A.2**). The primary task of the Publishing Liaison Officer will be to create an awareness among academics of the necessity for obtaining copyright permission from the relevant publishers, before producing course readers or photocopying materials in excess of the quantities permitted by the copyright regulations (Van der Merwe, personal communication, November 1996). The inevitable time delays and costs incurred by the administrative processes is bound to cause dissatisfaction among those lecturers who wish to produce course readers at short notice. At first, legal agreements will be negotiated with regard to print-based sources, but eventually copyright laws will have to be drawn up for the governance of electronic texts.

**Document:** any item or source of recorded information regardless of format or medium

**Document delivery:** all library activities, including collection development, catalogue and shelf integrity, and interlibrary lending, involved in providing the user with recorded information. Ultimately, a library's document delivery capability is the sum total of "all the elements that constitute the generic concepts document availability and document accessibility" (Steynberg, 1989:373).

**Document Delivery Test (DDT):** "The Document Delivery Test (DDT) combines both availability and accessibility into one numerical index number by measuring both the *adequacy* of the collection and the *speed* with which the library can meet patrons demands, either from its own stock or from interlibrary loan" (Hall, 1985:39). The DDT consists of a citation pool (list of bibliographic items which is used to test whether a

library owns an item and can locate it) and a score sheet, or checklist, for recording the status or whereabouts of the item.

**Document delivery time:** Van House, *et al.* (1987) defined document delivery time as the number of calendar days required to obtain all materials not immediately available to patrons, whether materials are obtained through purchase, interlibrary loan, or a reserve system. Another aspect of document delivery, is the evaluation of the effectiveness of recall systems.

**High-demand materials:** those items, documents or sources of information that are considered to be essential reading for undergraduate coursework, tutorials or assignments, and that are likely to be heavily used by a large number of students competing for the limited number of copies over a short time period. In this study, the high-demand materials comprised monographs and photocopies of journal articles, class notes and coursework readings.

**Library management:** the university librarian, deputy university librarian(s), and senior library staff members responsible for the functioning of the university library system.

**Online catalogue use:** “The [automated] catalogue is the main tool enabling the user to ascertain whether a required item is held in the library and if so where, and, increasingly, whether it is available for use or not. Its other function is to enable the user to determine what material the library holds on a particular subject. The introduction of OPACs in recent years has offered users a more effective and sophisticated means of searching the catalogue ... Subject access is much easier, with many systems providing options to search by subject keywords or using Boolean logic” (Workman, 1991:152).

**Undergraduate:** a registered student working towards a bachelor's degree.

**Writing Centre; writing laboratories/rooms:** The Writing Centre, at UCT, is housed in the Leslie Social Sciences Building and offers consultations to individual students or small groups of students concerning all aspects of academic writing such as reports, essays, tutorial assignments, research proposals, and theses. Some departments, such as English (cf. 3.4.2.1), aim to develop students' writing skills through the use of writing laboratories within the department. The department of Chemistry (cf. 3.4.2.2) requires students to attend writing workshops, planned in conjunction with the Writing Centre, in the departmental laboratories.

### 1.6.2 Review of related concepts

#### **The undergraduate library**

From the late 1940s to the mid 1970s numerous undergraduate libraries were established as separate entities to serve the needs of undergraduates. These libraries provided open access to core collections; facilities such as study halls, social centres, reserve collections, browsing collections; and special services to undergraduates, including bibliographic instruction, audio-visual, and reference services. More recently, fiscal policies and the affects of technological change on undergraduate education, have resulted in a reassessment of the concept of the decentralisation of library collections in favour of the "centralisation of capital and the decentralisation of intellectual work" (Engle, 1995:368).

The idea of a separate undergraduate library has gained less acceptance in the UK context than in the USA. There is a universal feeling that undergraduates should be exposed to and have access to the full range of library resources, even if they only need a limited number of basic texts for their coursework. The general consensus is that undergraduates will benefit from separate facilities housed within the main library rather than accommodated in an individual building. A very large research-oriented library collection may be overwhelming and confusing for the average undergraduate, but he/she can be introduced to the larger collection through a core undergraduate collection where valuable skills can be learnt within a hands-on learning environment with assistance from the library staff who are attuned to the needs of undergraduate students. (Workman, 1991:154). User education extends beyond awareness of the services offered by the library and the short loan collection staff are in the ideal situation for teaching information literacy skills to undergraduates because most of these students encounter their first real library experiences in the SLC.

Some undergraduate libraries have continued to exist as independent units, but have integrated new technologies into their collections and services, others have merged with central libraries while still offering special services to undergraduates. The primary concern is that undergraduates should be well served in whatever library system they use and that services should be designed to accommodate their learning needs while offering bibliographic instruction in electronic resources. The trend is towards digitising and networking services such as reserve collections, which undergraduates use heavily. Intellectual access to required materials will be hampered unless the students are familiar with the OPACs and searching strategies that provide the gateway to the collections. "Computers have become so central to undergraduate education that access to them has become a major issue. Providing

access to networked computers is a significant new service in undergraduate libraries in the 1990s” (Engle, 1995:383).

## **Chapter 2: Literature review on library evaluation and availability studies**

### **2.1 Sources used**

Useful literature on the subject of availability studies within the context of library evaluation, was identified through manual and online searches of appropriate databases such as LISA (Library and Information Science Literature), and Library Literature. New journals and review journals such as *Advances in Librarianship* and *Annual Review of Library and Information Science* were scanned, and references in topical articles were followed up. Several texts on research methodology in the field of librarianship were helpful (Busha & Harter, 1980; Hemon & Bryant, 1989; Powell, 1993; Simpson, 1990; Slater, 1990; Stephen & Hornby, 1995).

### **2.2 The rationale for library evaluation**

In the context of increasing student numbers, budgetary constraints, and shrinking resources, it is essential that academic libraries demonstrate their commitment and accountability towards their various stakeholders by providing an efficient and cost-effective service timeously. The evaluation of library services has the potential to serve as a "benchmark" for measuring and comparing various levels of service over a determined period. This could result in a more equitable allocation of resources to maximise the benefits of the library services to the various stakeholders, such as the students, academic staff, and researchers in an academic library. "The objective of the services offered by a library can ultimately be reduced to making required documents available to its user community. It is therefore logical to assess the availability of such

documents. Such a process infers the identification of required documents, the measurement of the availability thereof, as well as the assessment of user satisfaction or dissatisfaction with the capability of the system" (Steynberg, 1991:35).

However, availability studies are labour-intensive, time-consuming and often costly. Their potential usefulness has been questioned (D'Elia, 1985; Revill, 1987; Childers, 1989) regarding variables such as user proficiency factors. Furthermore the results of availability studies may be misleading, for example a high availability rate may indicate an under-utilised collection rather than an effective library service (De Jager, 1995:59). High circulation, and subsequent low availability, should not necessarily be seen as an indicator of failure, as it could imply a well-utilised library. High circulation activity is not problematic if the materials can be recalled swiftly and efficiently and if items can be reserved through the automated system. Duplicate copies may need to be acquired if there is a backlog of reserves and if the materials are frequently in urgent demand.

The necessity for performance evaluation in academic libraries has received much attention in recent times. In the United States of America, practical manuals such as the one produced by Van House, Weil and McClure (1990) have been used extensively at service-unit level. In the United Kingdom, various committees have published reports on the subject of performance indicators, one of the most recent being *The effective academic library* (1995), a consultative report from the Joint Fundings' ad-hoc group on Performance Indicators for libraries. This report proposes a framework for evaluating the performance of academic libraries in the UK and for identifying overall library effectiveness. It sets out the principles for constructing and applying library performance indicators in higher education institutions.

Many of the proposed indicators have been subjected to field testing before being formally implemented, and include quantitative measures based on statistics and transaction data and qualitative measures based on user surveys.

The above-mentioned report stipulates that performance indicators should be flexible, robust, reliable, and simple, to reflect diverse institutional missions and objectives. They should be non-intrusive, locally extracted and incorporated into existing systems wherever possible to keep overheads to a minimum. Performance indicators should be context-sensitive, clearly defined and provide incentives for service improvement according to the particular research or teaching emphasis of the institution (Joint Funding Councils' Ad-hoc Group, 1995:6-7). Academic libraries in South Africa can benefit from a similar approach to performance measurement by implementing appropriate performance indicators. The Joint Funding Councils' Ad-Hoc Group endorses the Van House Manual (cf. Van House, Weil and McClure, 1990) as one of two documents which contain suitable instruments for conducting user satisfaction surveys and materials availability studies, the other pertinent document, being the IFLA Manual on Performance Indicators for Academic Libraries, to be issued soon.

The subject of library evaluation is reviewed by authors such as Goodall (1988) and Revill (1990), and critically discussed in monographs by authors such as Baker and Lancaster (1991), and Lancaster (1993). The discussion that follows will focus on the evaluation of library services for collection management purposes, through the implementation of performance indicators for assessing library effectiveness.

### 2.2.1 Performance indicators for collection management

Collection management involves the development and implementation of library policies to ensure that the internal operations and services are meeting the various users' needs for document availability and delivery. The influence of the user on collection management is implicit in the selection of materials for the collection; in maximising the availability of the selected materials; and in assisting the user to fully utilise the collection. Access barriers may be curtailed if the user's needs and expectations are incorporated into the initial decision-making process. Winkworth (1991) provides a framework for selecting suitable performance indicators for collection management, which he says is "about balancing additions and withdrawals, and about the storage, display and accessibility of collections" (Winkworth, 1991:58). The term "performance indicator" is used in preference to "performance measure", which cannot give a meaningful expression of library performance on its own. A "performance indicator" shows the relationship between performance measures expressed as a ratio, whereas a "performance measure" is merely a quantitative count of some library activity (*Keys to success...*, 1990:4; Winkworth, 1990a:30).

Studies such as those of Kent, *et al.* (1979) have shown that collection size and variety do not necessarily make required items more available or accessible to the users if their specific needs are ignored. In an age of accountability and stringent fiscal policies, the collection management of academic libraries should be more closely associated with the "current, specific purposes of the institution served" and less concerned with expansion of stock that will be relatively unused and have high administrative costs. Peasgood (1986) and Britten and Webster (1992) agree that the current demands of the users are important criteria for achieving collection relevancy (cf. 5.1). The objectives of collection

management should be clear, relevant, and measurable, and should be constructed in terms that permit performance measurement against targets. Thus a library primarily concerned with document availability, may aim at a 60% immediate materials availability rate, 90% availability within a week, and 99% availability within a month in the most cost-effective manner (Winkworth, 1991:58-63). Winkworth (1991:90-91) suggests that performance indicators for collection management are defined as assessing the relevance of the objectives to the needs of the stakeholders; document delivery; effectiveness of the services; economy; and cost-efficiency with resources, staff and services.

### **2.2.2 Availability and library effectiveness**

Van House, Weil and McClure (1990:4) describe evaluation as a "cyclical, goal-based process" which is dependent on the definition of effectiveness, the established goals of the institution which set the standards against which performance is compared, and the criteria or broad indicators of effectiveness which are made concrete in such measures as materials use and materials availability. McDonald and Micikas (1994:99-105) contend that the measurement of effectiveness must involve all aspects of an organisation's activity, including outcomes or benefits. Thus materials availability is a measure of only one dimension of the adequacy of a library collection.

McDonald and Micikas (1994:47;99-105) are concerned with academic library effectiveness based on the principles of organisational effectiveness, which is both multivariate and multidimensional. They contend that effectiveness is a subjective, mental construct that must be assessed from someone's perspective and can only be meaningful with certain values or outcomes. They acknowledge the benefits of using a practical instrument, such as the manual by Van House, Weil and

McClure (1990), for the measurement of library performance, but caution that a goal-model of effectiveness may not be appropriate for assessing overall library effectiveness in all circumstances. The goal-model is acceptable in organisations that exhibit consensus towards clear, measurable, time-bound goals. Prescribed definitions of what constitutes effectiveness may be in conflict with other organisational goals. McDonald and Micikas (1994:101) focus on the overall organisational effectiveness of an academic library - the level of analysis is explicitly identified as the whole organisation. In contrast, Van House, Weil and McClure (1990) use service-level unit as their level of analysis. Service-unit analysis can provide important information about the performance of individual units within the library, but cannot give a complete picture of the overall organisational effectiveness. For this purpose it would be necessary to measure the interactions between variables.

Cullen and Calvert (1995) identified key performance indicators in New Zealand university libraries based on the multiple constituencies (stakeholders) model to assess library organisational effectiveness. Their study builds on the work of Childers and Van House (1989), and McDonald and Micikas (1994) into the dimensions of library effectiveness, and takes cognisance of the criteria of appropriateness, informativeness, validity, and practicality, suggested by Orr (1973). Of the 99 indicators of library effectiveness derived from the literature and used in the questionnaire administered in this study, the stakeholder group comprising undergraduate students ranked indicators related to the availability and accessibility of materials in their top twenty indicators. Their first priority was the provision of multiple copies of items in high demand. Other highly ranked indicators included opening times that matched user needs, updated computer catalogues, the speed and accuracy of re-shelving of material, speed of recall of requested items out on loan, protection against theft and mutilation of materials,

document delivery capability, and access to short loan facilities. In comparison with the other stakeholder groups, the undergraduates placed more emphasis on their immediate study needs (which included access to high-demand materials, study facilities, and the adequate provision of photocopiers), but recognised the need for a broad approach to library effectiveness (Cullen & Calvert, 1995:444).

### 2.2.3 User satisfaction and library effectiveness

Numerous studies (e.g. Blagden, 1988:126; Winkworth, 1991:74; Harris, 1991:3; Baker & Lancaster, 1991:19; Chaudhry & Ashoor, 1994:300) have posited the view that user satisfaction is a potentially useful indicator of library effectiveness. Although expressed user satisfaction is affected by such variables as previous experience, information skills and user expectations, Dalton (1992) showed that it is "both desirable and possible to quantify a qualitative construct such as user satisfaction", but that such subjective measures should be used in combination with more objective output measures to create a holistic picture of library performance. A user-centred perspective is important in an academic library, but it is equally important to consider the central task of the library in meeting the educational purposes of its institution.

According to the *UCT Libraries orientation manual* (1985), the basic goal of the University of Cape Town library system is "the effective development of library and information services to all sections of the University community to promote the educational, research and service programmes of the University". Recent investigations into the extent of the research and teaching support offered by the university library, have indicated that research activities tend to enjoy more prominence than teaching-related ones, although the library is used primarily for studying and learning purposes (De Jager, 1995:234). In the Report of the

Academic Review Committee on Undergraduate Education at UCT (1990:13) there is concern that particularly undergraduate education should not be compromised and that high priority should be given to the development of library facilities and access to educational resources for undergraduate students. The report of the Joint Funding Councils' Libraries Review Group (Follett Report, 1993:41-42) emphasises the importance of developing short loan collections to deal with increased pressures on library materials that are of central importance to undergraduates.

As noted earlier (cf. 1.1-1.2), the Linear Library Short Loan Collection (SLC) is heavily used by undergraduate students in the faculties of Arts, Commerce, Engineering, Science and Social Science and Humanities. These students have to compete for a relatively small number of high-use items that are frequently unavailable when required. A diagnostic availability study can illuminate the factors preventing students from gaining access to the materials they require for their studies.

Past availability studies have relied on titles that the users were actually looking for (Zweizig & Rodger, 1982; Kantor, 1984; Van House, *et al.*, 1987; Van House, Weil & McClure, 1990); shelflists, abstracts, indexes, and bibliographies (De Prospero, Altman & Beasley, 1973); items cited in users' publications (Orr, *et al.*, 1968); and checklists generated by subject experts. The major disadvantage of using checklists, or items selected from catalogues and bibliographies is that they may not be an accurate reflection of the real needs of the users and thus are of doubtful validity. The advantage of using such sources is that it is more convenient for the library and its users. A simulation of probable requests based on the titles appearing on recommended reading lists will be less obtrusive and may produce a reliable and valid measure of the percentage of materials availability across subjects. However, a

simulation study will not indicate the number of requests for a single title. The issues involved in conducting availability studies in academic libraries are evident in the survey of pertinent literature in 2.3.

## **2.3 Literature review on availability studies**

### **2.3.1 Introduction**

The seminal work of Buckland (1975) at the University of Lancaster library in the 1970s highlighted the complex relationship between availability and variable loan period and revealed increased availability and usage of high-demand materials when loan periods were substantially reduced. Buckland (1975) recorded four inverted relationships between user satisfaction, the popularity of items, loan period, and the number of copies available:-

- a. For any given loan period, the greater the popularity of the item, the lower the satisfaction level.
- b. For any given popularity, the shorter the loan period, the higher the satisfaction level.
- c. For any given satisfaction level, the greater the popularity, the shorter the loan period.
- d. By increasing the number of copies available one can increase the satisfaction level.

“In other words, the loan period, the duplication policy, or both should be related to the level of demand for the title” (Baker & Lancaster, 1991:163). Loan and duplication policies need to be reviewed in the context of user needs and library goals and objectives. A short loan policy with duplicate copies is recommended for heavily-used items, but at the expense of purchasing additional titles. Using data derived from a reserve collection, Buckland developed a quantitative analysis of the

relationships between the loan period and the duplication policy. "The results illustrate an important aspect of duplication: that the marginal benefit of adding an extra copy falls off steadily as the level of immediate availability rises. Conversely, as the level of immediate availability rises, so the cost of achieving an extra 5% immediate availability also rises. Doubling the number of copies will not double the probability that a copy will be available when sought" (Buckland, 1975:138). Possible alternatives to duplicating copies and reducing loan periods would be more efficient procedures to reserve material and to recall items in circulation when needed by other users.

Buckland (1975:136) states that his monograph on book availability and the library user "represents a deliberate shift towards relating standards of book availability to the needs and behaviour of library users by examining the effects of activities that are critical in this relationship: Acquisitions, discarding [weeding], binding, lending and duplication. Since a large amount of the demand for books tends to be concentrated on a small proportion of a library's stock, this emphasis is evidenced in the attention given to the management of titles that are in relatively high demand".

The factors influencing availability and access become more significant when one considers the individual parts of the library system in terms of the consolidated whole, as suggested by Buckland (1975). Internal consistency, between various library policies such as acquisitions, binding, Interlibrary lending (ILL), and duplication and weeding, can be greatly improved by relating their activities to one another through a measure of service such as book availability. Book availability as a measure of a library's capability to meet users' demands, hence to measure one important aspect of library effectiveness can result in answers to questions such as the number of titles and copies required,

selection and weeding criteria, loan policies, and processing procedures, to minimise the barriers to availability for the users. “Whatever the future may bring in terms of better and more cost-effective provision of library materials, it is difficult to envisage much progress without an understanding of the factors affecting book availability in relation to the library user” (Buckland, 1975:143).

In the last couple of decades, Kantor's branching diagram has frequently been used to evaluate materials availability in academic libraries and many studies (e.g. Mansbridge, 1986) have shown that the average availability rate of library resources is approximately 60%. The reasons for non-availability can be categorised and sub-categorised, depending on the purpose of the investigation. The primary categories, endorsed by the Association of Research Libraries (ARL) comprise: non-acquisition, user (catalogue) error, in circulation, library error (missing or misplaced items), and user error. Other sub-categories include materials at the bindery, items housed elsewhere, reserve items, and overdue items (Mansbridge, 1986:302-305). It is thus possible to measure availability rate in a certain category or by a range of other criteria such as user status, academic department, and length of loan period, and the chi-square test can be used to compare and correlate availability rates with various criteria.

Recent developments in the United Kingdom, in the field of performance indicators for effective academic libraries, have mandated the introduction of availability studies on a regular basis (Follett Report, 1993:81). The Joint Funding Councils' Ad-Hoc Group on Performance Indicators (1995:5) recommends that overall library effectiveness be assessed with 5 performance indicators, namely integration, quality of service, delivery, efficiency and economy. The delivery aspect deals

with service outputs and incorporates the "effectiveness" area (which covers availability of materials) in the Follett Report.

Most of the availability studies recorded, have been conducted in the United States and the United Kingdom. Few attempts have been made to determine the availability rate of materials in the developing world (Chaudhry & Ashoor, 1994). The few studies conducted in the developing world recorded availability rates around 40-50%, well below those recorded in first world studies. In Pakistan, an availability rate of 41.3% was recorded at the Punjab University Main Library (Rehman & Bashir, 1993), and in South Africa, an availability rate of 50.42 % was determined at the University of Zululand (Zondi, 1996). However, the availability rates recorded at the University of South Africa (Willemse, 1989) and at the University of Cape Town (see **Chapters 4 and 5**) are high, in the region of 80%. The discrepancies in availability rates across academic libraries suggests that there are context-specific factors, such as collection adequacy, the extent of library usage, and the level of information literacy (cf. **5.3.2**), that may influence local materials availability rates. These contributing factors are explored further in **Chapters 3 to 5**.

D'Elia (1985; 1988), however cautions against the indiscriminate use of materials availability fill rates as a valid and reliable measure of library performance, particularly across libraries. There is a substantial risk that random error and uncontrolled variation in user behaviour will taint such studies, rendering the results useless. D'Elia views such studies as measuring patron success rather than measuring library effectiveness. On the other hand, Willemse (1989:264) regards the development of availability measures as "indication of user satisfaction" as being "particularly important" because the major goal of any library is the provision of documented knowledge to its users. In documenting the

methodology of the availability surveys conducted at UNISA, Willemse (1989:266) acknowledges that although it is not a perfect performance measure, it is continuously being refined.

### 2.3.2 Reviews of Availability studies

Mansbridge (1986) examined and compared over 40 availability studies over a period of 50 years. His study revealed that the median sample size was 437 items (either monographs, serials, or both), that the average availability rate was 61%, and that there had been little progress in the methodologies used until De Prospero's 'probabilities of availability' and Kantor's 'branching diagram' in the 1970's. The Document Delivery Test derived by Orr, *et al.* (1972) calculated the time involved in making items available, De Prospero, *et al.* (1973) introduced the method of using the product of probabilities to determine overall availability rate, and Kantor (1975) took this concept further with his branching diagram to show the linear relationship between categories of non-availability.

Mansbridge (1986:301) proposes that the unobtrusive interview used by Kantor (1976b) and Saracevic, *et al.* (1977) provides a "good balance between response, unobtrusiveness, accuracy, efficiency, and ease of use of collected data", despite the likelihood of a low user response rate. The onus is on the user to fully record the search process and outcome, and on the researcher to follow up on the relevant information concerning the reasons for the non-availability of items. Most often, titles that were obtained from shelflists, subject experts, and indexes, abstracts and general bibliographies, formed the basis for availability studies. However, a truly representative sample would take users' actual needs into consideration. Data collection techniques include searches done by library staff, user surveys using questionnaires and interviews, and observation. Known-item searches constituted the bulk of the searches in

the availability studies researched by Mansbridge, but since subject and keyword searching on online catalogues are becoming increasingly popular, future studies will need to measure user satisfaction and availability rates in this area.

Kilgour (1989) used data from 16 availability studies and recalculated their results in a uniform manner to determine to what extent causes of failure could be attributed to user error and library error. The studies were all known-item searches conducted at traditional academic libraries. He calculated the considerable improvement in availability that a system of machine-readable books could achieve, by eliminating the factors causing at least three-fifths of user dissatisfaction. This investigation suggests that electronic reserve systems could provide maximum materials availability, given the necessary technological backup and access points, and a certain level of expertise on the part of the users in using electronic information resources. The networking concept discussed in **Chapter 1** (cf. **1.5.2.3**) questions the feasibility of a library system to support the increased load of machine-readable documents.

A chronological synopsis of the literature on availability studies in academic libraries since the 1980s revealed that most of the earlier investigations made use of a combination of list-checking methods, Kantor's branching technique, and/or, the use of questionnaires or interviews to determine the extent of the availability of library materials. The current trend (cf. **2.4.5**) is to investigate the capabilities of automated systems as surrogates for manual availability studies. Future studies will no doubt expand on this development. However, until such time that automated systems are sophisticated enough to reflect the qualitative aspects of availability studies, the more labour-intensive manual exercise will still have to be performed. The following literature review will be discussed in terms of the methods used for determining

materials availability, and the conclusions that can be drawn from such research. The order of the discussion will reflect that of the quantitative and qualitative empirical studies described in **Chapters 4 and 5**.

## **2.4 Quantitative availability studies**

### **2.4.1 List-checking or citation-based availability studies**

The citation-based availability study evaluates the library's collection by means of list-checking. It is easy to obtain misleading availability rates when compiling a citation pool from a large library collection containing a substantial number of older, less used items, unless one purposely narrows down the citation pool to include currently used items. Citation-based availability studies may be useful when comparing libraries, but they provide little information about user skills and fail to reflect the demand for heavily used items unless a correction factor is applied to the sample (Baker & Lancaster, 1991:150-151).

Comer (1981) discusses list-checking as a method of collection evaluation, covering the types of lists used, the advantages and disadvantages of such methods and the implementation thereof. List-checking is viewed as an initial step for improving a library's collection by identifying its strengths and weaknesses. The choice of list used in the evaluation may influence the outcome of the investigation because of inherent biases. Thus "ad hoc" lists "designed to measure and evaluate the collection based on that library's particular goals and objectives, as well as community interests" may be more effective for comparing different libraries and for evaluating a particular division of a single library, than the standardised, published lists (Comer, 1981:29). Assessing the adequacy of a library's stock is merely a precursor to collection development and the improvement of library services. The

effectiveness of the library's collection can be ascertained by determining the availability and accessibility of the library's materials to the users.

#### **2.4.2 Shelflist samples**

Shelflist samples are relatively economical and easy to compile and are useful for comparing availability rates at different times during the year, and for detecting potential library problems such as misshelving or processing delays. However, such samples do not reveal acquisition gaps and they tend to bias the results in favour of the library because they are based on items owned by the library. Not all the materials in a circulating library are equally in demand and items in low demand are more likely to be found on the shelf than those items that are in high demand. A randomly drawn shelflist sample will include many little-used items and give an inflated availability rate.

Kantor (1981) recognised the inherent bias in using shelflist samples to measure document availability, and proposed a technique for "demand-adjusted shelf availability parameters" to compensate for such bias. "The most important results of any study of the availability of documents are parameters characterizing the causal factors which inhibit patrons from finding the items which they seek. For this reason, the collection of data based upon expressed demand, as introduced by Buckland et al. and elaborated by Kantor and others is the exactly appropriate tool" (Kantor, 1981:78). Kantor suggests that various parameters, such as accession number, imprint date, and time elapsed since last circulation date are correlated to demand, and that items can accordingly be characterised as young, middle-aged, or elder items in the library collection. Kantor illustrates, by means of a hypothetical study, how items can be weighted according to the incidence of circulation for an adjusted calculation of shelf availability that limits bias towards older, low demand items. The

main tenet of his argument is that serious overestimates of document availability will result if expressed demand for certain items is disregarded. He suggests that this can be avoided by multiplying the data gathered in each age category by the demand factor: demand factor = (number in circulation)/ (total number in the category) (Kantor, 1981:81-82). The "demand-adjusted" shelf availability parameters were tested and confirmed by Schwarz (1983).

Elzy and Lancaster (1990) compared two methods of collection evaluation by checking the holdings of a academic library against a sample drawn from published lists and conversely, checking a sample from the library's shelflist against published lists. The purpose of the first approach, or "bibliographic sample", is to predict subject coverage and identify gaps in the collection. It has limitations for weeding purposes and for quality assessment. The reverse procedure, or "inductive method", of checking the library collection against bibliographies is less frequently applied although it may provide a better indication of the quality of the collection. Elzy and Lancaster's study resulted in comprehensive weeding for the library concerned, as well as retrospective collection development (1990:8-9). Prescribed or highly recommended reading lists could be used instead of standard bibliographies in an availability study (cf. **Chapter 4**), to highlight the need for weeding or quality collection development in an academic library.

Stelk and Lancaster (1990) investigated the use of shelflist samples in studies of book availability and concluded that such studies over-represent items that are in low demand, if conducted in a large library collection that is not frequently weeded. A more accurate availability rate may be obtained by using a sample of items known to have circulated in the recent past. The difference between availability

probability derived from a shelflist sample and from a previous use sample, is smaller when the study is conducted in a library or division with an active collection which is frequently weeded and updated (1990:22-23). This study alerts one to the possibility of misleading availability rates if one fails to consider the characteristics of the collection in terms of currency and demand, and collection management policies. The simulated study recorded in **Chapter 4** was based on current reading lists to account for these recommendations.

### **2.4.3 Short loan collection reading lists**

Wall (1994) measured the utilisation of individual titles in a short loan collection to assess their availability. He determined that "titles which ranked most highly according to the measures of utilization would be the most cost-effective to duplicate" (Wall, 1994:199), irrespective of the number of potential users. The preferences of users resulted in uneven utilisation of recommended materials and the titles with the highest utilisation, had the highest levels of unfulfilled demand and lowest rate of availability. The implication is that recommended materials do not necessarily have to be duplicated in proportion to the number of potential users. This study further showed that by comparing performance indicators for the utilisation of a short loan collection by different groups of students with similar library requirements, systematic variations in the provision and use of reading lists can be monitored. This study supports the earlier findings in Buckland's (1975) seminal work on book availability and duplication and variable loan periods

#### **2.4.4 Simulation availability studies**

Steynberg (1991) researched the document delivery capabilities of the academic medical libraries in South Africa. An empirical, quantitative document delivery test was conducted at all seven the medical libraries to establish the availability quotient of the identified journal citations. Relatively high availability rates ranging from 59.3% to 84% were found at the test libraries, with an overall availability rate of 68% (Steynberg, 1991:123). This study was intended as an indicator of the current state of availability of biomedical journal literature in South Africa.

Lancaster (1993:130) proposes that a quantitative simulation study can be a very reliable estimate of shelf availability if the bibliographic items sought are representative of the actual needs of the users. Course reading lists or required texts are suggestions of suitable sources from which to draw samples for an availability study in an undergraduate academic library (Lancaster, 1993:135). The major weakness of a simulation study conducted by a single researcher, is that it will only identify availability problems related to acquisition barriers, circulation interference and library error and it will not highlight possible user errors in locating the items at the catalogue and on the shelves. As an alternative to the simulation method, Lancaster suggests user surveys (cf. 2.5.1) where users record details of items they sought but were unable to find. The researcher should then immediately follow up on the reasons for non-availability of items.

#### **2.4.5 Automated studies as an alternative to manual availability studies**

Britten and Webster (1992) propose an alternative methodology for determining the characteristics of high-demand materials by analysing the data stored in online systems, rather than by interviewing users, which is often impractical and cumbersome. "The methodology offered here is a valid means of assessing trends of demand for specific types of items in a library's collection, for uncovering areas that have been undercollected and are overburdened with use, and for exposing areas that have been well collected but rarely circulate" (Britten & Webster, 1992:246). The method presented links MARC records of highly circulated items according to clusters of commonality that characterise the titles and provides practical, replicable techniques for libraries with automated systems.

Chaudhry and Ashoor (1994:301) maintain that "materials availability needs to be seen in a broader perspective including both the immediate and the later availability of materials" with the introduction of automated systems and the increased document delivery capabilities of computer networks. Factors that warrant such a revision include: changing expectations, where access to materials is more important than ownership; the easier recalling of circulated items by means of the automated library system; the diminishing budget that forces the library to buy fewer copies; and the availability of document delivery services (such as interlibrary loan). Previous studies have been limited to monographic materials and known-item searches, while non-book items and subject searches are in growing demand.

Jacobs and Young (1995) compared figures derived from a questionnaire-based book availability survey design and computer records of the use of the library's online catalogue to assess whether an automated system could act as a non-intrusive surrogate for questionnaire-based availability surveys. They were able to determine the potential and limitations of data derived from a library's automated system for monitoring book availability. A crucial factor was the ability of the computer system to distinguish between browsing activity and sought-after or requested items. If user satisfaction can be reliably quantified by established survey techniques, the methodology investigated may have potential for the use of a management information system in monitoring book availability.

Day and Revill (1995) also examined the potential of automated library systems for collection evaluation and for identifying high and low demand subject areas from data derived from the library system. Appropriate duplication of high-demand items and variable loan periods could improve availability. The limitations of such "circulation activity reports" lies in the inability of automated systems to record exactly when an item is shelved and ready for loan and the inclination to reallocate funds to "high-performing" subject areas to the disadvantage of material that is attracting little use, thereby affecting the balance of coverage in the total collection (Day & Revill, 1995:156).

It is interesting to note the direction that future availability studies are likely to take, but for the purposes of this investigation a mostly manual approach was necessitated because of the limitations imposed by the present library system at UCT. Moreover, it was deemed important to obtain a qualitative aspect from the users' perspective concerning the availability of high-demand materials for undergraduates.

## 2.5 Qualitative availability studies

### 2.5.1 User surveys or patron-based availability studies

As was noted in 2.2, D'Elia (1985; 1988) questions the usefulness of materials availability rates as indicators of library performance. His view that such measures are of extremely doubtful value, concerns library managers because of the recent emphasis given to library performance evaluation. D'Elia (1985:106) refers to Zweizig and Rodger (1982) who proposed that title fill rate, subject and author fill rate, and browsers' fill rate (cf. 4.1), be used as measures of materials availability. These measures are calculated from self-administered questionnaires and presumed to be indicators of library effectiveness. D'Elia's study within the Saint Paul (Minnesota) Public Library System disclaimed this notion. The materials availability surveys were conducted as recommended by *Output measures for public libraries* (Zweizig & Rodger, 1982:106). The major criticism levelled at fill rates was that they measured patron success rather than library performance because patron behaviour was largely uncontrolled and could significantly influence the outcome of a search for library material. In order to compare the performance of different libraries one would have to control the variance in patron behaviour within individual libraries. D'Elia made use of sophisticated mathematical models of multiple regression for the analyses of variance and covariance between the variables. "The results indicated no significant relationships between any of the materials availability rates and any of the per capita measures of size of the libraries resources" (D'Elia, 1985:110) and thus he concluded that these measures were "error bound" and useless indicators of library performance (cf. 5.1).

On the other hand, Harris (1991) advocates the importance of securing user opinions so that appropriate services can be designed and monitored for performance assessment. "For some services, asking the user is the only way to measure success" (Harris, 1991:3). Harris derived performance indicators and practical measures from the goals of an academic library and then tested these measures by means of a user survey to detect broad and specific areas of library service where improvement was needed. In deriving practical measures from identified institutional goals, Harris (1991:1) ensured that the most important measures were selected for the library concerned. Qualitative and quantitative measures of library performance could be elicited from the user survey through the use of direct questions and rated opinions.

The successful outcome of user surveys depends on the co-operation and diligence of the users, but could produce reliable data if conducted over time. The co-operation of a random sample of users may be easier to obtain and then interviews can replace questionnaires. "The great advantage of the sampling method ... is that it gives a reliable estimate of the failure rate, as well as permitting the usual analysis to identify the reasons for failure " (Lancaster, 1993:138). Surveys of this type could also be used to determine the availability of material on certain subjects or in specific subject areas. A pretest of the user survey can give a rough estimate of the expected availability rate and, to determine a reliable sample size at the 95% confidence level from table provided with the MAS form (Van House, Weil & McClure, 1990:63). The time period required to collect sufficient responses can also be determined by means of a pretest.

Zondi (1996), in a team effort, carried out a user survey at the University of Zululand to measure the extent of materials availability achieved according to student status (either "undergraduate" or "postgraduate") and educational level, and to identify factors responsible for user failure to retrieve desired items. A questionnaire was used to elicit background information regarding user traits and to serve as a checklist for determining the availability of known-items. The results were analysed using a modified Kantor branching technique and showed a success rate of 50.42%. User error was responsible for 38.28% of dissatisfied requests, library error for 39.42%, and circulation error for 28%. As the ability to identify and locate required items was not affected by user status or educational level, it was recommended that a user education programme be initiated for all students (cf. 5.3.2).

### **2.5.2 Questionnaires or interviews**

Olaosun (1984) conducted a materials provision survey at the University of Ife library in Nigeria to determine the extent of the availability of teaching-support materials in the various disciplines at the university. The methodology relied on questionnaire and interview surveys and on observation techniques. "A comparison of the expected and the observed resources was made to determine the adequacy level...[of the library stock]" (Olaosun, 1984:396). The strengths and weaknesses of the collection were identified and remedial action proposed to improve the selection and availability of teaching-support materials.

Ferl and Robinson (1986) conducted a study to determine the rate of user success and failure in finding known items at a medium-sized, open stack academic library, and discovered that the users found 61% of all the materials they sought. Of the 39% not found by the users, 35.5% were in circulation, 24.6% were not acquired by the library, 11.7%

were unaccounted for, and 18.5% were due to user error (Ferl & Robinson, 1986:504). Circulation interference and library error constituted most of the availability problems and these areas were earmarked for further investigation. The authors used Kantor's branching diagram to analysis the user survey data. Books not found were traced to record the reasons for non-availability and multiple copies were represented by a fraction (the method employed in **Chapter 4** to deal with multiple short loan copies).

Willemse (1987) records that the University of South Africa (UNISA) has regularly conducted availability studies to examine the library's document delivery capability. Various methodologies have been devised of which a materials availability survey among on-site visitors to the library is currently used and followed up by library staff to detect the reasons for success and failure in obtaining items. The library monitors its progress annually and has used such availability studies to successfully substantiate the need for a greater spending budget on monographs and periodicals. UNISA library services have claimed that 85.5% availability was achieved for use of the local study collection and 81% for local use of their open stack collection by 1989 (UNISA Library). This figure is particularly high in the light of the 50%-60% availability recorded by academic libraries in the UK and USA and one would be inclined to enquire whether this was a consequence of "efficient supply" or "low demand" for items. However, availability rates of 80% have also been recorded at the University of Cape Town (cf. 4.3.1 and 5.3.1) at the University of Cape Town, and at the Copenhagen Business School library (Cotta-Schonberg & Line, 1994).

Rashid (1990) used Kantor's branching technique to study book availability and user satisfaction as a measure of overall library effectiveness. The study consisted of a questionnaire survey to users to

determine the degree to which they were satisfied in finding desired items in the library. The research produced quantitative data and a diagnostic evaluation of problem areas. The study highlighted the weaknesses in the selection and acquisition policies of collection development programmes. Such a study could be replicated at regular intervals for ongoing evaluation. The results differentiated between performance measured with and without the help of a librarian. The overall measure of book availability was found to be 59.6% without the help of the librarian, and 63.5% with the help of the librarian, which endorses the findings of Ferl and Robinson (1986) that availability rates increase when the library staff are involved in the search process.

Harris and Garner (1992) conducted an availability study at the University of Western Australia to identify the obstacles that prevented users from accessing required materials timeously. The user survey was carried out during a typical semester week on a sample size of 500 searches. Such a large sample was possible because a number of staff members were involved in collecting and examining the user survey forms and in tracing the reasons for unsuccessful searches. Kantor's method was modified to suit the University of Western Australia's multi-site library, allowing for different types of searches and different areas of failure. Three of the 11 branch libraries were surveyed in addition to the main library and an availability ratio for the library as a whole determined. Over 90% of the searchers who responded were undergraduates and thus the findings were interpreted in terms of the undergraduate user. "The availability rate for books and reserved items were 41%, and for serials 54%, giving an overall availability rate of 44%" (Harris & Garner, 1992:28). User error accounted for a large proportion of the unsuccessful searches, which resulted in the low availability rate. A relatively small proportion of unsuccessful searches were as a result of incorrect or inadequate citations brought to the

catalogue by the users themselves. "The most common library procedure problem was failure to record on the catalogue that an item was missing so that replacement could be considered and the users could be informed. User knowledge problems were mainly concerned with understanding both the full call number in catalogue entries and the various collections and filing sequences within the library" (Harris & Garner, 1992:29).

The availability problems were addressed by devising a plan of action in consultation with staff. Feedback indicated that the main problems uncovered by the availability study were in the User Services Division. Other issues needing to be addressed included those related to acquisitions, circulation and recall policies, library procedures, and user knowledge (Harris & Garner, 1992:30). Focus group interviews with staff members from the various divisions took place and priorities were set for a final action plan to improve the low availability rate. The proposed plan of action included addressing the problems of selection and acquisition of library materials, analyses of ILL requests to identify requested items, and more comprehensive liaison with students and staff. The study was to be replicated to measure improvements and as an ongoing commitment to improving library services.

Rehman and Bashir (1993) conducted an availability study amongst users of the General Collection of the Main Library of Punjab University using Kantor's methodology for availability analysis, and compared the results with four similar studies conducted in the United States. The availability success rate at Punjab was 41.3% for 300 citations, compared to the availability rates of 58.9-63% for 400 or more citations at the American institutions. It is significant that 80% of the students at Punjab university are enrolled in postgraduate programmes (Rehman & Bashir, 1993:184), in contrast to the comparative studies where the libraries serve mostly undergraduates. Acquisition, library, and user error significantly

contributed to the low overall availability rate at the Punjab University Main Library. These factors served to highlight the problems encountered in the developing world concerning insufficient acquisition policies, poor user skills, and inadequate bibliographic records.

Tuck (1995) relates how two surveys were conducted during 1993 at John Rylands University Library, to assess the book availability for taught-course students. The first survey was based on a questionnaire completed in the presence of a library staff member, the second consisted of a self-administered questionnaire to be returned by the user. A success rate of 53.6% was recorded for the first survey and difficulties in catalogue use was attributed to 12% of the failed searches. The self-administered survey was not successful due to a very poor response rate. Future surveys, based on the Standing Conference of National and University Libraries (SCONUL) pilot survey, were being planned for comparative purposes.

### **2.5.3 Longitudinal availability studies**

Ciliberti, *et al.* (1987) investigated material availability in an academic library by selecting a modified self-study model, based on the shelf availability study developed by Kantor (1984), to measure the performance of "a library's acquisitions program, circulation policies, internal operations and users' capabilities" (Ciliberti, *et al.*, 1987:514). This study included a longitudinal investigation into availability rates for actually sought subject and known-item card catalogue searches. Qualitative patron-reported and quantitative librarian-observed searches were analysed, and an overall success rate of 54% was found. Although this study proved to be time-consuming and labour-intensive, the findings enabled library management to identify and measure the various obstacles to materials availability. The largest cause of user

dissatisfaction was attributed to library malfunction and library inventory and shelf-reading programmes were recommended to improve the situation. Other recommendations for remedying acquisition, circulation and user errors included the purchasing of duplicate copies for high-demand titles, improved signage in the library, further bibliographic instruction in catalogue use and information retrieval, and improved security measures to ameliorate the theft of materials. The study had implications for the design of self-explanatory display screens for online systems (cf. 5.3.2).

An availability study (Revill, 1988) was performed across Liverpool Polytechnic's nine site libraries in 1987 to compare the results of a similar survey conducted a year earlier, while involving the Polytechnic's librarianship students in a practical evaluative study. A user survey was administered, based on Kantor, *et al.* (1976) and described by Revill (1987). The results of the availability survey showed an increase from 69%, recorded in the 1986 survey, to 75% success rate for the 1987 study. Transcription errors and incorrect citations were two of the most apparent causes of user failure in obtaining required items. Other barriers to the immediate availability of high-demand items were attributed to the "imperfect communication between academic staff, students and librarians" (Revill, 1988:26).

This study, like others such as those of D'Elia (1985; 1988), reiterated the need to interpret availability rates with caution because of the myriad factors, including user expectations and user behaviour, that may influence the final outcome of a search. Revill (1988:27) concluded that one could only speculate on the causal relationships resulting in the higher availability rates for the second study, as "the true extent of availability for any library would require a daily survey...[and] Resources are just not available for this degree of investigation".

Nevertheless, the emphasis on availability as a performance measure could lead to greater awareness and interest on the part of all stakeholders which in itself is conducive to improved services and better co-operation amongst the stakeholders.

Mitchell, Radford and Hegg (1994) followed up on the research of Ciliberti, *et al.* (1987) to identify any improvements in availability after the implementation of the recommendations subsequent to the first study. The quantitative measure of library performance served as a model for continuous library assessment. A comparison of the two studies showed that there was a large increase in the overall success rate from 54% to 64%, achieved in the second study. However, library malfunction and user retrieval errors were still major problems affecting materials availability and it was recognised that continuous user instruction and feedback was required to facilitate higher availability rates from the users' perspective. Further recommendations were made to modify and replicate the assessment technique once the card catalogue was converted to an automated system.

Jacobs (1995), following the work of Mitchell, Radford and Hegg (1994), embarked on a longitudinal availability study at the University of Sussex Library. The study consisted of an initial questionnaire survey, followed by the implementation of changes in library policy, and a second survey which revealed a significant improvement in the availability rate. Kantor's methodology was modified to suit the local conditions and technological changes, and a random sample of 2000 searches could be used because the project was carried out by a team of experienced library staff. The initial survey produced a materials availability rate of 62.5%, while the second survey showed a materials availability rate of 71.7%. Although there were differences between the two surveys, including the substantially different populations, it seemed

likely that the improved availability rate was due to the interim changes in library policy introduced after the initial study. The introduction of a user education package for new students and the priority in improving the short loan facility, were considered to be significant in increasing the effectiveness of those areas of library service to the users. Jacobs (1995:54) concludes that even if the higher availability rate proves unsustainable, “the higher level of demand for books, prompted by the improvement in availability, will mean that the new equilibrium point will reflect a higher level of service, even if it reveals the same materials availability rate”.

## **2.6 Multi-method availability studies (quantitative and qualitative methods)**

Steynberg (1989:373-374) presents a theoretical methodological model for quantitatively measuring the availability and accessibility of documents and for qualitatively determining the user perceptions of library services, building on the benchmark research of prolific writers such as Orr, *et al.* (1968), Buckland (1975), Lancaster (1977), Kantor (1984), Line (1984), and Revill (1988). The elements of the proposed methodological model comprise choice of user group, perceptions of the service offered, a citation pool, a document delivery test (DDT), and data analyses. Steynberg considers user perceptions as significantly influencing library use and the resultant availability success rate. Staff perceptions are also important as they may highlight discrepancies in the various viewpoints, and the corresponding weaknesses in the service being offered. The citation pool must be carefully chosen to reflect the real needs of the targeted user group as the DDT uses the citation pool to check the status of each item. A valid DDT can assist in the decision-making process for collection development, and enhanced library services.

Cotta-Schonberg and Line (1994) initiated a pilot study in the Copenhagen Business School library to test practical performance indicators with which to evaluate academic libraries in an efficient and cost-effective way. The methodology developed by Van House, Weil and McClure (1990) was found to be inadequate with regard to input and process measures considered essential for the study and thus a schema covering input, process, and output variables was drawn up by Line and comprised indicators to measure resource allocation, resources utilisation, quality, efficiency, market penetration, and productivity. "The most valid indicator of an academic library's performance is *the extent to which it contributes to the achievement by users of their objectives of teaching, learning and researching...an academic library's main objectives*" (Cotta-Schonberg & Line, 1994: 56-57). It was deemed necessary to complement quantitative indicators with qualitative indicators as the latter often played a crucial role in policy and funding issues.

The pilot investigation tested and confirmed the most satisfactory of the proposed indicators, highlighted the strengths and weaknesses of the CBS library, and indicated where remedial action was needed. Of the 130 measures used, the most important ones concerned issues such as library use or non-use, availability, and efficiency. Several measures were used to assess the availability of acquired titles: the number of direct loans was compared with the number of indirect loans (reservations or interlibrary loans); reservations and the results thereof were investigated; the waiting period for reserved books, and the time taken to return books were calculated as additional factors influencing the availability of titles (Cotta-Schonberg & Line, 1994:59-61). The direct, immediate availability rate was high, in the region of 80%, but the user surveys revealed that there were not enough copies of the most heavily-

used titles to meet users' needs and the user perception of availability was unsatisfactory.

The inadequacy of the acquisitions' budget was considered to be a major cause of materials unavailability and a problem that the library could not easily solve. Availability was considered to be a key indicator of academic library effectiveness, which ideally should assess the ability of the library to cater comprehensively for the needs of actual and potential users by measuring whether required items are owned by the library, whether they are found in the catalogue, and whether they are available when needed. The time taken to recall an item or obtain it through ILL should also be noted when assessing availability. "It is well known that apart from factors within the library itself availability is affected by users' readiness to return due books in time" (Cotta-Schonberg & Line, 1994:61). There is consensus that availability studies need to be conducted alongside other studies such as market penetration and user satisfaction to draw a rich picture of the perceived or expected availability rate from the users' perspective.

## **2.7 Summary and conclusions**

The literature survey highlights the advantages and disadvantages of various methods for assessing the availability of library items. The technique pioneered by Kantor (1976) can be used to determine the reasons for unavailability - whether the library had acquired a requested item, whether it was in circulation, misplaced or incorrectly catalogued, or whether the user-error was the cause of failure. The statistics required for the analysis are very simple and the calculations can be "bottom up" or "top down" (Revell, 1987:25), but this method is time-consuming and tedious. Nevertheless, for diagnostic purposes, an availability study must not only indicate what the "score" of the library is for material

provision, but also how that "score" fluctuates when conditions change, for example during periods when assignments and tests are due. Materials availability survey (MAS) forms (cf. 2.5.1) have been used to sample users to determine the degree of success they achieved in locating sought for items (D'Elia, 1985; Van House, *et al.*, 1987; Van House, Weil & McClure, 1990). The major disadvantage of such surveys is that they have limited diagnostic and remedial value, but they do produce valuable qualitative data for a fuller picture of the effectiveness of the document delivery process (cf. 5.1).

Baker and Lancaster (1991) review previous research into materials availability and endorse the findings of Saracevic, Shaw and Kantor (1977) which set the precedent for using a branching diagram to illustrate the probability of a user finding a sought item. They discuss the merits and shortcomings of quantitative and qualitative availability studies, including the citation-based or simulated availability study, and the patron-based or user survey study. The consensus is that a valid availability study will contain a sample of between 300-500 documents which are representative of the actual needs of the users. Most of the availability studies reviewed have been carried out by a team of researchers or with the assistance of the library staff. It is extremely difficult to conduct a thorough availability study single-handedly.

Baker and Lancaster (1991:156-171) discuss the non-availability of items in terms of access barriers resulting from acquisition barriers, circulation interference, library error, and patron or user error. They advise that further breakdowns be made of the four main categories to determine the exact cause of the access problems and to devise appropriate solutions. On the surface, the acquisition barrier in large academic libraries appears to be minimal, but a more comprehensive investigation may reveal "hidden barriers" related to the acquisition process: items may still be on

order, awaiting cataloguing, catalogued and shelved but not yet updated on the online catalogue, or not ordered due to the reallocation of funds elsewhere (Baker & Lancaster, 1991:157). For subject breakdowns smaller classes must contain enough items to give statistically significant results. Other variations on availability studies include studies of a particular format, and availability rates based on user status, academic department, or age of material. Most shelf availability studies measure the immediate availability of library materials. Some studies measure document delivery time (cf. 1.6.1), that is, how long it takes to satisfy some percentage of user needs for particular materials.

In optimising the availability of high-demand materials one needs to consider user groups with special needs such as part-time students. Their access to these materials can be increased by adapting the hours of operation and the loan and reservation policies to meet their service requirements. For example, reserved books may be kept longer for them and issued during the evening rather than afternoon sessions, and they may be given slightly longer loan periods than full-time students for their convenience. Depending on the demand for any particular title, a multiple copy may have to be set aside for the use of part-time students only. Heery and Barr (1989), as cited in Workman (1991:148), outline recommendations for library services to benefit part-time students, including creating separate collections for them, giving them priority in the reservations system, purchasing extra copies for their use, loaning more materials to them, and providing closed access to the SLC.

Finally, it is evident from studies such as Ferl and Robinson (1986) and Rashid (1990) that availability rates increase when the user is assisted by the librarian in locating required materials. The degree of user error varies according to the competency of the user and the extent of the library barriers experienced by the user. Availability rates are ultimately

determined by whether or not the user is able to obtain the desired materials when they are needed. The relationship between the library staff and the students can either impede, or enhance the search process, depending on the mutual co-operation of the parties involved. User education with regard to the use of information retrieval tools and library procedures, and regular feedback from the users concerning their perceptions of the strengths and weaknesses of the system can facilitate a good library service that is in keeping with the users' needs. The subsequent chapters will illuminate the importance of good communication between the students, academics, and library staff in optimising the availability of high-demand materials.

### **Chapter 3: The faculty study: background and preparation for the availability studies**

The literature survey suggested that three relationships affect the ultimate availability of documents in an academic library:-

- a. the relationship between the academics and their students;
- b. the relationship between the academics and the library staff;
- c. the relationship between the library staff and the students.

Higher education and academic libraries are interrelated to the extent that any changes in the one inevitably affects the other: “if students are required to read less, or to study less on their own, the burden on libraries is reduced. Conversely, libraries with smaller stock could lead to shorter reading lists and more direct instruction” (Line, 1990:185). It is the researcher’s assumption that the extent to which library resources are valued as prerequisites for academic success, affects their popularity and materials availability.

The empirical component of this thesis will explore these relationships further to illustrate the interdependence of the three relationships, and the factors that influence materials availability rates in a short loan collection. The empirical research is divided into three sections, the first one (**Chapter 3**) being the investigation into which departments are using the SLC and for what reasons. This study incorporates a faculty survey amongst lecturers who are teaching second-year courses, and personal interviews with the SLC library staff. This provides the background to section two (**Chapter 4**), the quantitative simulation study, and section three (**Chapter 5**), the qualitative user study.

### 3.1 The role of faculty and the library in undergraduate education

Numerous articles such as those of Deekle (1995) and Hardesty (1995), have focused on the general state of undergraduate education, in an attempt to uplift the role of the library in providing academic support services. The Association of College and Research Libraries (ACRL) drafted some guidelines for university undergraduate libraries in 1995, that take cognisance of the specific needs of undergraduate students. According to this document, undergraduate library collections should provide curriculum support through reserve collections and the purchase of multiple copies of high-demand items; a variety of formats for reference sources; a broad range of subject coverage; access to recreational, cultural and personal interest information resources; and adequate study facilities including seating arrangements and access to computer terminals. Above all, there should be clear communication between staff, faculty and students, and the collections should be "dynamic and responsive to the needs of a changing curriculum and clientele" (Guidelines for undergraduate libraries, 1995:340).

The primary mission of undergraduate libraries is to meet the information needs of undergraduate students enrolled at large universities. Depending on local circumstances, separate facilities may be established independently or housed within the larger academic library. Undergraduate students have varying levels of information skills constituent upon previous library experience and educational background. Cuthbertson (1992:29-34) enumerates the problems that disadvantaged, black students experience as under-prepared users of academic libraries. However, Research Surveys (1994:21-24) and the E.O.R.P (*Overcoming barriers to learning*, 1995:43-44) found that many students at UCT with a generally privileged secondary education, also displayed poor library competency skills.

Most undergraduate students require a user-friendly environment, with introduction to research and library skills, bibliographic tools and resources, and “just-in-time” library services to meet the deadlines for assignments for courses where there are large enrolments (cf. 5.1). By providing reference and referral services, bibliographic instruction, and intellectual and physical access to a broad range of information resource tools, undergraduate library services have the potential for teaching valuable information literacy skills, for developing students’ critical thinking skills and for serving as a gateway to future library-based research using the full spectrum of available tools. Performance evaluation and assessment should be carried out on a continuous basis to ensure that the goals and objectives of the undergraduate services are being met; that the collections and access to the materials adequately support the needs of the primary clientele; that the environment is conducive to learning and the materials secured against theft, mutilation, and loss; and that the budget is adequate in maintaining and developing the services in support of the specific needs of undergraduate students (Guidelines for undergraduate libraries, 1995:338-343).

The entire edition of *Library Trends* 1995 (44(2)), is devoted to the library and undergraduate education. In the introduction, McFadden and Hostetler (1995) review the state of undergraduate education in American universities, and consider the educational role of the library in serving the specific needs of undergraduate students. The debate on creating self-sufficient end-users and the role and future of bibliographic instruction is addressed by various authors. Nearly all the contributors to this edition of *Library Trends* deal with the related issues of “literacy, critical thinking, reading, and technology” (McFadden & Hostetler, 1995:223-224) and challenge the intelligibility and utility of sophisticated electronic resources for the substantial number of “ill-prepared” undergraduates. Most undergraduates appear to lack the information

literacy skills needed to retrieve the most relevant and reliable information from the vast array of electronic resources at their disposal, and many experience difficulties using an OPAC to access material in the library. Deekle (1995) considers the significance of books in the education of undergraduates, and identifies contributing factors leading to the decline in the reading culture. He advocates that "Academic libraries, in collaboration with faculty, must increase their efforts to encourage the integration of critical thinking in the curriculum through the supported relevance and expanded requirement of serious reading" to combat the universal need for immediate gratification for information rather than knowledge (Deekle, 1995:268).

The influence of both the teaching staff and the library resources on the academic performance of students has been researched in various institutions. Recent studies, including those of Hardesty (1995) and Wells (1995), suggest that these influences are significant in determining academic success. Wells (1995:125-128) found that the way in which the university courses were taught, including the expectations of the lecturers and the methods of assessment, greatly influenced the way the students used the library and the extent to which they utilised reference tools and made use of the reserve collections. Nearly 60% of the first- and second-year students interviewed used the reserve collection, with the highest usage made by Sociology, History, and Economics students. Non-book materials, CD-ROM and journal article usage was greater than that of monographs, and almost 80% of the interviewees reported in-library usage without borrowing the material used.

A few studies, such as those of Mays (1986) and Saunders (1990), propose that it is the individual characteristics and motivations of the students that determine academic success, whether or not the students make full use of the educational resources at their disposal. The use (or

non-use) of the library by undergraduates has been noted by many researchers from the 1930s to the present day (Hardesty, 1995:339, 341). A major factor affecting undergraduate library use appears to be a lack of co-operation and interest from faculty.

Studies on the information needs of undergraduates have shown that students do not generally approach library staff for assistance unless encouraged to do so and that the attitudes of teaching staff towards the library and librarians significantly influence the undergraduate students' library usage (Hiscock, 1986:208-209). Those academics who encourage serious reading and library-based research, have a greater proportion of students who utilise a variety of library information resources. Many university librarians believe that greater co-operation from academic staff will result in the library fulfilling more of its potential as a powerful educational resource. The increasingly sophisticated library tools have the potential to make more online materials available to users, but barriers resulting from library error, user error, or more subtle external factors that are part of the organisational culture of the institution, may significantly limit physical access.

Comprehensive studies into the information needs and information-seeking behaviour of various user groups (Paisley, 1968; Wilson, 1981; Dervan & Nilan, 1992) underscore the importance of studying the user within a series of systems and subsystems, rather than in isolation. Hiscock (1986) investigated the relationship between library usage and academic performance in an academic library, through multivariate data analyses to account for the numerous factors that may influence users' information-seeking behaviour. Hiscock's study did not show a positive relationship between academic performance and library usage, but it did reveal areas of concern including potential communication barriers between undergraduate students and library staff, and the potential

influence of teaching methods on library usage and student attitudes towards library resources.

The following factors were identified as having a positive influence on academic performance:-

- a. previous library experience and knowledge of bibliographic tools, which enabled students to choose their own relevant texts besides the recommended ones;
- b. frequent catalogue usage (Hiscock, 1986:212-213).

Recent studies (Rader 1995; Blandy & Libutti 1995; Tiefel 1995) analysing the role of academic libraries in enabling undergraduates to acquire the information literacy skills needed for the Information Age, identified some of the barriers which prevented undergraduates from accessing the most accurate and relevant information:-

- a. lack of skills to locate and evaluate information;
- b. lack of guidance from academic and library staff towards assisting students to become independent and self-sufficient users;
- c. insufficient funding and resources for teaching-support in large academic institutions;
- d. teaching methods and course requirements that rely on handouts and prescribed reading, rather than encouraging original research and library competency in a wide range of information sources.

These investigations stress the need for an integrated approach defining the special needs of the various user groups and promoting library competency skills in undergraduate students. For undergraduate students enrolled in semester courses, the prompt availability of a limited range of prescribed materials, identified from student reading lists, is likely to be an indicator of good library service.

The influence of the user on collection management is implicit in the selection of materials for the collection; in maximising the availability of selected materials; and in assisting the user to fully utilise the collection. Access barriers may be curtailed if the user's needs and expectations are incorporated into the initial decision-making procedures. To achieve balance and equity in the book selection process, there should be co-operation between library staff and academic staff with regard to the teaching and research objectives reflected in the institution's mission statement. Resource allocation and funding must be weighted appropriately according to the various subject specialisations, student numbers and academic requirements; and current reading lists should be incorporated into the selection process (Workman, 1991:141-145).

### **3.1.1 The use of reading lists for accessing study material**

Some institutions have made reading lists available on the OPACs and this has facilitated the updating and accuracy of bibliographic details for the students and the library staff serving them. Smith (1993) describes a project initiated by the Library and Information Services (LIS) at Aston University to construct a database of courses offered by the University, with OPAC access to the reading lists received by the library. The importance of reading lists for helping students (particularly undergraduates) to identify core study material and in enabling library staff to predict likely demands for certain titles provided the rationale for the study. Intellectual and physical access to highly recommended materials is seriously hampered when students attempt to find items on their reading lists that have not been acquired by the library or that are inaccessible because the librarians were not informed that they would be in high demand. High-demand items are often placed in short loan or reserve collections to facilitate their availability for predetermined

periods. The success of such systems depends largely on the co-operation between teaching and library staff so that the reading lists can be continuously updated. The primary objectives of the Aston reading list project were to involve library staff from the Information Services and the Acquisitions divisions; to initiate a two-way process between teaching staff and the short loan or reserve staff for compiling and updating reading lists; to establish appropriate acquisition and loan policies; and to make the current reading lists publicly available via the OPACs (Smith, 1993:90). Collaboration between academic and library staff was crucial in building up an accurate database of courses and accompanying reading lists. Further co-operation was needed to ensure that the short loan materials were processed, monitored, selectively weeded as their use declined, and then relegated to the open stacks of the main library.

The Aston University Reading List Project (cf. **Appendix A.1**) rests upon the premise that reading lists are actually used by students for study purposes, in which case reading lists have important implications for undergraduate collection development, particularly for the smooth running of the SLC. If students disregard reading lists (Saunders, 1982), then new ways of determining high-demand material need to be devised and the short loan concept needs to be reviewed (Self, 1987). Self (1987) investigated the relationship between students' grades and their use of reserve material for specific courses at the University of Virginia. Although frequent users of reserve facilities tended to have better grades, reserve use was not found to be a reliable indicator of a student's grades. The study called into question the reasons for the existence of a reserve system and the merits of having one considering the high costs involved and the finding that 48% of the reserve materials were not used (Self, 1987:34-39).

Despite the debate concerning the merits of the reserve or short loan system, the system is dependent on close collaboration between library and academic staff. The lecturers need to notify the library of the selected material to be placed on short loan and the SLC librarians, in turn, need to ensure easy and sufficient availability of the readings for the users, by duplicating titles if necessary and by devising adequate security measures and retrieval systems (Clarke 1994, 18).

### **3.2 The use of the Short Loan Centre (SLC) at UCT for providing high-demand material**

The context and operational procedures of the SLC was related in **Chapter 1** (cf. 1.5.1). The library staff are in direct contact with the students and the academic staff who utilise the SLC and should thus have insight into the obstacles that may hamper the smooth running of a short loan facility.

#### **3.2.1 The SLC library staff's perspective on the availability of undergraduate materials**

Frequent informal interviews were conducted among the SLC library staff (cf. **Personal communication**, 1996), to extract their experiences concerning the factors that ultimately affect the availability of high-demand information for the users. The present SLC is experiencing a space problem due to the relocation of the Linear Library's video section to the SLC, and the increasing number and variety of multimedia materials (which reflect changes in teaching practices) being requested for the SLC. Traditionally, books and photocopies constituted the bulk of the collection, with smaller numbers of examination books (collections of past examination papers for the various course offered), private copies of textbooks, videos, and some core journals (primary

sources of information for courses such as Psychology). Recently, course readers, government publications, lecturers notes, and computer discs, have been added in increasing quantities. The video section is in great demand, particularly the titles prescribed for language and literature courses. Departments from the Science faculty tend to use the SLC predominantly for weekly tutorials, lecturers' handouts, and model answers to experiments, to supplement the work conducted in the science laboratories.

There is concern that the original quota of one photocopy per twenty students, up to a maximum of ten copies is inadequate in terms of the growing students numbers and this has resulted in copyright infringement on the part of lecturers with class sizes of more than 200 students. It is hoped that the copyright dilemma will be resolved with the imminent establishment of a Copyright Clearing Centre which will serve the CALICO libraries (cf. 1.6.1). The concept of an electronic SLC, discussed in 1.5.2.3, will resolve some of the problems of multiple photocopies, but pose new copyright dilemmas with regard to the access, downloading, and printing of online texts. Other problems in making materials available to the students, concern the inaccuracies of the Linear Library database encountered by the SLC staff when retrieving material for transfer to the SLC. To some extent the accuracy of bibliographic records can be updated by the SLC during the processing of new requests and by constructing their own records for the SLC OPACs. The SLC librarian monitors the quality of the bibliographic records entered by the SLC staff.

The researcher's view, based on the many discussions held with the SLC staff, is that the professional staff feel frustrated by the limitations inherent in the present SLC system because they are aware of the changing needs of the UCT user community; particularly the increasing

numbers of undergraduate students, the changes in the teaching methods, the greater expectations and demands placed on the resources, and the innovations in computerised information resources. In the light of these factors, they realise the need for restructuring the service beyond the mere provision of high-demand information to undergraduates, to a more proactive, dynamic service that will provide user training in computerised information tools, including OPAC training and limited internet access, as well as offering basic word processing facilities. Such developments would be in line with world-wide trends and serve to increase the availability of information sources to meet the growing needs of the UCT undergraduate students.

Recently the SLC has been reviewing its role and mission within a broader library planning project to investigate future scenarios including networking options, a closed access system, and the establishment of a separate undergraduate centre with a smaller, more dynamic, self-renewing reserve collection (*Library Planning Project: SLC report, 1996*). In addition to the three alternative SL concepts already identified (cf. 1.5.2), the SL Core Group proposed that further investigations be made to explore alternative concepts to the present SL system by means of wide consultation with the primary stakeholders, namely, the academics and the students. This process was considered extremely important to ensure that the future system would be in accordance with the actual needs of the user community. The SL Core Group reasoned that participation and a sense of ownership on the part of the users would result in a more relevant service and greater co-operation from all the parties concerned.

As the SLC accounts for nearly half of the total library issues, and is the one library facility that most undergraduates rely on (cf. 1.2), it has the potential of introducing students to the vast array of library resources

available for enriching their educational experiences and for inculcating life-long learning skills. To achieve any of these goals, however, the SLC needs to acquire formal representation at Faculty Board level. Discussions with the SLC librarian, reiterated the importance of good communication between the library staff and library management, and between the library staff and the constituent user groups (Baker, personal communication, March 1996).

The discussions held with the SLC staff revealed the notion that the Library User Services Division is under-represented at library management level and that technical services often make decisions affecting the users without having grassroots input from those who deal directly with the users on a daily basis. Other obstacles to the effective operation of the SLC are generated by budget cuts that reduce the number of permanent staff, and increase the reliance on contract positions and student assistance in the SLC. On average the contract positions have a high turnover and as it takes a good portion of the year to train these people to process and input the various types of SLC material, there is little chance to reap the benefits before they leave in November. This is the busiest time in the SLC when the computer printouts are sent to the academic staff for updating for the following academic year.

The training of student assistants is intensive and time-consuming, but generally the SLC staff are fortunate to obtain reliable and conscientious students to run the loan desk. As the front-line staff project an image and level of competency that will determine the users' level of expectations of the service, it is imperative that staff are equipped to answer the users' enquiries with regard to sought-after materials. Based on the interviews with the student assistants, it is evident that dissatisfaction with certain conditions of their contracts, particularly with the system of standard

monthly payment which does not cover overtime work, affects their commitment to the SLC and thus their concerns should be addressed too.

The SLC staff communicate with the academics on an ad-hoc basis, either at departmental level, or individually. They cite lack of consideration and co-operation on the part of teaching staff as obstacles to effective communication between the academics and the library. Ultimately, this impacts negatively on the students who are frustrated in their attempts to obtain material that should be available on short loan. Unfortunately, many lecturers remain unaware of the SLC processing procedures and fail to co-operate fully with the staff when requested to complete request forms and to update printouts sent to them. As a result, much of the SLC material is “deadwood” that rarely circulates because it is no longer relevant for the currently taught courses. Furthermore, material that should be placed on SL, may not be available to unsuspecting students because the lecturers concerned did not notify the library in advance about the anticipated demand for these items. This scenario underscores the crucial three-way relationship that should exist among the teaching staff, the library staff, and the students to make required materials both available and accessible so that the major objective of the UCT mission statement “to be an outstanding teaching and research university, educating for life and addressing the challenges facing our society” can be realised through consultation and debate (*UCT's Mission statement, 1996*).

### **3.3 Rationale for interviewing lecturers teaching second-year students**

Previous attempts to conduct an availability study in the Linear Library had proven unsatisfactory, primarily because a shelf-list sample (cf. 2.4.2) was used. This sample was not reflective of the actual needs of potential users, because a large proportion of the Linear Library stock was outdated and no longer in high demand (Harford, personal communication, February 1996). For the purposes of this investigation, a decision was taken to obtain a more relevant sample of titles from the current reading lists which are distributed to the students by the lecturers responsible for teaching the specific courses in the various departments.

Although the Short Loan Centre had in the past requested that complimentary reading lists be sent to them from the departments that use the SLC facilities, it became clear to the researcher that this practice was not observed. In fact, the SLC librarians mentioned that often they see recommended reading lists for the first time when the students arrive to search for the material that they have been told by their lecturers, is in the SLC. Occasionally, it is discovered that this is not the case and that there has been poor communication between the academics and the SLC staff. Although, printouts of all the materials requested by various departments and housed in the SLC, are sent to the relevant departments at the end of each year for updating, these are often not fully revised or returned and thus the SLC cannot adequately weed or add to its stock in preparation for the new academic year. A recent audit done by Coopers and Lybrand (1996) suggests that this process should be largely eliminated because it is not cost-effective.

In addition to the information recorded on the SLC files, the validity and accuracy of an availability study in the SLC rested on the information

obtained from personal interviews with lecturers, to confirm those materials that were likely to be in high demand by undergraduate students. Considering all the factors involved in obtaining a highly relevant sample, it was decided to narrow the parameters of the study as far as possible to limit the degree of error. Thus the study was to focus on the material required by second-year students from departments who were using, or had used the SLC facilities during 1994-1996. Furthermore, the items were to constitute those needed by the second-year students in the first semester of 1996 as the actual availability study was to be conducted during the month of May and the material would thus presumably be in demand until after the June examinations at the closure of the first semester.

The aim of this study was to assess the availability rate of “high-demand”, or highly recommended and essential, reading material for undergraduate students at the University of Cape Town in the SLC of the Linear Library. After discussions with lecturers from various departments and faculties, it was decided that second-year students are representative of the body of undergraduate students in that they are required to do more independent research than first-year students, but receive more guidance from their lecturers than third- or final-year undergraduate students who are frequently starting to specialise and research specific options of their choice. Moreover, by focusing on the information needs of second-year students this study could attempt to draw comparisons with another independent study recently conducted by the Equal Opportunities Research Project (E.O.R.P.) at UCT (cf. **Appendix A.3**) into the state of undergraduate education at the university. This project had also chosen to focus on second-year students as representative of what is meant by “undergraduates” and had in part investigated their use of the Linear Library facilities (*Overcoming barriers to learning*, 1995).

To avoid faculty bias, an attempt was made to include departments from the Faculties of the Arts, Science, Engineering, Commerce, and Social Science and the Humanities. Only departments who predominantly use the Linear Library were included and not those departments who were served exclusively by established branch libraries with their own SL facilities. Exceptions were Hebrew Studies, Drama, and Commercial Law, who used the SLCs of the Branch libraries and the Linear Library, because their courses were included in the curricula of other departments using the Linear Library. In the Faculty of the Arts, the departments of African Languages, Afrikaans and Nederlands, Archaeology, Classics, Drama, English, French, Hebrew, History, Linguistics, and Theory of Literature, were included in the study. In the Faculties of Engineering and the Sciences, the departments of Biomedical Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Materials Engineering, Biochemistry, Chemistry, Environmental and Geological Sciences, Geographical Sciences, Computer Science, Mathematics, Statistics, Physics, Oceanography, and Zoology, were included. In the Faculty of Commerce, the departments of Accounting, Business Science, Commercial Law, Economics, and Information Systems, were considered. Lastly, in the Faculty of the Social Sciences and the Humanities, the following departments were incorporated into the study: Anthropology, Philosophy, Political Science, Psychology, Religious Studies, Social Work, and Sociology.

All the updated 1996 SL requests from the above-mentioned departments for second-year, first semester courses, were recorded. In the case of whole year courses, the lecturers concerned indicated which of the materials would be required during the first half of the year. In addition to the SL requests, it was necessary to obtain any required reading lists given to the students by their lecturers, so that those items that the lecturers informed their students were on SL could be included

in the availability study, whether or not this was actually the case. This would determine the degree of non-availability due to poor communication between faculty and the SLC staff with regard to materials likely to be in high demand. As this part of the research could only be attempted through personal communication with the lecturing staff concerned, it was decided to draw up a short questionnaire schedule that could be used in an interview situation, or failing that, could be sent via internal post or e-mail. The objective of the questionnaire was to determine which departments issued their students with required reading lists, what the nature of the required reading material was and how it was made available to the students, that is, whether it was placed on SL; collated into course notes or course readers; or prescribed to be purchased by the students themselves. At the same time, it was possible to glean other useful information that could form the background or context to the actual availability studies. For example, student numbers, test and assignment dates, and qualitative comments concerning the problems encountered by the lecturers and students (as relayed to the lecturers) with regard to the use of the SLC could be determined. All these factors were viewed as being relevant to the discussion of the availability rates which were to be obtained during the month of May 1996.

It was an exceedingly laborious and time-consuming task to conduct interviews with the lecturers teaching second-year courses amidst their hectic schedules, but after much perseverance and repeated follow-ups, a response rate of 70% was achieved, with 70/100 lecturers responding to the survey. The names of lecturers responsible for teaching the various courses were obtained where possible from the Faculty and Departmental booklets with assistance from departmental secretaries. A covering letter (cf. **Appendix B.1; B.2**) was sent to the lecturers requesting personal interviews if possible and as a less satisfactory

option, the brief questionnaire was included in the letter to be completed and returned via internal mail. The lecturers were also given the option of responding via e-mail, which a few did. The personal interviews granted were very fruitful and yielded more information than the postal returns, especially amongst those departments who made extensive use of the SLC or used the facilities in various ways in an attempt to facilitate access to the materials for their students. The initial few interviews which were conducted in the faculties of the Arts and the Sciences served as a pretest which led to amendments in the wording of the questionnaire sent out thereafter. It became clear that there was disagreement as to what was regarded as required, recommended, prescribed or core reading material. The researcher had to distinguish between the terminology used in the different departments in order to maintain consistency in drawing up a final list of high-demand materials for second-year students (cf. 1.6.1; 3.4.1). Furthermore, departments in the faculties of Engineering and the Sciences were often not familiar with the concept of "course readers" which were frequently compiled by departments in the faculties of the Arts, Commerce, and Social Science and the Humanities. Course readers comprise collations of prescribed readings from various sources in a single format, that the students are expected to read for coursework, tutorial, and assignment purposes. The cost of producing course readers is usually covered by a student levy and each student receives a copy of the course reader. A recent trend in the UK is to publish "customised courseware" electronically (Di-Placito, 1995; Marcus & Raven, 1996), but this demands a certain level of computer literacy from the students.

### **3.4 Results of faculty interviews**

#### **3.4.1 Trends in teaching methods and SLC use**

The Aston Reading List Project (referred to in 3.1.1) highlights a number of common problems experienced by the SLC at the University of Cape Town. There is little uniformity between the departments with regard to the co-ordination of course information and the finalisation of timetables and teaching schedules for the subsequent semesters. Certain courses are taught in modules ranging from a couple of weeks or months to a whole semester, and other courses are taught throughout the year. Certain departments rely on textbooks or course readers, and others rely heavily on monographs or journal articles to be housed in the SLC. Terminology to describe the importance of the reading list material varies from “prescribed”, “required”, “highly recommended” and “core or essential”, to “additional” and “supplementary reading”, which take on different connotations depending on the departmental use of the terms. Generally, the prescribed reading overlaps with the required and recommended reading considered essential to an understanding of the coursework, for tutorial or seminar purposes, and for examination requirements. The additional or supplementary reading is frequently meant for assignments and individual projects. A major problem exists with references to journal articles, because incomplete bibliographic details are commonly found on reading lists.

An interesting fact that emerged from the background survey, was that some departments had recently established informal departmental “libraries’ or reading rooms for their students within the department. The extent to which major textbooks were prescribed by departments was also determined and this needed to be reflected in the study because many of the textbooks are exorbitantly expensive and thus unaffordable

to the majority of the students, yet it is library policy not to stock them. As noted by the SLC staff (cf. 3.2.1), a number of lecturers had resorted to putting their private copies of the textbooks on the SLC for use by their students. **Table 1** and **Appendix B.3** list the findings of the 36 departments surveyed, the 70 lecturers interviewed, and the 56 courses reflected in the faculty study. The faculties of Commerce and the Social Sciences and the Humanities were pooled together because all the Commerce departments sampled (Economics, Accounting, Business Science, Management Studies, and Information Systems) overlapped with the Social Science and Humanities categories, but were too few to stand alone despite having very large class sizes. The combined category of the Social Science and the Humanities, and the Commerce faculties will be referred to as the Social Science/Commerce faculties for practical purposes in the empirical studies.

| faculty  | use SLC                | percentage per faculty |                  |                 |                 | dept. library    | weightings* |
|--|------------------------|------------------------|------------------|-----------------|-----------------|------------------|-------------|
|  |                        | reading lists          | textbooks        | course readers  |                 |                  |             |
| arts   | 22 91.7%               | 23 95.8%               | 12 50%           | 17 70.8%        | 7 29.2%         | 24 (34.3%)       |             |
| science  | 15 88.2%               | 7 41.2%                | 12 70.6%         | 3 17.6%         | 7 41.2%         | 17 (24.3%)       |             |
| soc.sci./comm.   | 18 62.1%               | 18 62.1%               | 15 51.7%         | 19 65.5%        | 6 20.7%         | 29 (41.4%)       |             |
| <b>total (%)</b>   | <b>55 78.6%</b>        | <b>48 68.6%</b>        | <b>39 55.7%</b>  | <b>39 55.7%</b> | <b>20 28.6%</b> | <b>70 (100%)</b> |             |
| student numbers for courses taught by faculty interviewees |                        |                        |                  |                 |                 |                  |             |
|  | <b>&lt;50 students</b> | <b>50 - 100</b>        | <b>100 - 250</b> | <b>&gt;250</b>  | <b>total</b>    |                  |             |
| arts   | 14 58.3%               | 7 29.2%                | 2 8.3%           | 1 4.2%          | 24              |                  |             |
| science  | 4 23.5%                | 5 29.4%                | 8 4.7%           | 0 0%            | 17              |                  |             |
| soc.sci./comm.   | 4 13.8%                | 6 20.7%                | 9 31%            | 10 34.5%        | 29              |                  |             |
| <b>total</b>   | <b>22 31.4%</b>        | <b>18 25.7%</b>        | <b>19 27.1%</b>  | <b>11 15.7%</b> | <b>70</b>       |                  |             |

**Table 1: Faculty use of the SLC and corresponding class sizes**

36 departments surveyed; 56 courses covered; 70/95 lecturers interviewed.

**\* Breakdown of lecturers interviewed by faculty ( see "weightings" above):-**

Arts: 24/70 = 34,3%

Science: 17/70 = 24,3%

Soc.Sci./Comm.:29/70=41,4%

As can be seen from **Table 1**, 91.7% of the departments in the Arts faculty use the SLC; 88.2% of the departments in the Science faculty; and 62.1% of the departments in the Social Science and the Humanities, and the Commerce (Social Science/Commerce) faculties. This last category has the largest number of courses with more than 250 students per course. In the Social Science/Commerce faculty, 65.5% of the lecturers interviewed taught classes of more than 100 students, as opposed to 12.5% of the lecturers interviewed in the Arts faculty, and 4.7% in the Science faculty. A greater proportion of lecturers with small class sizes (<50 students) made extensive use of the SLC. Of the 1060 titles placed on SL by the 70 lecturers interviewed, 60.8% was requested by departments in the Arts faculty, 13.1% from departments in the Science faculty, and 26% from the departments in the Social Science/Commerce faculties. The highest number of lecturers using reading lists was from the Arts faculty (95.8%), while the Science faculty made the most use of textbooks that students had to purchase for themselves (70.6%). Both the Arts faculty and the Social Science/Commerce faculties used course readers to a substantial degree (70.8% and 65.5% respectively), but their reasons for using course readers were different, as will be seen in the lecturers comments recorded in **3.4.2**. The Science faculty made minimal use of course readers (17.6%), and a greater percentage (41.2%) of departments in the Science faculty was making use of departmental facilities for making high-demand materials available to the second-year students.

The weightings referred to in **Table 1** present the relative importance of the individual faculty's contribution to the average, for each category. The "weightings" in the last column refer to the total number of lecturers interviewed per faculty, over the total number of lecturers interviewed overall. In other words, the importance of the individual faculties in deriving the average for the sample as a whole. For example, with

regard to SLC use (the first column), the average percentage is not a good reflection of the composite averages because of the weightings for the individual faculties. More lecturers were interviewed from the faculties of Social Science and Commerce than from the Arts faculty and the Science faculty, although a greater percentage of the last two faculties utilised the SLC. The weightings for the faculties account for the averages derived for the other columns concerning the use of reading lists, textbooks, course readers, and informal departmental libraries. In each case the weighting for the faculties of Social Science and Commerce, is larger because more lecturers were interviewed from these faculties than from the Arts and Science faculties. The following section relates the findings from the 70 lecturers (teaching second-year courses) interviewed, concerning their use of the SLC and how they make high-demand materials accessible to their students.

### **3.4.2 Faculty perspective on the SLC**

#### **3.4.2.1 The Arts faculty**

The departments of History, English, and Classics make the most use of the SLC in the Arts faculty. In the History department, no major textbooks are prescribed, but a few are strongly recommended on the reading lists, for background reading. Several "tutorial readers", "literature guides", or course readers (defined at the end of 3.3) are compiled to collate a variety of readings for weekly seminars; to alleviate the inadequacies of the SLC particularly during peak times when assignments are due; and to overcome the problem of access to new books. The History department is likely to stop using course readers in 1997 as a result of cost and copyright (cf. 1.6.1) and then more demands will be placed on the SLC by the History students. Lecturers in this department are aware of the need for weeding the

collections in the Linear Library, with their participation. Lecturers commented that students are often forced to use old, "discredited" or outdated readings on the open shelves in the Linear Library because high-demand materials are not available in the SLC when needed simultaneously by multiple users. This supports earlier findings (De Jager, 1994:77). The SLC is mostly used for essay readings and different essay topics are set for the students so that a wider range of materials are used and the demand for materials is more evenly distributed.

A History lecturer raised the question as to whether popular monographs should be placed on 3-day loan rather than 3-hour loan if more than a couple of chapters or if the entire item constituted recommended reading. Serious students are unable to read the entire texts within a couple of hours and find the loan period frustrating, particularly because immediate renewals are often not possible in the SLC system. This implies that more copies of popular, core monographs will be needed so that at least one will remain in the SLC and the others can be placed on the open shelves (with a 3-day loan period) in the main library. This is already being done to a large extent.

The African Studies Library (ASL) provides research and reference materials on Southern Africa, primarily for senior undergraduate students, postgraduates and staff. Departments in the faculties of the Arts, and the Social Sciences and the Humanities, have increasingly incorporated African Studies' materials into their curricula. Some lecturers and students interviewed felt that the ASL should be made accessible to undergraduate History, Political Science and Sociology students for research purposes as a number of highly recommended texts are housed there but are only available (in-house) to postgraduate students. However, the ASL was not established for this purpose and

does not have the seating facilities, or the resources for providing access to very large undergraduate classes. In recognition of this dilemma, which causes serious availability problems for undergraduates, the ASL staff motivated for funding from the Mellon Foundation in 1995 for the purchase of duplicate copies of core monographs to be placed in the SLC. In addition, the ASL staff regularly scan review journals to assist the departments in identifying new materials that can be ordered and placed in the SLC, thereby duplicating much of the material housed in the ASL for the benefit of the undergraduate students. An underlying problem affecting the availability of high-demand materials in the SLC, is the reluctance of the individual departments to allocate a portion of their library budget for the purchase of duplicate copies of materials that are housed in the ASL (Richards, personal communication, October 1996).

In the English department, the SLC use varies depending on the nature of the courses offered. The textbooks are the prescribed novels, drama and poetry collections which the students are expected to purchase themselves. Course readers are not necessary for the specialised options as these usually have small class sizes and the students choose their own essay topics. The SLC is mostly used for selective, core reading material, critical texts, commentaries and interesting articles. There is a writing laboratory (cf. 1.6.1) for certain courses, but all critical prescribed readings are either on SLC or on 3-day loan. Generally the lecturers are not in favour of course readers because they would prefer students to learn how to access secondary materials in the library. However, the uniform opinion is that students ignore additional readings unless they are forced to read them for assessment purposes.

For certain courses, such as Middle English and Medieval Studies, and Fantasy, course readers are necessary for the excerpts of additional texts

from books "which in their entirety would be prohibitively expensive to purchase" and because some of the texts are "highly obscure and mostly out-of-print". All students must purchase the course readers from the department. The compulsory, general English language and literature courses have considerably larger classes and thus more obstacles to the availability of supplementary material is evident in these courses. A major problem arises when the same material is required by students for other courses. For example, certain monographs may be recommended for second- and third-year students, doubling the expected demand. Photocopies of journal articles are frequently placed on SL and videos relating to the prescribed texts are in growing demand.

The Classics department uses the SLC extensively, without major problems because the class sizes are manageable (from 10-70 students). Many critical texts, commentaries, and general "source books" are placed on the SLC. The students are issued with comprehensive course outlines and reading lists. Course readers are necessary for out-of-print materials, to supplement prescribed texts, and to explain obscure texts. A small departmental library exists for rare texts and specialised monographs which are briefly loaned to students for research purposes. The Hebrew department mainly uses the SLC in the Jewish Studies Library, although material that is common to History courses is placed in the Jagger SLC. The Linguistics department is no longer using the SLC for the primary second-year course, because the lecturer has written a comprehensive textbook for his students. Additional articles are handed out to the students periodically. Other language departments, such as French and German, use the SLC to a lesser extent for related readings, translations, and texts that the students are not expected to purchase individually. The German department uses course readers for out-of-print materials.

The department of Archaeology makes less use of the SLC now than it did in the past, because the system is regarded as being too cumbersome for the small class sizes. Textbooks are expensive, and thus lecturers compile extensive notes and course readers, although the production and distribution of course readers creates copyright problems (cf. 1.6.1). Some of the lecturers resort to keeping files for the students, and to personally distributing photocopies and handouts. One lecturer makes personal copies of a textbook, written by himself, available to the students in the department. There are no prescribed textbooks but a couple of highly recommended ones and students are encouraged to use a broad range of library resources.

#### **3.4.2.2 The Science faculty**

The departments of Chemistry, Environmental and Geographical Sciences, and Geological Sciences make the most use of the SLC in the Science faculty for second-year courses. The Chemistry department has internally financed “writing rooms” (cf. 1.6.1), which are part of each laboratory, where expensive prescribed texts, special monographs, and models are made available to the students. All the major textbooks and reading materials for writing projects are kept in the SLC. The students use the Internet and other computer-based resources for the writing projects, in addition to the SLC material. The department of Environmental and Geological Sciences does not issue course readers because of cost and copyright problems, but two textbooks are recommended to the students and course outlines with reading lists are distributed. All the readings for the course are on the SLC. One major, comprehensive textbook is recommended for the first semester, second-year course in the Geological Sciences. Numerous articles and an extensive set of sedimentological papers are kept in the SLC.

Most of the departments in the Science faculty use textbooks, yet not all students can afford to purchase them because they are expensive. Lecturers felt that multiple copies of the core textbooks should be made available in the SLC, despite the present library policy of not providing textbooks. Lecturers in the department of Physics and the department of Biomedical Engineering are issuing their students with comprehensive sets of notes, and placing their lecture notes and personal copies of textbooks on the SLC, to compensate for the lack of available textbooks. Departmental facilities including computer-based tutorials, are used in addition to the SLC to make high-demand information accessible to the students in the department of Civil Engineering. In the Zoology department, folders containing photocopies of suggested readings are left in the laboratories for the second-year students.

The Oceanography department does not use textbooks, but places extracts from relevant textbooks in files in the Oceanography library, run by a qualified librarian. Some books from previous years are still in the Jagger SLC, but students are encouraged to use the departmental library as "it is more conducive to learning to use subject-specific libraries run by professional librarians". This helps integrate the students into the department and they get to know the most useful information resources more quickly. There were suggestions from lecturers in this department that the SLC should be decentralised and that more use should be made of branch libraries and "departmental libraries", particularly in the case of subject specialisation.

#### **3.4.2.3 The Social Science/Commerce faculties**

The departments of Sociology, Philosophy, Psychology, Social Work, and Economics make the most use of the SLC in the Social Science/Commerce faculties. This is an interesting category, because a

number of departments have stopped using the SLC for various reasons, the most common being the frustrations experienced in using the system, the inadequacies for large student numbers, and the inflexibility of the system in handling new materials immediately and in automatically adjusting the processing to meet unexpected demands (cf. 3.5). Within the Social Science and the Humanities, the department of Political Science has stopped using the SLC because it is regarded as being inadequate for their very large student numbers. The lecturers maintain that their students do not make extensive use of the SLC and that it is thus better to provide broader, research-based readings which encourages the students to read more comprehensively rather than to rely on a few, selected prescribed texts. Unfortunately, the lecturers' experience is that very few students conduct independent research. Course readers are considered to be essential, despite the problems of copyright, because students do not buy the expensive, recommended textbooks and the library does not usually stock enough copies of the core monographs. The advantage of using course readers is that numerous sources can be used to provide wider exposure for the students. This point is nullified if the students do not actually read the course readers! Student levies cover the cost of producing the course readers. Lecturers who were not keen on using course readers, felt that the whole SLC concept needed to be reviewed. It was suggested that an undergraduate library with a reserve section, similar to those of major overseas institutions (e.g. Yale University), would be more functional in meeting the specific needs of undergraduate students.

The department of Social Anthropology is making less use of the SLC than it used to and is depending more on the distribution of course readers to its students. Course readers are considered to be important because of the inadequacy of the library stock and because no major textbooks are prescribed. All students receive a course reader consisting

of articles from multiple sources and seminar and assignment topics. Once again, copyright infringement poses a dilemma in making high-demand materials available to the students outside of the SLC. Students are referred to additional readings and encouraged to use other library resources, but, as experienced in the department of Political Science, few do. One of the lecturers still places overheads and photocopies of interesting articles on the SLC, despite the general feeling that the procedures for placing material on the SLC, are slow.

The department of Religious Studies has also stopped using the SLC, although their class sizes are very small. Lecturers in this department commented that is quicker and more practical to maintain files of essential readings in the department, and to distribute handouts on a regular basis to the small groups of students. Copyright regulations are considered if course readers are compiled. Generally, students develop their own reading lists and are encouraged to read widely. The two prescribed texts for one of the courses, are written by the lecturers themselves, and the students are directed to the bibliographies at the back of the two texts for further reading.

The lecturers in the department of Sociology tend to make extensive use of the SLC for additional and core reading materials. Course readers are used to complement SLC material. All students get a copy of the course reader, paid out of student levies and an extra copy of the course reader is placed on SLC. The SLC materials are "resource books" rather than prescribed materials. In the Psychology department, textbooks are used for statistics courses, and course readers for non-textbook courses. As is the case in many other departments, individual lecturers express preferences with regard to the use of the SLC and course readers. An advantage of course readers is that "one can tailor the reading for coursework more effectively". Some lecturers prefer to focus on specific

textbooks, using the bibliographies at the back for supplementary reading. Other lecturers place several general texts in the SLC, any of which the students can consult. The department issues course readers because certain textbooks are very expensive and not comprehensive enough.

In the Social Work department, certain major textbooks are recommended, but course readers are also issued to the students because of the expense of purchasing textbooks. Extracts from textbooks and numerous other sources in appear in the course readers. This department has a number of part-time students and related their problems of access to the SLC materials (cf. 2.6). The sentiment was that the "book-in-hand" reservation policy, described in 1.5.1, was obsolete and impractical if the students are unable to obtain the required items because they are in circulation. Moreover, overnight items are checked out too early (from 15h00 onwards) for part-time students who often can only visit the SLC after 17h00. Lecturers in the Philosophy department follow the general trend of using the combination of course readers and SLC materials to make essential readings available to their students. All required readings and "best essays" get put on SLC.

In the Commerce faculty, the very large student numbers are a major problem when it comes to providing scarce or limited resources. As can be seen from **Appendix B.3**, the class sizes are over 500 students for Economics and Accounting, and more that 350 students for Business Science and Information Systems.

The department of Accounting relies mainly on prescribed textbooks and the SLC houses a couple of copies which are often missing from the shelves. The ratio is hopelessly inadequate for the class sizes, but the problem cannot be addressed within the present library policy of not

providing textbooks for students. In the Department of Economics, some lecturers put additional rather than prescribed material on the SLC. Others place photocopies of chapters from textbooks and supplementary texts on the SLC. Most lecturers acknowledge the need for compiling course readers because of the substantial number of readings, core and supplementary, required for coursework, seminars and essay purposes. The primary objective is to make these readings more accessible but there is no guarantee that students will read them. This dilemma is central to the issue of whether course readers benefit students or not. Ultimately, the onus is on the students to acquire knowledge from the various information resources, whether they are made available through the medium of course readers, or placed on SL.

The department of Information Systems is innovative in making high-demand information available to the increasing number of second-year students. The concept of "discovery learning" is embraced, whereby students use the Internet to find materials to compensate for the insufficient library resources in their field of study. With guidance from the lecturers, students learn to retrieve relevant and up-to-date information sources, while creating their own reading lists. The nature of this field of study dictates the necessity of keeping up-to-date with new trends and the latest information. Copies of the "best essays" previously produced in the course, are placed on SL. Handouts and current journals supplement the students' independent research. A major textbook, which the students are expected to purchase, is prescribed for one of the courses, which accounts for the minimal use of the SLC. The use of e-mail and pamphlets in the computer laboratory are the preferred mediums for distributing essential information and readings to the students concerning coursework and seminar requirements.

Core textbooks are central to the second-year courses in the department of Management Studies. The students are required to purchase the latest editions, but the library stocks some of the older versions. Periodicals are recommended for current awareness purposes and the SLC is not used. Two alternative texts are prescribed for one of the courses, depending on the students' direction of study and area of specialisation.

### **3.5 Summary and conclusions**

The frustrations and difficulties encountered by lecturers with regard to the SLC system are recurring problems that have been noted in previous studies (Research Surveys, 1994; De Jager, 1995). The loan request procedures are seen as being cumbersome, slow, and outdated. A number of lecturers would like to be able to send and update requests electronically. Generally the smaller departments (<50 students per class/course) find the SLC facilities adequate, but there is a substantial problem of physical access for departments with large student numbers (> 250). Networking (cf. 1.5.2.3), as a future concept, would mean multiple access simultaneously, but the material will still have to be printed or downloaded at a cost to the students.

Individual departments are devising their own strategies to overcome the shortcomings of the present SLC system. Some departments are prescribing one or two basic texts, usually authored by the same lecturers teaching the courses, and are encouraging their students to find their own additional material in the Linear Library by using the extensive bibliographies at the back of these texts. Other departments are using "writing laboratories" (cf. 1.6.1) to facilitate access to material and to develop their students' research writing skills. The use of electronic information sources is encouraged and computer-based tutorials are used for alerting students to relevant information resources in the Science and

Commerce faculties. As recognised by the SLC staff (see 1.5.2.3), undergraduate computer access is still limited at UCT. This problem will have to be addressed in the light of the implementation of the INFOLIT project (cf. Appendix A.4).

Students often complain to lecturers about books being misshelved, hidden, or surreptitiously removed from SLC. Perpetual SLC problems include the theft and mutilation of material, deliberate misshelving, problems with the reservation and recall policies, overdue books, and insufficient copies of monographs. The qualitative interviews conducted amongst library staff, academics, and students (cf. 3.2.1; 3.4; 5.3.2) indicated that the SLC needs to be redesigned to overcome security issues and to provide more flexibility for new additions to the collection during the course of the semester. Sometimes readings are made available to the students on a week-to-week basis, for a specific module. As reported in previous sections (cf. 3.4.2.3), the processing of new requests is very slow, often too late for course requirements. The concept of SLC is problematic if it restricts the library experience to a limited number of pre-selected texts and if it cannot meet the needs of lecturers who want to make new materials available at short notice as they come across them. A closed access reserve section would increase the availability for the short period that these titles would be in intense demand. Thereafter they could be withdrawn and placed on open access. There are suggestions that the SL and the Reference Collections could pool resources that are primarily core reference works, for in-house use only. Closed access (cf. 1.5.2.1) for the SLC may need to become a reality, but this would mean downsizing the collection to the absolute essentials and making seating facilities available in a special reading room for the purpose.

The SLC, described in 1.5, is perceived to be in need of upgrading with regard to essential facilities such as more OPAC terminals, better lighting and seating arrangements. Some suggestions for immediate improvements in the SLC include changes to the reservation policy, later times for overnight issues, perhaps from 17h00 onwards, and improvements to the security system. Students should be able to report "missing" materials so that can immediately be traced and if there is a problem with any particular title, it should be kept behind the desk. Penalties for overdue books may need to be reviewed and stricter action taken against habitual offenders. Most of the concerns of the lecturers interviewed, are documented in the availability studies discussed in **Chapters 4 and 5.**

In the breakdown of the number of titles on SL according to faculty, it was decided to combine the faculties of Engineering and the Sciences, as only a couple of the departments in each of the faculties used the SLC substantially. Similarly, it was decided to combine the Commerce faculty with the faculty of Social Science and the Humanities for evaluation purposes, as the departments included in Commerce faculty offered courses in the curricula of the Social Science and Humanities, and vice versa. Although the Commerce faculty has large numbers of students, the number of titles on the SL constituted only 2.19% of the total number of titles collected from the SL records and the lecturers' reading lists. By appropriately grouping the five original faculties into three categories, it was envisaged that inter-faculty comparisons with regard to availability rates could be made, as it was clear that this could not easily be done across individual departments, within the faculties because of the vast difference in the number of titles requested by the individual departments. Some departments have requested only a couple of titles while others have requested over one hundred titles per course offered. It was also necessary to distinguish between items and titles, as

a major complication in this type of availability study is the existence of numerous multiple-copied items, particularly in the form of photocopied journal articles. The number of copies available for a specific title may significantly affect the availability when the title is sought simultaneously by large numbers of students. Circulation figures will also be affected by the number of copies available at any particular time.

A breakdown of the number of titles on SL showed that 60.8% of the titles were from the Arts faculty, 13.1% from the Engineering and the Science faculties, and 26% from the combined faculties of Commerce and Social Science and the Humanities (cf. **Figures 1 and 2**). The proportion of titles on SL by faculty, as calculated through the faculty study (cf. 3.4.1), is very similar to the proportion of titles by faculty chosen for the sample group in the simulation study discussed in **Chapter 4** (cf. 4.2). The sample group consisted of 299 titles at the end of May 1996, because one title had been removed from the SLC towards the end of the month (cf. **Figures 1 and 3**).

Number of new and updated titles put on Short Loan for the first semester 1996 = 1060 (excluding multiple copies).

Arts:  $645/1060 = 60,8\%$

Science:  $139/1060 = 13,1\%$

Soc.Sci./Commerce:  $276/1060 = 26\%$

Compare to sample group:-

N = 300 (start of May 1996)

N = 299 (end of May 1996)

Arts =  $170/300 = 57\%$

$170/299 = 56,9\%$

Science =  $42/300 = 14\%$

$41/299 = 13,7\%$

Social Science/Commerce =  $88/300 = 29,3\%$

$88/299 = 29,4\%$

**Figure 1: Number of titles on Short Loan by faculty**

Number of titles on Short Loan by faculty (population)

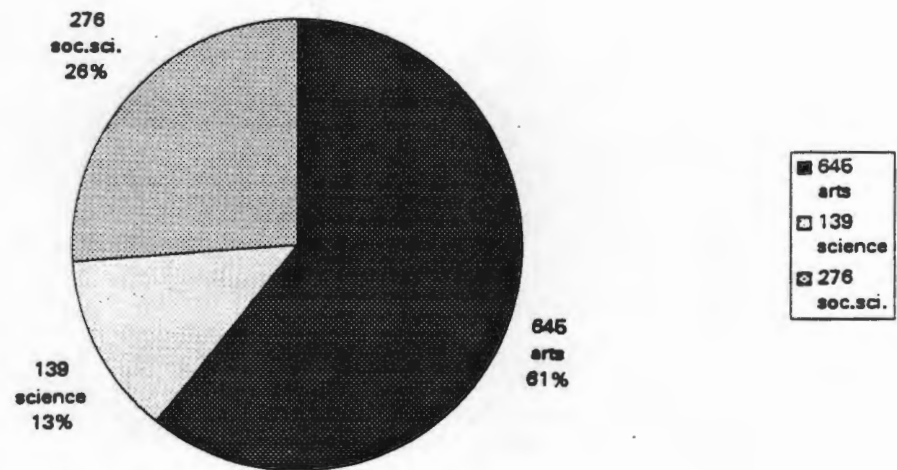
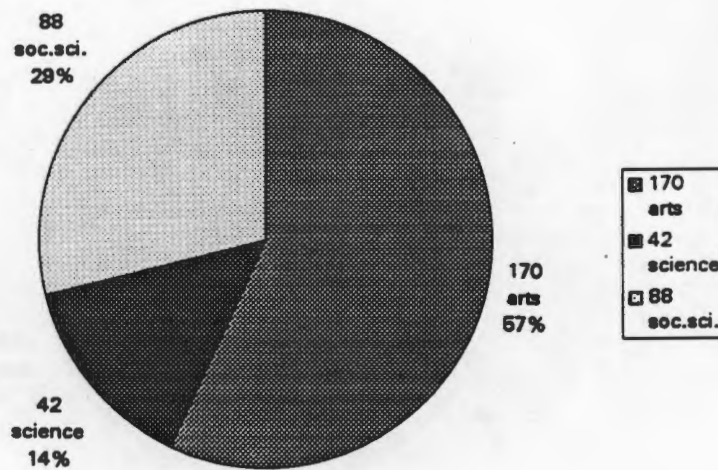


Figure 2: Number of titles on Short Loan reading lists and records, according to faculty

**Number of titles on Short Loan by faculty (sample)**

**Figure 3: Number of titles on Short Loan in sample group, according to faculty**

## **Chapter 4: The simulation study: a quantitative availability study in the SLC during May 1996**

### **4.1 Context and background**

"Availability studies assess a library's ability to provide patrons with the documents they need at the time they need them. Specifically, availability rates, or fill rates, measure the probability that an item sought by a patron will be in the collection, be found in the catalog, be on the shelves, and be found on the shelves" (Baker & Lancaster, 1991:143). This definition of availability rate, or fill rate, takes into account four main barriers that may prevent a user from finding a needed item on the shelf:-

- a. the library may not own the item;
- b. the item may be in circulation;
- c. the item may not be on the shelf due to library "error";
- d. the user may not be able to find the item due to user error.

The overall availability rate, or fill rate, is the cumulative probability that the user will overcome the four barriers and successfully procure the required item. The non-availability of items can be viewed in terms of access barriers resulting from acquisition barriers, circulation interference, library "error", and patron or user error. Library "error" may be an inaccurate description for the barriers preventing access to the required items, because it includes routine library procedures such as the cataloguing, processing, binding, and shelving of items. These processes can only be erroneous if viewed in terms of excessive delays, otherwise they are mundane, acceptable tasks rather than errors.

Further breakdowns can be made of the four main categories to determine the exact cause of the access problems and to devise appropriate solutions. On the surface, the acquisition barrier in large academic libraries appears to be minimal, but a more comprehensive investigation may reveal "hidden barriers" related to the acquisition process: items may still be on order, awaiting cataloguing, catalogued and shelved but not yet updated on the online catalogue, or not ordered due to the reallocation of funds elsewhere (Baker & Lancaster, 1991:156-171). One can expect circulation interference, or the loan barrier, to be high for prescribed titles for use in academic courses. The availability rate for such titles is affected by the number of copies of each title in the library's collection. Library "error", as an access barrier, results when the item is not in circulation, but it cannot be found in the correct location as indicated by the catalogue. The item may be missing due to theft or misshelving. Items may be temporarily unavailable when at the bindery, or on the sorting shelves. They may be temporarily located to a reserve room, in which case the automated catalogue should reflect the new location and give details of the status of the item.

A citation-based simulation study, as suggested by Lancaster (1991), (cf. 2.3.2), can be seen to simulate a situation in which a certain number of users (determined by the number of documents sought) each seek a single bibliographic item on a particular day. Through simulation, three probabilities may be established - the probability of ownership, the probability of availability for an item owned, and the probability that the item will be owned and available. In addition to determining the ownership and availability probabilities, the study should also analyse the reasons for "failure" to retrieve items (Lancaster, 1993:129). The analysis of causes of failure may reveal the extent of "interference" from other users competing for the same item, sources of internal inefficiency or security problems. The major disadvantage of using checklists, or

items selected from catalogues and bibliographies is that they may not be an accurate reflection of the real needs of the users and thus are of doubtful validity. The advantages of using such sources are that they are easily obtainable to the researcher, and can be used non-intrusively with minimal inconvenience to the users.

Kantor (1984:43-44) reiterates the importance of sampling actual user searches, rather than relying on shelf-list samples. Availability studies that focus on actual, current requests can reveal the level of users' library skills in using the catalogues and in identifying and locating material on the shelves. User characteristics and information literacy abilities may significantly limit access to the required materials. Circulation interference, or the extent to which circulating items are in demand, will be reflected in patron-request studies. Moreover, the most active part of the collection will be illuminated and hidden factors affecting materials availability revealed because the active part is more likely to be misshelved, misplaced, stolen, damaged, or lost. It is on these grounds that users were interviewed to determine their success in actual searches for materials in **Chapter 5** (cf. 5.2).

## **4.2 Research method**

As this part of the research was to be a simulated user search, it was decided that a "known-item" search would provide the most appropriate basis. As stated in **Chapter 3** (cf. 3.3), previous attempts to conduct an availability study in the Linear Library had proven unsatisfactory, primarily because a shelf-list sample was taken, which included a large proportion of outdated stock and thus was not reflective of the actual needs of potential users (Harford, personal communication, February 1996). It was thus decided to obtain a more relevant sample of titles from the current reading lists which are distributed to the students by the

lecturers responsible for teaching the specific courses in the various departments. Such reading lists were collected during the months of March and April 1996, as part of the survey of faculties (cf. 3.3). It was noted that non-book materials such as videos, overheads, maps and chemistry models, were increasingly being recommended to students as supplementary material for their studies. Nevertheless, it was decided that this study would only investigate the availability of monographs, journal articles (most frequently in the form of multiple photocopies), seminar notes, and course handouts housed in the SLC. Future availability studies would have to encompass non-printed materials such as videos and also electronic information sources in keeping with the advance of information technology and the concept of information literacy.

By the end of April a total of 1060 titles was obtained from all the references on the reading lists collected from the lecturers surveyed, and from short loan request forms for second-year students for the first semester of 1996. This number was reduced to 1000 titles by eliminating those titles that were regarded by the lecturers as being optional or additional reading, rather than required or highly recommended reading. Many of the titles had multiple copies, which had to be accounted for in the study, as the ultimate availability of a title is dependent on the number of requests and the number of copies available.

In choosing a final sample of titles to use in the simulated availability study, various possibilities of non-probability random sampling were considered, including proportional and disproportional random sampling. As the total population from which the sample was to be taken, was regarded as being representative of possible known-item searches by second-year students in the first semester, it was decided to rely on the

self-weighting nature of a simple random sample. In such a sample, a greater proportion of the most frequently occurring items should naturally be reflected in the sample group drawn.

A table of random numbers was taken from Willemse (1994:316) to be used in the selection of a sample of 300 items. The 1000 titles which comprised the final population were numbered from 000 to 999 and the first 300 numbers that were generated by the table of random numbers were then chosen for the sample to be used in the availability study during the month of May. Of the 300 titles that made up the sample group, 57% (170/300) were from the Arts faculty; 14% (42/300) were from the Science and Engineering faculties; and 29.3% (88/300) were from the combined Social Science and the Humanities, and Commerce faculties (cf. **Figures 1 and 3**). These figures are representative of the proportion by faculty in the population group (cf. 3.5).

In preparing a checklist for the 300 titles that constituted the sample, a decision was taken to record the catalogue reference number (CRN) for each title rather than the individual barcodes so that circulation figures could be obtained for each title collectively, irrespective of the number of individual copies held. The reasoning behind this decision was that availability rates of individual items are of little diagnostic value if seen in isolation when multiple copies exist. However, if viewed within the context of circulation figures and the anticipated demand, from students competing for a limited number of copies, the results can be analysed more fully.

The automated library system at the University of Cape Town records the current circulation figures for each item on an ongoing basis as part of the item's circulation "history". It would thus not be possible to directly obtain the circulation figures for any item for a specific month, but one could, for example, calculate the figures for the month of May by recording the count

at the beginning and end of the month and by doing a simple subtraction to obtain the actual figures in between the two dates (McBurnie, personal communication, April 1996). The systems librarian in the Linear Library was instrumental in setting up a remote terminal for the researcher with access to the bibliographic and circulation statistics for the SLC holdings. The terminal provided OPAC (BORIS) access for the researcher, similar to that which student users would have in the SLC, and additional searching capabilities for research purposes. BORIS provides users with onscreen information with regard to the availability and accessibility of sought items. The status of the items that the library owns is provided (for example: on loan, reserved, awaiting cataloguing, missing, or on order), and the exact location is given (shelf number, specific library). In addition, the number of copies for specific titles is also recorded.

The availability study could thus be conducted unobtrusively without interfering with user access to the limited number of OPAC terminals in the SLC. By initially searching for the titles in the sample, using author-title keywords or shelf numbers, the CRNs were recorded to facilitate subsequent searches. Current circulation figures as recorded on 2 May 1996 were noted on the checklists for each title in the sample. On 2 and 3 May 1996 an initial availability study was conducted as a pretest to determine the amount of time needed to search for all 300 titles and to physically check the shelves for those items supposedly available to detect any discrepancies, and to try and determine further reasons for the unavailability for those items not in circulation but nevertheless not on the shelves.

When measuring availability within a diagnostic framework, it is necessary to account for all the requested items including the multiple copies. Kantor (1984:46) suggests that each copy of a specific item should be counted as a fraction. This consideration was crucial in

assessing the availability of the SLC where multiple copies of journal articles are abundant, and where popular titles are frequently duplicated in anticipation of heavy use. Each copy must be accounted for as this could seriously distort the availability rates determined in a simulation study. In, reality the most popular titles may be sought by more than one user simultaneously. The only limitation to tallying fractions in the final data analysis is that one does not always obtain whole figures due to the rounding off of decimals. Nevertheless, it is still possible to interpret the results in terms of acceptable or unacceptable availability rates. Wherever possible, the calculations in this study are rounded off to the first decimal.

In a simulated availability study the items need to be checked quickly and thoroughly to determine their status before it is altered. The pretest showed that it was possible to check 150 items on the OPAC and to follow up with a shelf-check within a three to four hour period. Two time periods were chosen for checking the items, the first between 09h00 and 12h00 and the second between 15h00 and 18h00. These periods were identified by the researcher as being steadily busy periods in the SLC, by observing the activities in the SLC and by speaking to the staff at the checkout desk. Although the SLC remains open until 22h00 on Mondays to Thursdays, overnight items are checked out from 15h00 and thus those titles in heavy demand are unlikely to be available later in the evening. In order to obtain a true picture of the overall availability rate in the SLC during the month of May, the study was to be replicated twice as there was speculation that the initial high availability rate recorded by the pretest, would decline substantially as the pre-examination period drew closer towards the end of May. Thus the study was to be repeated in the same manner during the last week of May, just before the study week, when the students were preparing for their June examinations, and completing outstanding assignments. The user survey

(cf. **chapter 5**) was to take place during the study week to provide qualitative data and to discern whether or not the availability rates in the SLC fluctuated substantially at different times of the semester.

The same random sample of 300 titles was checked on BORIS to determine the loan status of the individual titles. Once again, for practical purposes, the first 150 titles were checked in the morning during 09h00 and 12h00, and the second 150 titles were checked in the afternoon between 15h00 and 18h00. The two groups were alternatively checked the next day during the same time periods so that each group was checked once in the morning and once in the afternoon. The final morning and afternoon availability rates were calculated by combining the four groups of 150 titles into 300 titles for a morning availability rate and 300 titles for an afternoon availability rate, respectively. After the initial OPAC check, the items deemed to be available for loan, were sought on the shelves to determine if this was the case. The reasons for the unavailability of titles on the shelves were traced and all the factors influencing the accessibility and availability of SLC materials were recorded. At the same time the final circulation figures for the 300 titles and their individual copies, were recorded so that the circulation figures for the month of May for each item could be calculated to provide further insight into the availability rates derived from the two studies.

A perusal of the results of the second study indicated that the availability rate had not decreased significantly, and was surprisingly high. It was thus important to analyse the reasons for this phenomenon. High availability is frequently a result of low circulation and it was in this light that the circulation statistics could prove enlightening. Library managers must use availability measures, as indicators of library effectiveness, with caution and interpret them in the light of other substantiating factors: for example, low availability rate and high circulation rate per

capita and high turnover rate, may suggest good or inadequate library performance depending on the interpretation thereof.

### **4.3 Results and interpretation of the data**

#### **4.3.1 The use of Kantor's branching technique for displaying the results**

In the early 1980s, the Association of Research Libraries (ARL) engaged Kantor to devise and test performance measures which could serve as useful tools for its libraries. The primary measures addressed in Kantor's manual are those of availability and accessibility. Availability is defined as the "fraction of all needs for specific documents which are promptly satisfied" and accessibility is defined as the obstacles to meeting those needs in terms of effort (time and cost to the user) and delay (the waiting time for receiving the desired item) (Kantor, 1984:3). Kantor devised a format to visually show how availability is affected by the accessibility of materials, as well as the diverse characteristics and psychological motivations of the users.

This study will follow Kantor's acronymic scheme, in which "M" stands for "Measurement", "AV" stands for "Availability", and the components of MAV include: MAV-ACQ (the probability that the library has acquired the item sought), MAV-CAT (the probability that the user can locate the item in the catalogue), MAV-CIRC (the probability that the item is not circulating), MAV-LIB (the probability that the items not circulating can be found in their correct locations on the shelves), MAV-USER (the probability that the user can locate the item on the shelf) (Kantor, 1984:4-5). The specific availability measures can be presented in a table or in a "branching diagram" with the prefix "D" representing the correct

number of "dissatisfactions" or "disservices" associated with each cause. The results are easy to interpret when the branching diagram is used.

As stated at the beginning of this chapter, Kantor's branching diagram was used to calculate the overall availability rate for the random sample of 300 titles at the beginning of May and the sample of 299 titles at the end of May 1996. At the end of May 1996, one title had been inadvertently removed by the library staff, apparently at the lecturer's request. This particular title had circulated very heavily during the first two weeks of May, but a final circulation count was unavailable because this title was removed from the automated system when it was weeded sometime towards the end of May. Only the components of MAV-ACQ, MAV-CIRC, and, MAV-LIB from Kantor's acronymic scheme were used in the simulation study, because it was not possible to determine the extent of the users' skills. The interrelationship between the users and the intellectual and physical accessibility of materials, can be revealed by the MAV-CAT (the measure of the user's skill at the catalogue) and MAV-USER (a measure of the user's skill at the shelf) when determining overall materials availability. These measures could be assessed in the qualitative study conducted at the end of May prior to the June examinations.

|   |                        |                          |
|---|------------------------|--------------------------|
| Pretest:-                               |                        |                          |
| 300 titles requested                    |                        |                          |
| 294 titles acquired                     | Acquisition barrier    | 6 not acquired           |
|   | $P_A = 294/300 = 0.98$ |                          |
| 284 titles not in circulation           | Circulation barrier    | 10 titles in circulation |
|   | $P_C = 284/295 = 0.96$ |                          |
| $P = P_A \times P_C = 0.98 \times 0.96$ |                        |                          |
| $= 0.94$                                |                        |                          |
| $= 94\%$                                |                        |                          |

Figure 4a: Morning availability (beginning of May 1996)

**Morning availability (beginning of May 1996):-**300 titles requested<sup>1</sup>

294 titles acquired

Acquisitions barrier

6 titles not acquired<sup>2</sup>

$$P = 294/300 = 0.98 \text{ (DACQ)}$$

278.4 titles not  
in circulation

Circulation barrier

15.6 titles in circulation

$$P = 278.4/294 = 0.95 \text{ (DCIRC)}$$

238.2 titles in correct  
location on shelves

Library barrier

40.2 titles not in SLC

$$P = 238.2/278.4 = 0.86 \text{ (DLIB)}$$

[3.2 titles in Linear (3-day loan)<sup>3</sup>

$$P = P \times P \times P$$

$$= 0.98 \times 0.95 \times 0.86$$

$$= 0.80$$

$$= 80\%$$

11.8 titles misshelved;

6.8 titles to be shelved;

18.4 unaccounted for]

**Afternoon availability (beginning of May 1996):-**

300 titles requested

294 titles acquired

Acquisitions barrier

6 titles not acquired

$$P = 294/300 = 0.98 \text{ (DACQ)}$$

275.8 titles not  
in circulation

Circulation barrier

18.2 titles in circulation

$$P = 275.8/294 = 0.94 \text{ (DCIRC)}$$

254.7 titles in correct  
location on shelves

Library barrier

21.1 titles not in SLC location

$$P = 254.7/275.8 = 0.92 \text{ (DLIB)}$$

[3.2 titles in Linear (3-day loan)

$$P = P \times P \times P$$

$$= 0.98 \times 0.94 \times 0.92$$

$$= 0.85$$

$$= 85\%$$

7 titles misshelved;

1 title to be shelved;

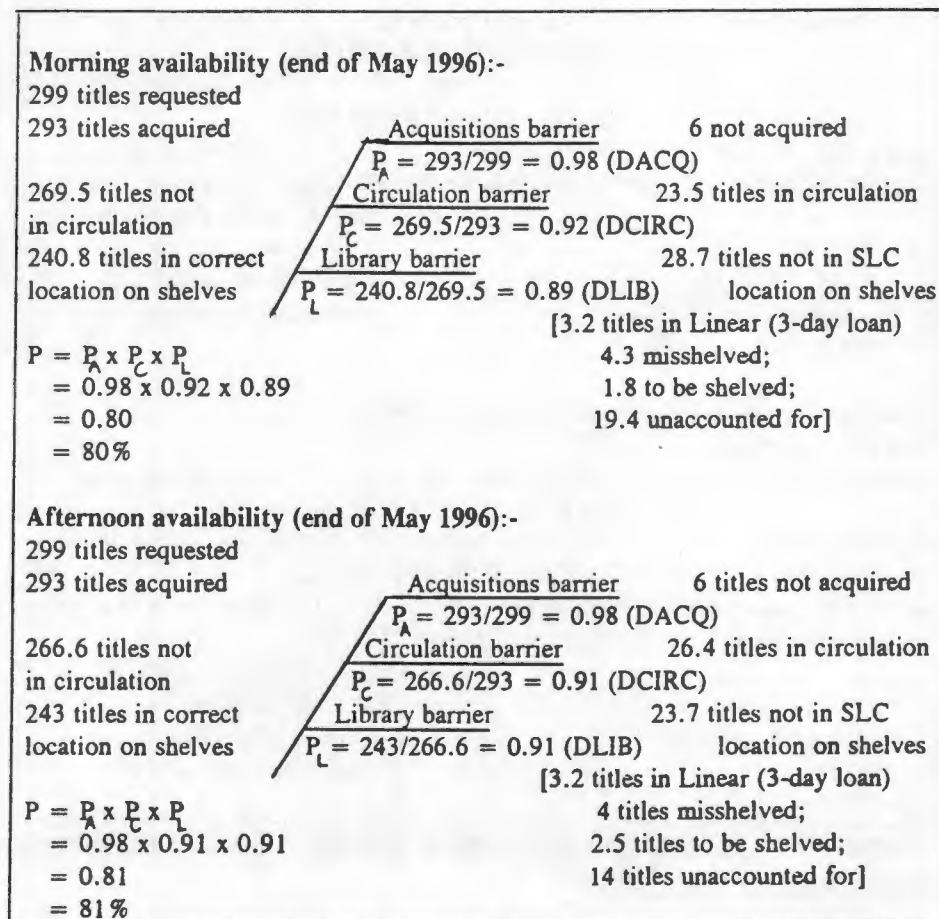
9.9 titles unaccounted for]

**Figure 4b: Availability rates using Kantor's branching diagram (beginning of May 1996)**

<sup>1</sup> As explained in 4.2, 150 titles were checked in the morning and 150 titles in the afternoon on the first day and then checked again on the following day, but alternated so that each of the 300 titles was checked once in a morning session and once in an afternoon session within a two-day period. The morning and afternoon availability rates reflect the combined checking of the morning and afternoon sessions respectively.

<sup>2</sup> These titles were on the reading lists for SL, but were not recorded in the SLC.

<sup>3</sup> The SLC does not house the 3-day loan period books, although they are processed in the SLC. These books are kept on the open stacks in the main Linear Library and are issued there (cf. 1.5.1).



**Figure 5: Availability rates using Kantor's diagram (end of May 1996)**

If one considers the results of the first simulation study conducted at the beginning of May and depicted in Figure 4b, DACQ is 98 for both the morning and afternoon studies, DCIRC is 95 (morning) and 94 (afternoon), and DLIB is 86 (morning) and 92 (afternoon). Thus in the morning study, of the 300 titles sought, 294 were acquired by the library for the SLC, a performance of MAV-ACQ = 98%. Of the 294 titles acquired, 15.6 titles were circulating, a performance of MAV-CIRC = 95%. Some 40.2 titles were not found in the SLC in their correct locations, a performance measure of MAV-LIB = 86%. These factors combined indicate an overall MAV of 80% (the product of the individual probabilities, converted into a percentage), which is a high availability rate for academic libraries, particularly for supposedly high-demand

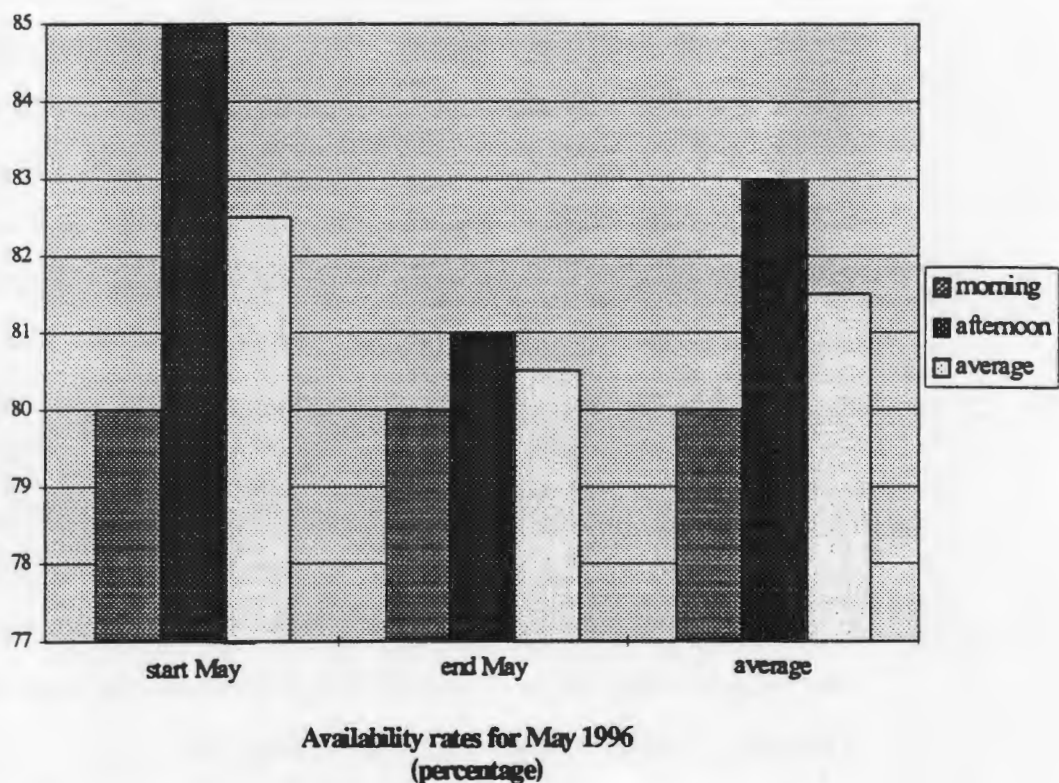
materials. The lowest availability factor for the first morning study is due to the library itself (DLIB is 86) and may involve the library procedures of reshelving, shelf-reading, and security measures.

Although the MAV-LIB of 86% is high, it still needs investigation because the "missing" or unaccounted for items are likely to be those in the highest demand and thus they represent true unavailability. In a qualitative user study where the actual number of requests for a specific item can be recorded, the MAV-LIB rate might be considerably lower for these items. The MAV-LIB can be subdivided into various categories to distinguish between those items that cannot be traced, and those items that are found to be misshelved, on the trolley awaiting reshelving, or not immediately available because they are housed in the Linear open shelves (3-day loan) (cf. 1.5.1). Electronic security systems could help to lessen the likelihood of items being illegally removed from the library or special facility such as a short loan or reserve collection. Efficient shelving and shelf-reading policies could help to minimise the misshelving of items and to locate items that have been deliberately misplaced by users. It is significant that this study has indicated that of the items that should be on the shelves but are unaccounted for, an average of 55% ( $18.4/40.2 = 0.46\%$ ;  $9.9/21.1 = 0.47\%$ ;  $19.4/28.7 = 0.67\%$ ;  $14/23.7 = 0.59\%$ ) will not be traced at all, although the researcher found that they could re-appear, unpredictably, at some stage in the future. The individual percentages were derived by taking items that are unaccounted for as a fraction of the sought titles not in the SLC at the time of each investigation in the simulation study.

Kantor (1984:51) also found that half of the items which fall into the DLIB category will not be located. Jacobs (1995:50-51) recorded 1% of the short loan collection being formally registered as missing in the Sussex University Library (cf. 2.5.3), but noted that the

reserve collection was disturbingly under-utilised despite being regarded as “the safety net of provision for taught courses at the university”. The high availability rates determined in the SLC at UCT could likewise be due to the under-utilisation of the collection.

Similarly, the results of the other three availability studies can be interpreted in the same way by reading off the respective MAV-ACQ, MAV-CIRC, and MAV-LIB values. The graph (cf. **Figure 6**) gives a visual portrayal of the morning and afternoon availability rates and the average availability rate for the month of May 1996 as determined by the study.



**Figure 6: Morning and afternoon availability rates for May 1996**

The overall availability rate dropped at the end of May for the afternoon study (from 85% to 80%) which was to be expected as the examinations approached and final assignments for the semester were due. The results of this simulation study might also be high because the users' skills in identifying and locating items could not be assessed and because the number of requests for any item at any particular time could not be determined.

The overall MAV can be monitored periodically and compared with similar collections of other academic libraries, but the most valuable facet of an availability study using Kantor's branching diagram, is the ability to compare individual performance factors with each other and to determine the most beneficial area of improvement (Kantor, 1984:49). The more categories and subcategories that are analysed, the greater the cost, and hence the necessity for prudent decision-making in the initial planning stages. For subject breakdowns smaller classes must contain enough items to give statistically significant results. For the purposes of this study, the high MAV-ACQ indicates collection adequacy, although a few items were not acquired specifically by the SLC and this could be due to faulty communication between the academic staff concerned and the SLC library staff. Of greater concern, is the fact that one item that was required for the second quarter of the first semester, took the entire month of May to be catalogued and only appeared on the OPAC in early June 1996, the end of the first semester. Other items not acquired by the Linear SLC could be traced to other branch libraries' SLCs, where they also had restricted status, but were less accessible for those students who were primarily using the main library's SLC.

A low MAV-CIRC may indicate that there is circulation interference among the few heavily circulating items due to high demand, or that the collection lacks relevancy and currency. The few titles in greatest demand may not require duplication if their popularity is likely to dissipate after a brief period. The academic staff concerned should assist with these subjective decisions by adequately informing the library as to the nature of the materials, when they will be needed, and for how long. The MAV-LIB scores have the potential to uncover various layers of inaccessibility that ultimately affect the immediate availability of high-demand materials. The subcategories are numerous and include library procedures such as the processing, shelving, and recall of materials, to the circulation policies involving loan periods, reservations, and penalties for overdue items. The contentious security issues of theft, deliberate misplacing, and the defacing of library materials (cf. 5.3.4) may also need to be addressed in this category. Library policies may need to be reviewed and new innovations introduced to make items more accessible and to lessen the frustration of users searching for important study materials. For, example, the simulation study and the user survey study showed that the "book-in-hand" reservation policy (cf. 1.5.1), a prerequisite for advanced bookings, caused considerable dissatisfaction amongst students wanting to reserve materials but unable to do so because the material was in circulation and thus not physically available. Overdue books were also responsible for the unavailability of items in the most active section of the collection, according to students interviewed in the user survey (cf. 5.3.4).

The problems of misshelved and "missing items" were often caused by the users themselves, but the library shelf-reading process could be inefficient, as many of the items recorded as being "misshelved" or "missing" at the beginning of May when shelf checks were done by the researcher, were still misshelved or unaccounted for at the end of May.

This is a grave problem, because these items may have circulated more frequently and been in heavier demand if they were available in their correct locations on the shelves. According to the SLC librarian, each SLC staff member is expected to do 30 minutes of shelf-reading a week, but this is not always done thoroughly due to time constraints. The library needs to be informed of the materials that students cannot trace, and the reasons for their failure to retrieve the required materials so that the situation can be assessed continuously. This will promote a more efficient and satisfactory service for the users, and will facilitate a sense of accountability and dual ownership between the staff and the students.

#### **4.3.2 The use of a “correction factor” for undiagnosed failures**

Kantor (1984:48) suggests that a “correction factor”, (All reported failures)/ (analysed failures), be used in calculating availability rates when using his branching diagram: “The meaning of the correction factor is that the unreadable, unfound items do represent true unavailability. But we do not have a chance to find out the cause. We therefore adjust each observed cause of unavailability slightly up, so that the calculated MAV [overall availability] values take this into account”. When using the correction factor these items are distributed evenly amongst all the categories used as they could in fact fall into any of the categories if the reasons for their unavailability could be analysed.

It is difficult for the library staff to shelf-read on a regular basis to keep up with the number of books that are misshelved by the students, or to try and trace the missing items which were not reported to them. The method used in this study incorporated the tally of missing or unaccounted for items, in the library barrier category (DLIB). The “correction factor” is useful if one suspects

that the failure rates for any of the other categories may in fact be higher than that recorded without the correction factor because of the likelihood that some of the missing items may fall within these categories. As the SLC online catalogue indicated that the "missing" items in this study were acquired, and were not in circulation, and as there is no category for user error, it can be assumed that they fall into the library barrier category, but remain unanalysed in terms of the reasons for unavailability. The availability rates for this study were recalculated by applying the "correction factor" to determine whether the rates were significantly affected by this step (see **Figures 7 and 8**).

**Morning availability (beginning of May 1996):**

DACQ: 5 titles not acquired for SLC

1 title awaiting cataloguing

DCIRC: 15.6 titles in circulation

DLIB: 3.2 titles housed in Linear (3-day loan)

11.8 titles misshelved

6.9 titles on trolley to be shelved

(18.4 titles unaccounted for)

correction factor = (all reported failures)/(analysed failures)

$$= (300-238.2)/(43.4) = 61.8/43.4 = 1.4$$

DACQ:  $6 \times 1.4 = 8.4$ DCIRC:  $15.6 \times 1.4 = 21.8$ DLIB:  $21.9 \times 1.4 = 30.7$ 

Acquisitions barrier

$$P_A = (300-8.4)/300 = 291.6/300 = 0.972$$

Circulation barrier

$$P_C = (291.6-21.8)/291.6 = 269.8/291.6 = 0.925$$

Library barrier

$$P_L = (269.8-30.7)/269.8 = 239.1/269.8 = 0.886$$

$$\begin{aligned} P &= P_A \times P_C \times P_L \\ &= 0.97 \times 0.93 \times 0.89 \\ &= 0.80 \\ &= 80\% \end{aligned}$$

**Afternoon availability (beginning of May 1996):-**correction factor =  $(300-254.7)/36.1 = 45.3/35.4 = 1.3$ DACQ:  $6 \times 1.3 = 7.8$  titles not acquiredDCIRC:  $18.2 \times 1.3 = 23.7$  titles in circulationDLIB:  $11.2 \times 1.3 = 14.6$  titles in Linear, misshelved, or to be shelved.

Acquisitions barrier

$$P_A = (300-7.8)/300 = 292.2/300 = 0.974$$

Circulation barrier

$$P_C = (292.2-23.7)/292.2 = 268.5/292.2 = 0.918$$

Library barrier

$$P_L = (268.5-14.6)/268.5 = 253.9/268.5 = 0.945$$

$$\begin{aligned} P &= P_A \times P_C \times P_L \\ &= 0.97 \times 0.92 \times 0.95 \\ &= 0.85 \\ &= 85\% \end{aligned}$$

**Figure 7: Availability analysis using a correction factor (beginning of May 1996)**

**Morning availability (end of May 1996):-**

correction factor =  $(299-240.8)/38.8 = 58.2/38.8 = 1.5$

DACQ:  $6 \times 1.5 = 9$  titles not acquired

DCIRC:  $23.5 \times 1.5 = 32.3$  titles in circulation

DLIB:  $9.3 \times 1.5 = 14$  titles in Linear, misshelved, or to be shelved.

## Acquisition barrier

$$P_A = (299-9)/299 = 290/299 = 0.969$$

## Circulation barrier

$$P_C = (290 - 32.3)/290 = 257.7/290 = 0.886$$

## Library barrier

$$P_L = (257.7-14)/257.7 = 243.7/257.7 = 0.945$$

$$\begin{aligned} P &= P_A \times P_C \times P_L \\ &= 0.97 \times 0.89 \times 0.94 \\ &= 0.81 \\ &= 81\% \end{aligned}$$

**Afternoon availability (end of May 1996):-**

correction factor =  $(299-243)/42.1 = 56/42.1 = 1.3$

DACQ:  $6 \times 1.3 = 7.8$

DCIRC:  $26.4 \times 1.3 = 34.3$

DLIB:  $9.7 \times 1.3 = 12.6$

## Acquisition barrier

$$P_A = (299-7.8)/299 = 291.2/299 = 0.974$$

## Circulation barrier

$$P_C = (291.2-34.3)/291.2 = 256.9/291.2 = 0.882$$

## Library barrier

$$P_L = (256.9-12.6)/256.9 = 244.3/256.9 = 0.95$$

$$\begin{aligned} P &= P_A \times P_C \times P_L \\ &= 0.97 \times 0.88 \times 0.95 \\ &= 0.81 \\ &= 81\% \end{aligned}$$

**Figure 8: Availability analysis using a correction factor (end of May 1996)**

As can be seen from the availability analyses using the correction factors, the overall availability rates of 79%, 85%, 80% and 81%, are almost identical to the ones achieved without the correction factor, namely: 79%, 86%, 80%, and 81%. The individual values for the various categories have changed because the proportion of unanalysed failures are more evenly dispersed among the various categories, and not solely included in the DLIB category. This is important if one suspects that the unanalysed failures are likely to fall into other categories, which must then be assessed in terms of the correction factor. Sometimes it is difficult to distinguish between the DLIB category and the DCAT or DUSER categories in terms of the reasons for not locating material that is theoretically available. For the purposes of the simulation study, however, it will suffice to categorise the missing items in the library barriers category, as the potential for user error was controlled by the single researcher, familiar with the OPACS and shelf arrangements.

#### **4.3.3 The use of confidence intervals to assess the accuracy of the results**

The statistics collected and generated in a study of this kind are primarily descriptive and therefore it is important that they do not present misleading information. Descriptive statistics, based on random sampling, can depict a more holistic picture provided that they are within acceptable confidence intervals. Kantor (1984:19), and Van House, Weil and McClure (1990:63-64) discuss the use of confidence intervals in the interpretation of the results of availability studies and propose that the 95% confidence interval be used for samples of 300 to 500 items. There is a relationship between the size of the sample and the confidence interval, with the confidence interval narrowing as the statistical sample increases. The cost of substantially increasing

the sample is often not warranted, because of diminishing returns and thus the library must decide what level of precision it finds acceptable. The 95% confidence interval is always bigger than the 90% confidence interval and implies that one in every 20 studies may be incorrect as opposed to one in every 10 cases for the 90% confidence interval (Kantor, 1984:21-22). The 95% confidence limits for the availability rates determined in May 1996 (see Table 2) were calculated using the formula associated with Bernoulli trials, as explained in Kantor (1984:21; 55). The confidence interval around each estimate is important because "it means that *small changes in measurement results based on samples may be due only to sampling error*" (Van house, Weil & McClure, 1990:64). The Bernoulli distribution assumes that very high (close to 100 percent) or very low (close to 0 percent) availability rates are less likely to be the result of such sampling error. As can be seen from the formula, they are therefore attributed with lower standard errors and narrower confidence intervals than availability rates that lie closer to 50 percent.

|  |              | <u>Value</u> |              |              | <u>Average</u> |
|--|--------------|--------------|--------------|--------------|----------------|
| MAV-ACQ  | 98           | 98           | 98           | 98           | 98             |
| MAV-CIRC   | 95           | 94           | 92           | 91           | 93             |
| MAV-LIB  | 86           | 92           | 89           | 91           | <u>89.5</u>    |
| <u>95% confidence limits</u>                               |              |              |              |              |                |
| MAV-ACQ  | 96.4 to 99.6 | 96.4 to 99.6 | 96.4 to 99.6 | 96.4 to 99.6 | 96.4 to 99.6   |
| MAV-CIRC   | 92.5 to 97.5 | 91.3 to 96.7 | 88.9 to 95.1 | 87.7 to 94.3 | 90.1 to 95.4   |
| MAV-LIB  | 83.8 to 88.2 | 88.8 to 95.2 | 85.4 to 92.2 | 87.6 to 94.4 | 86 to 93       |
| STD ERR = $\sqrt{P(100-P)/N}$                              |              |              |              |              |                |
| P = the measured percentage value                          |              |              |              |              |                |
| N = number of items in the sample [N = 300; 300; 299; 299] |              |              |              |              |                |
| 95% range: [P-(2*STD ERR), P+(2*STD ERR)]                  |              |              |              |              |                |

**Table 2: 95% confidence intervals for the May 1996 availability rates**

As calculated in Table 2, the confidence intervals for the acquisition category are all within 1.6 percentage points of the measured percentage value, indicating a high level of confidence in the calculated estimate. The confidence intervals for the circulation category range from 2.5 to 3.1 percentage points of the measured values. The percentage points difference for the library category is even larger than for the other two categories, ranging from 2.2 to 3.5 percentage points. Thus less confidence can be placed on these last two sets of calculated estimates. However, given the large sample size of  $N=300$ , even these confidence intervals are narrow enough for the results to be considered robust.

#### **4.4 The link between availability rates and circulation statistics**

Despite the controversy over use studies in collection evaluation (cf. 2.2), indicators of use, such as circulation figures, can be of immense value to appropriate collection development, if used in conjunction with availability studies. Data analysed from circulation statistics can be used to identify materials that are likely to be used in the near future and which could form the basis of a core collection for specific user groups. Those titles with the highest circulation, are often unavailable because they are on loan and multiple copies may be needed to satisfy the users' demand for them. "Automated circulation systems enable evaluators to quickly collect information about which items should be duplicated. Because each item in the system must carry a unique identifying number, librarians can readily identify the items that are most and least used. This information can form the basis for duplication and future purchase decisions or for that matter, for decisions to retire materials altogether" (Baker & Lancaster, 1991:91-92).

As many students use the OPACs for subject searching, it is also useful to use circulation statistics and availability rates for subject analyses. A

heavily under-used class may contain obsolete materials or materials that do not meet the needs of the present user groups. This class may need to be weeded, and replaced with newer, more pertinent materials. An over-used class may need to be strengthened because it cannot meet the needs of present and potential users. This class will frequently have materials that are unavailable, and duplicate copies or new additions that cover specific subjects may need to be purchased.

In reserve and short loan collections with closed access (or where there is no seating provided within the collection) "loan statistics provide an accurate picture of the use of individual items" (Workman, 1991:147). As Peasgood (1986:243) notes, the justification for the transfers and purchases for short loan or reserve collections, is the ability to satisfy the demand for these popular titles that would otherwise have been frustrated. Such collections have to be carefully monitored and the issue statistics routinely analysed because of the costs involved in processing the materials and maintaining the collection. The most heavily used titles can be identified from the automated circulation system and in this way "a staff-intensive collection can be restricted in size and titles no longer in heavy demand cease to have their availability unnecessarily decreased by a very short loan period" (Workman, 1991:147). Recorded use in many large libraries is low, and mistakes in collection development are costly in that limited funds may be better spent on expanding areas of real need than on buying, processing and storing materials that will never be used. High availability rates may be accompanied by low circulation figures indicating an outdated, or under-used collection. "Material in a library's collections may no longer be in use for a variety of reasons. The wrong material may have been selected in the first place. Reading lists for courses may have been updated or the courses themselves may have been altered" and the library staff not notified to take corrective steps (Workman, 1991:147-148). Research interests may have changed,

courses may have been restructured and thus a large component of the collection may have fallen into comparative disuse. Weeding will help to restore the relevancy of the core collection. The analysis of circulation statistics, alongside quantitative availability rates across faculty and format, can be of value in maintaining a dynamic, relevant short loan collection (cf. **Figure 9** and **Tables 3-4**). Metz and Litchfield (1988:512-513) found that circulation statistics are remarkably stable over time, and that 3-day samples of circulation counts can give reliable estimates of the overall circulation activity.

#### **4.4.1 Analysis of circulation statistics for May 1996**

If one compares the circulation transactions for the Linear SLC over the past few years (1991-1995), there was an increase of 2.49% in the total circulation transactions from 1991-1992, then a sharp decline of 11% from 1992-1993 (University of Cape Town Libraries Statistical Reports, 1992-1993:11). In 1994, a decrease of 4.99% from 1993-1994 was recorded, and in 1995 there was a slight increase of 1.24 % above the 1994 figures (University of Cape Town Libraries Statistical Reviews, 1994-1995:21;17). The total number of circulations in 1992 show a 14.43% overall decrease to the total number of circulations recorded in 1995, thus depicting a declining pattern of use in the SLC. This trend is reflected in the circulation statistics for the Linear Library overall, whereby the SLC was responsible for 54.5% of the total number of items issued in the Linear Library in 1992 and for 48.46% in 1995.

From the BOOK plus monthly statistics summary (cf. **1.5.1; Appendix B.5**) for the period 01/05/1996 to 31/05/1996 for the SLC, it is clear that 23% fewer items were borrowed this year compared to the same period last year. There was a slight decline of 4% for the number of catalogue enquiries, and 15% more of the enquiries were unsuccessful compared to

last year's figures. Thus there was a decline in the use of the SLC in May 1996 compared to May 1995 and more of the catalogue enquiries were unsuccessful, the reasons for which are not known from the statistics summary (University of Cape Town Libraries Production System, 1996:23-24).

The circulation statistics for the titles used in the simulated study, gleaned from the automated library system for the month of May 1996 (cf. **Figure 9**), revealed that many of the SLC materials were not heavily circulating although they constituted required or prescribed reading for undergraduate students. These materials are part of the "deadwood" of the SLC and could easily be relegated to 3-day loan status. This would ensure improved availability to the small number of students wanting to use them, and less frustration for the SLC staff who have contend with an ever-increasing collection that is difficult to maintain and control and not equally in high demand. The 3-day loan books (cf. **1.5.1; 4.3.1**) are kept on the open stacks in the main Linear Library and are issued there. As a result their circulation statistics are not reflected in the SLC circulation statistics, and had to be obtained from the date stamps in the books. In-library use of the materials that were not officially checked out, could not be determined.

N= 300 titles

176/300 = 58.7% circulated during May 1996.

46/300 = 15,3% circulated > 10 times

10/300 = 3,3% circulated > 50 times

5/300 = 1,7% circulated > 100 times

Breakdown of the number of titles that circulated during May in the SLC sample, according to faculty:-

Arts: 107/170 = 62.6%

Science: 21/42 = 50%

Soc.Sci./Comm. = 48/88 = 55.2 %

124/300 = 41.3% of the titles did not circulate at all during May 1996.

Breakdown of the number of titles that did not circulate at all during May in the SLC sample, according to faculty:-

Arts: 63/170 = 36.8%

Science: 21/42 = 50%

Soc.Sci./Comm.: 40/88 = 46%

57/300 = 19% of the titles did not circulate at all for the first semester 1996.

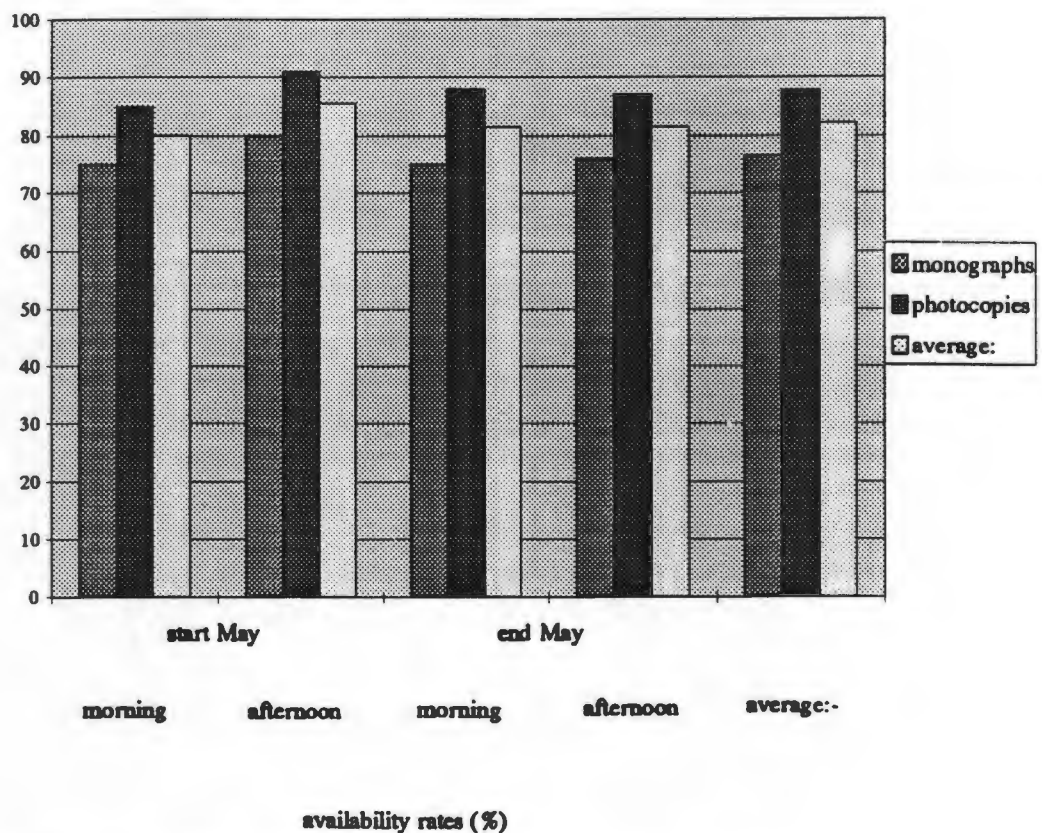
**Figure 9: Circulation statistics for May 1996**

A review of the usage of SLC photocopies at Aston University (cf. 3.1.1), revealed that "although non-used items are deleted from the SLC at the end of each session,...during the last session 50% of items had not been used, and a further 16% had been used only once. At a conservative estimate, this has wasted about five hundred hours of staff time!" (Smith, 1993:95). This dilemma is evident to a lesser extent in the UCT SLC, where the circulation statistics indicated that 41.3% of the titles did not circulate at all during May 1996, and 19% did not circulate during the first semester. The necessity of excess multiple photocopies is questionable if one considers that 15 of the titles with 10 or more copies, never circulated during May and 3 of the titles with 10 or more copies never circulated at all during the first semester.

In **Table 3** and **Figure 10**, it can be seen that the availability rates for photocopies are much higher than for monographs. The breakdown of the circulation statistics across faculty and format for May 1996 can be compared to the availability rates across faculty and format for the same time period, to observe trends. In the Arts faculty, 36% of the sample titles did not circulate during May 1996, compared to 50% of the titles from the Science faculty and 46% of the titles from the Social Science/Commerce faculty. Thus more titles were circulating in the Arts faculty than in the other faculties and this goes hand-in-hand with the lower availability rates for the Arts faculty (see **Table 4**).

| format                   | start May |           | end May |           | average |
|--------------------------|-----------|-----------|---------|-----------|---------|
|                          | morning   | afternoon | morning | afternoon |         |
| monographs <sup>1</sup>  | 75%       | 80%       | 75%     | 76%       | 76.5%   |
| photocopies <sup>2</sup> | 85%       | 91%       | 88%     | 87%       | 87.8%   |
| average                  | 80%       | 85.5%     | 81.5%   | 81.5%     | 82.1%   |

**Table 3: Availability rates across format for May 1996**



**Figure 10: Availability rates across format for May 1996**

<sup>1</sup> Monographs constituted  $173/300=57.7\%$  of the sample titles.

<sup>2</sup> Photocopies comprised  $127/300=42.3\%$  of the sample titles.

| faculty              | start May |           | end May |           | average |
|----------------------|-----------|-----------|---------|-----------|---------|
|                      | morning   | afternoon | morning | afternoon |         |
| Arts                 | 74%       | 83%       | 76%     | 78%       | 77.8%   |
| Science              | 78%       | 86%       | 78%     | 82%       | 81%     |
| Soc.Sci/<br>Commerce | 86%       | 87%       | 89%     | 85%       | 86.8%   |
| average              | 79.3%     | 85.3%     | 81%     | 81.7%     | 81.8%   |

Table 4: Availability rates across faculty for May 1996

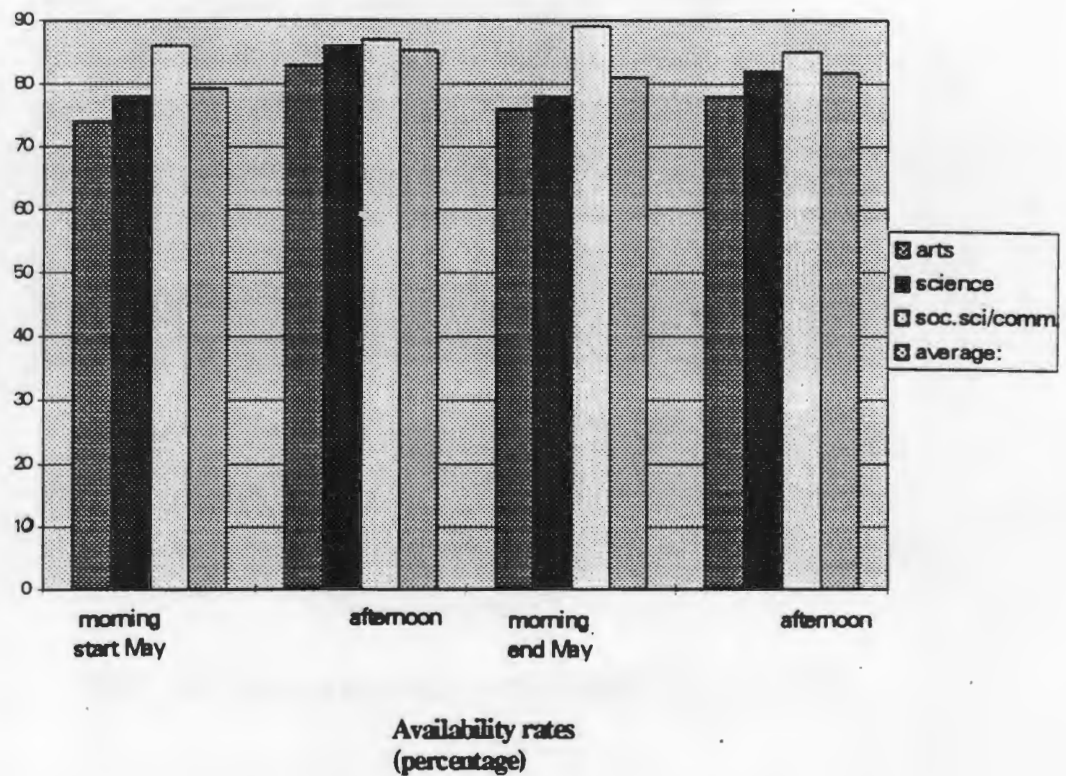


Figure 11: Availability rates for May 1996

#### **4.5 Conclusions**

The simulated availability study, in conjunction with the analysis of circulation statistics, suggested that only a small percentage of items in the SLC were in heavy demand and that the most serious availability problems existed with the limited number of core monographs. These materials were more often on loan, overdue, reserved, misshelved, misplaced or illegally removed, thus rendering them inaccessible to the majority of the students. The abundant number of excess photocopies resulted in a high availability rate, but also created unnecessary costs for the SLC as many were never used. The user study served to confirm these observations, while providing qualitative data concerning the current demands and experiences of the undergraduate users of the SLC.

The first part of the report deals with the general situation of the country and the progress of the work during the year. It is followed by a detailed account of the various projects and the results achieved. The report concludes with a summary of the work done and a list of the publications issued during the year.

## **Chapter 5: The user study: A qualitative availability study**

### **5.1 Background**

The most important of the collection management performance indicators suggested by Winkworth (1991) is that of the relevance of the collection in terms of meeting the users' actual needs. The second priority is given to document delivery in terms of the outputs of services designed to make sought-after items available as soon as possible to the users. "At any one time most of the 10 per cent most popular books will not be on the shelves. Special collection provision for students, such as undergraduate collections, short loan collections or reference collections, may compensate in part. But there is always an element of 'collection bias' defined non-technically as the extent to which the books most in demand are/ are not available on the shelves. Collection bias afflicts all library collections, always making the collection look less attractive to users than the library staff envisages" (Winkworth, 1991:76). The library can employ one of the established methods of testing availability through simulation (as conducted in **Chapter 4**) or user surveys (to be discussed in **Chapter 5**) to determine the "collection bias" or "shelf bias" and to address the possible reasons for it.

Some studies suggest that students largely ignore reading lists (cf. 3.1.1), but whether or not this is the case, is largely dependent on the teaching strategies employed by the academic staff, and the learning strategies adopted by the students (Winkworth, 1991:77). Winkworth recommends the user survey for availability testing, as the analysis of "actual user-experience" data more closely resembles user behaviour than the analysis of reading-list titles used in a simulation study. By assessing

the degree to which factors such as loan policies, catalogue design, and shelving arrangements affect availability, attention can be focused on those areas of the library service that need to be strengthened, but are often ignored because more emphasis is given to the quality of the stock than to the processes involved in providing physical access. Other factors affecting the outcome of users' searches include the ability to evaluate the material for relevance and reliability (Winkworth, 1991:77-79).

It is essential to assess delivery to discover hidden barriers to availability and to take corrective measures, as most users adjust their demands on the library because of past experiences and their perceived expectations of the library's document delivery capability (D'Elia, 1988:17; Revill, 1988:28). If they do not find what they want, they may either accept an inferior substitute, go elsewhere, or do without. In this case, the library will remain unaware of having failed to meet the users' needs. To a certain extent, the problems of patron failure, as opposed to library failure, can be addressed by using Kantor's method to identify the reasons for the unavailability of titles sought by patrons (D'Elia, 1988:20). For diagnostic purposes it is necessary to perform a "micro-evaluation analysis" to determine the precise cause of each unsuccessful search. Recent studies have revealed that up to 51% of the failed searches reported by users, involved titles that were actually available and accessible at the time of the search (D'Elia, 1988:19).

As was discussed in 2.5.1, not all researchers endorse the use of user surveys for assessing materials availability. D'Elia and Walsh (1982) question the value and validity of user surveys in measuring user satisfaction with library performance. The subjective, preconditioned responses obtained from users are said to be unreliable in distinguishing levels of service between different libraries.

D'Elia suggests that the reliability of materials availability rates is undermined by the random errors involving patron behaviour and sampling techniques:-

“The first possible source of error variation in the fill rates is the amount of unexplained variation among patrons - variation in the nature of the materials that they seek, variation in their ability to negotiate bibliographic systems, variation in their ability to negotiate the shelving system, variation in their evaluation of the materials that they do succeed in finding, variation in their willingness to participate in the materials availability survey, variation in the amount of time and effort that they are willing to expend in writing the results of all or perhaps just a self-selected subset of searches undertaken, and variation in their ability or willingness either to write complete and accurate titles or to differentiate clearly between titles and subject areas.....In short, there are so many possible sources of uncontrolled variation among patrons that could affect the estimation of fill rates for libraries and there are so many possible differences in the compositions of the samples drawn from different communities of patrons, that fill rates are not reliable measures of library performance” (D'Elia, 1988:20).

Despite these reservations with user surveys, authors such as Harris (1991) and Bessler (1990) assert the necessity of involving the end-user when assessing the effectiveness of aspects of the library service. Interviewing users is more costly and time-consuming, but may yield a greater response rate and provide more insight into user skills and hidden barriers affecting materials availability than quantitative measures including simulation studies and circulation statistics analyses. Patron-based availability studies focus on the actual needs of users and data is collected through the use of a questionnaire survey or interview schedule during a specific observation period. The reliability of the data depends on the total response rate obtained. A major limitation of the patron-

based availability study is that it cannot address the latent needs of potential users (Baker & Lancaster, 1991:155).

Authors such as Gorman and Howes (1989:148-151) and Bookstein (1982; 1985) illustrate the problems involved in using user-oriented measures of collection evaluation. Despite the consensus that past use is a reliable indicator of future use in large academic libraries, they caution that there are great variations in different subject areas and that use studies tend to measure current demands rather than the needs of potential users. Some authors such as Peasgood (1986), and Britten and Webster (1992), maintain that current demands are more important than future needs, thereby necessitating the "just-in-time" services discussed in 3.1.

Britten and Webster (1992:247) illustrate the value of collection-use statistics for "demand-driven collection development in an automated environment". They contend that the data stored in automated systems can reveal the common characteristics of high-use titles that would be indicative of future trends, within the context of the particular user environment. A collection development policy based on anticipated demand will minimise the purchase of items known to circulate infrequently and also be more reflective of current user needs. Demand-led acquisitions maximise current library use and justify expenditure in areas of high-demand (Peasgood, 1986:256).

User surveys have limited diagnostic and remedial value because of the subjectivity of the assessment process, but they do produce valuable qualitative data for a fuller picture of the effectiveness of the document delivery process. Despite the many pitfalls of user surveys, high priority must be placed on the needs of users who are the *raison d'être* of any library and the direct feedback and opinions obtained from users can

greatly influence library management, funding prospects, and the subsequent state of library services.

In addition to the quantitative simulation study of materials availability, it was thus deemed necessary to conduct a qualitative user survey to determine the extent of satisfaction that users experienced in obtaining prescribed materials timeously, and to glean information with regard to the patterns and frequency of undergraduate SLC use. Materials availability survey (MAS) forms (cf. 2.5.1) have been used in numerous studies (D'Elia, 1985; Van House, et al., 1987; Van House, Weil & McClure, 1990) to determine the degree of success achieved by a sample of users, in locating sought-after items. These studies provided the guidelines needed for interviewing a representative sample of undergraduate students in the SLC at the University of Cape Town, as will be discussed in 5.2.

## **5.2 Research method**

A brief questionnaire was drawn up (cf. Appendix B.6) and used by the researcher as a basis for interviewing students who made use of the SLC facilities during the first week of June 1996, the official "study week" (cf. 4.2) before the mid-year examinations. At this stage the students were actively pursuing material in preparation for the examinations, but they indicated to the researcher that they were prepared to be interviewed. In fact, most were eager to give their comments concerning the issue of availability and accessibility of SL materials, thereby displaying a co-operative attitude towards assessing the SLC service.

Only a limited number of students could be interviewed by the researcher single-handedly, and this is major limitation in a research project of this kind. There is no doubt that a well-executed team effort

could produce an availability study of greater proportions than the one undertaken in this case. The research method is extremely time-consuming and labour-intensive, especially if it is undertaken for diagnostic purposes in which case the reasons for not being able to obtain materials must be followed up immediately. Nevertheless, a single researcher can interpret the collected data more consistently, without the influence of multiple personalities.

Given the above-mentioned constraints, the user survey was conducted between 9h00 and 12h30 for three days during the week of the study break. Every 3rd student approaching the exit door of the SLC, was approached for an interview regarding the purpose of the visit to the SLC, the number of items sought, the number of items found, and the reasons for not obtaining the desired items. Other questions put to the interviewees concerned their year of study and courses enrolled for, their SLC use patterns, and the level of their library skills. As this study was centred around the use of high-demand materials by undergraduate students, postgraduate students were excluded from the sampling process. During sporadically busy periods of the morning, every 5th student was approached. In this way, a broad spectrum of students was interviewed and interviewer bias (involving subjective decision-making to interview certain patrons and not others, according to the interviewer's own biases or criteria), was limited in the random sampling of every fifth student. A few students were amenable to a more comprehensive interview and returned later for additional comments.

### 5.3 Results of the user survey

#### 5.3.1 The demographics and satisfaction rate of the SLC users

| (N=95 students) |           |           |           |           |           |           |           |           |           |           |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Year            | Faculty   |           |           | Total     | Language  |           | Gender    |           | Problems  |           |
|                 | Arts      | Science   | Soc.Sci.  |           | English   | Other     | Male      | Female    | BORIS     | Shelf     |
| first           | 18        | 12        | 9         | 39        | 24        | 15        | 22        | 17        | 14        | 15        |
| second          | 10        | 5         | 17        | 32        | 18        | 14        | 11        | 21        | 10        | 12        |
| third           | 8         | 3         | 13        | 24        | 15        | 9         | 7         | 17        | 12        | 7         |
| <b>Total</b>    | <b>36</b> | <b>20</b> | <b>39</b> | <b>95</b> | <b>57</b> | <b>38</b> | <b>40</b> | <b>55</b> | <b>36</b> | <b>34</b> |

The figures given above can be converted into percentages:-

| Year         | Arts       | Science    | Soc.Sci.   | Total       | English    | Other      | Male       | Female     | BORIS      | Shelf      |
|--------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|
| first        | 19%        | 13%        | 9%         | 41%         | 25%        | 16%        | 23%        | 18%        | 15%        | 16%        |
| second       | 11%        | 5%         | 18%        | 34%         | 19%        | 15%        | 12%        | 22%        | 11%        | 13%        |
| third        | 8%         | 3%         | 14%        | 25%         | 16%        | 9%         | 7%         | 18%        | 13%        | 7%         |
| <b>Total</b> | <b>38%</b> | <b>21%</b> | <b>41%</b> | <b>100%</b> | <b>60%</b> | <b>40%</b> | <b>42%</b> | <b>58%</b> | <b>39%</b> | <b>36%</b> |

Percentage of students by faculty:-

Arts             $36/95 = 38\%$   
 Science         $20/95 = 21\%$   
 Soc.Sci./       $39/95 = 41\%$   
 Comm.

Frequency of SLC use (according to percentage of students interviewed):-

once a month: 15%  
 less than once a month: 10%  
 more than once a month: 45%  
 weekly: 30%

No. of items sought = 298  
 No. of items found = 240  
 Immediate availability rate =  $240/298 = 80.5\%$

Percentage of total no. of items sought by faculty:-

Arts             $114/298 = 38\%$   
 Science         $60/298 = 20\%$   
 Soc.Sci./       $124/298 = 42\%$   
 Comm.

**Table 5: Characteristics of undergraduate students interviewed**

Of the 112 students approached for interviews, 11 were postgraduates and 6 were undergraduates who did not have the time to be interviewed. Thus 95/101 undergraduates were interviewed, giving a response rate of 94%. The traits of the interviewees are summarised in **Table 5**.

Of the 95 undergraduates interviewed, 38% were from the Arts faculty, 21% from the Science faculty, and 41% from the combined Social Science and Commerce faculties. First-year students made up 41% of the sample, second-year students made up 34%, and third-year students 25% of the sample. It is interesting to note the decline in the use of the SLC according to the year of study, but the reasons for this decline are not obvious from this investigation. One could speculate that third-year students are conducting more independent research and are less dependent on recommended readings, but such assumptions would have to be tested further. These findings cannot be compared to the simulation study described in **Chapter 4**, because that investigation was limited to second-year students, but they are supported by the investigations of De Jager (1991b:277) who found that senior students were more likely to be engaged in research activities that involved broader library use and less reliance on the SLC materials.

More females (58%) than males (42%) comprised the sample of undergraduates interviewed. With regard to home language, 57/95 or 60% of the students were English-speaking and 38/95 or 40% spoke a large variety of languages including 8 different African languages, Afrikaans, German, French, Swedish, Finnish, Chinese and Japanese. These factors may affect availability and accessibility rates, because the language barrier may influence the ability of some students to locate and retrieve required material with ease. A larger percentage of first-year students reported difficulties in using the OPACs and in locating material on the shelves, than second- and third-year students. Many of the non-

English speaking students from all years of study reported difficulties with the OPAC syntax and vocabulary.

Most of the third-year students were familiar with library procedures, and were searching for photocopies and monographs for studying purposes. The majority of the first- and second-year students were merely in search of old examination books (cf. 3.2.1), housed in the SLC. A number of students from the Arts faculty, related their frustrations in trying to reserve books that were on loan, or that were overdue. Concerning the frequency of SLC use, 75% of the undergraduates interviewed reported using the SLC facilities more than once a month, of which 30% used the SLC weekly. Ironically, some of the most frequent users appeared to have the lowest levels of library skills and were thus unable to benefit fully from the services offered.

It was surprising to discover that a number of students found the shelf arrangement in the SLC confusing, and that they were not familiar with some of the library procedures such as the filing order of the photocopies. Other students avoided using BORIS on the grounds that it is too slow, frustrating, or limiting. They were unaware of recent searching capabilities that had been added to the OPACs.

Many students admitted that they seldom sought the assistance of the SLC staff because they felt that it would reflect poorly on their abilities and library skills. There was a surprising lack of interest in attending user training sessions, although students agreed that better information literacy skills would enhance their ability to identify and access the study materials they needed. This endorses the findings of recent research into the use of the library system at UCT by Research Surveys (1994) and the Equal Opportunity Research Project (*Overcoming barriers to*

*learning...*,1995). The pertinent findings of these reports are outlined in **Appendix A.5** and **A.3** respectively, but both studies indicated that the library is particularly under-utilised, and that undergraduate students use only the most basic information resources necessary for their course requirements. Few students ask for library assistance, browse for material, or follow up references cited in their readings, and few are aware of the wide variety of potential reference sources. This has led to comprehensive campaigns to equip students with the information literacy skills needed for success in an increasingly sophisticated and technologically advanced society (cf. 5.3.2).

Tiefel (1995:325) refutes the claims of Bessler (1990) and Eadie (1995) that users know what is best for them and therefore need minimal intervention from librarians:-

“these points of view fail to take into account that most library users are unaware of the quantity and variety of information available. They are often satisfied with materials that an experienced librarian would find wholly inadequate and/or inappropriate. Unless librarians educate users about finding information, users will continue to underutilize and misuse information. If librarians allow users to be satisfied with reserve lists and minimal reference help, they have abrogated their responsibility to ensure that users get the best information for their needs”.

McFadden and Hostetler (1995) note in their research that most undergraduates appear to lack the information literacy skills needed to retrieve the most relevant and reliable information from the vast array of electronic resources at their disposal, and many experience difficulties using an OPAC to access material in the library. Recent interviews with undergraduates on two campuses of the University of California library system revealed that many undergraduates found large academic libraries intimidating to use, that they learnt to use the libraries in a haphazard

manner, and were inexperienced in online systems. They mainly used the libraries for studying their own material or for checking out reserve material (Meltzer, Maughan & Fry, 1995). Similar trends have emerged as a result of this study in the SLC at the University of Cape Town.

Banks (1996:35) reiterates the need for communication between the library, faculty and students in maintaining an effective reserve system: "The library is the interface between the faculty and the students for reserve material in terms of student needs and has a role in alerting faculty to those needs".

Bruce (1995:164) proposes that teaching strategies that do not nurture information literacy include:-

- a. a reliance on lectures for transmitting information, and
- b. heavy dependence on reading lists and reserve collections.

### **5.3.2 The need for information literacy training**

Information literacy encompasses critical thinking skills, lifelong learning, and the ability to access and evaluate information effectively for problem-solving and decision making (Tiefel, 1995:326). Technological innovations have resulted in a greater need for user-friendly systems that provide different levels of instruction on search strategies, including Boolean searching, on OPACs, CD-ROMs and online databases. The view that academic libraries should become "self-explanatory" to facilitate the development of independent and competent end-users, is gaining popularity (Line, 1990c; Pacey, 1995). Line (1990c) regards the concept of the self-explanatory academic library, in conjunction with the co-operation between library staff and academic staff, as essential to higher education, whereas "spoonfeeding" through

the direct conveyance of information to students through lectures and lecture notes is a "negation of higher education" (Line, 1990c:505).

Tiefel (1995) describes the successful "Gateway to Information" system, developed by the Ohio State University (OSU) Library to enable undergraduates to locate, evaluate, and select the most useful information to meet their needs, regardless of material format and with minimal outside intervention:-

"The Gateway is so clearly written that no help screens, handouts, or workshops are needed to use it. The user can find the information independently without the help of library staff. The Gateway combines the use of the online catalog, CD-ROMs, and print materials....[it] is intended ultimately to serve equally undergraduate and graduate students, faculty, and staff" (Tiefel, 1995:332).

Not all automated library systems are as user-friendly as the Ohio State University library system, however, and there remains a great need for continuous training in the use of information retrieval tools at different levels of skill.

The University of Cape Town is currently involved in a large-scale information literacy programme (INFOLIT), in collaboration with four other tertiary institutions in the region as part of the Cape Library Co-operative (CALICO) project. For a detailed description of these two initiatives, see **Appendix A.2**. In order to launch this major research project into the state of information literacy at the five institutions of tertiary education in the Western Cape, a Research Team was appointed to derive an operational definition of the concept of "information literacy" appropriate to the South African tertiary education environment. The following definition emerged:-

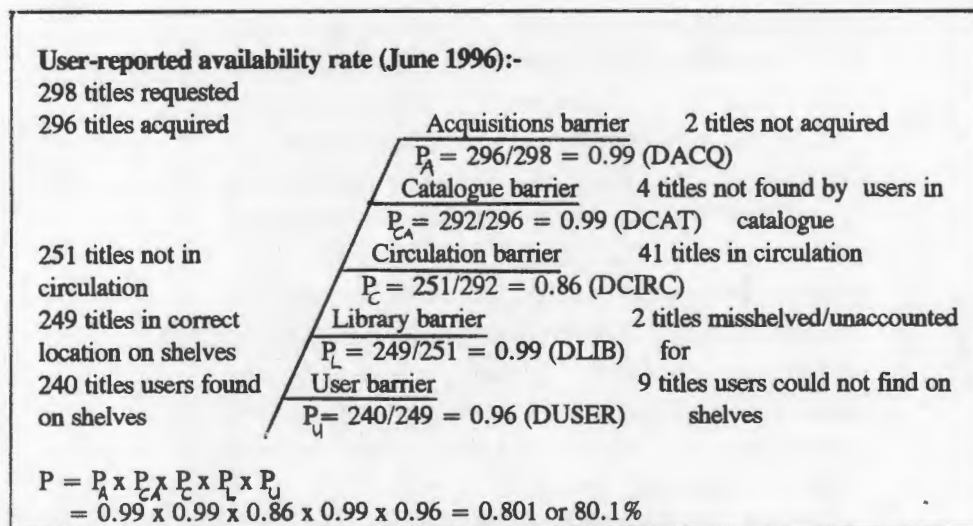
"Information literacy refers to the ability of learners to access, use and evaluate information from different sources, in order to enhance learning, solve problems and generate new knowledge" (Sayed & De Jager, 1996:21). It is noted that this definition of the concept of information literacy must be seen in conjunction with the contextual issues outlined below:-

... in South African tertiary education, 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. Information literacy is most effectively imparted in an environment which is centred around the learner rather than the teacher in a collaborative relationship which also includes other facilitators such as librarians, and specialists in computer applications and academic development. The development of information literacy is directed towards producing independent and self-directed learners who are able to become active and responsible citizens, make informed decisions in their private and public lives and contribute to both individual and national empowerment and growth.  
(Sayed & De Jager, 1996:21).

This definition emphasises the importance of a holistic approach to the factors affecting materials availability from the students' perspective. Individual experiences of availability rates in the SLC may vary considerably depending on the personal and environmental factors that dictate the student's ability and incentive to procure the required items. The interaction between the students and the lecturers, the relationship between the students and the library staff, and the communication between the academics and the library staff, contribute to the materials availability rate experienced by the individual in the sense that there needs to be a clear understanding of what is required, for what purpose, and how it can be obtained in the most effective manner.

### 5.3.3 Kantor's diagram to display the results of the user survey

Figure 12 displays the results of the user study using Kantor's branching technique. The researcher followed up on the searches reported to have been unsuccessful, to ascertain the possible reasons for the users' failure to obtain the required materials. Those searches reported as having been successful by the users, were not checked on. The researcher accepted the users' satisfaction with successful searches.



**Figure 12: User-reported availability rates using Kantor's branching diagram**

The overall, user-reported, materials availability was calculated to be 80.1% which is marginally less than the 81.7% recorded in the simulation study of Chapter 4. The circulation barrier (DCIRC) accounted for the most dissatisfaction in this study and this is largely due to the heavy demand for examination materials, including the examination books containing previous examination papers. The availability rate across faculty (cf. Figures 13 and 14) revealed that the Arts had the lowest availability rate of 70%, while the availability rate

for the Social Sciences and the Humanities, and Commerce, was 82.6%.

The Science faculty had a very high availability rate of 95.1%.

**User-reported availability rate across faculty (beginning of June 1996)**

Arts:-

(DACQ) 112/114 = 0.98

(DCAT) 110/112 = 0.98

(DCIRC) 87/110 = 0.79

(DLIB) 85/87 = 0.98

(DUSER) 80/85 = 0.94

Availability rate =  $0.98 \times 0.98 \times 0.79 \times 0.98 \times 0.94 = 0.699$  or 70%

Science:-

(DACQ) 60/60 = 1

(DCAT) 60/60 = 1

(DCIRC) 59/60 = 0.98

(DLIB) 59/59 = 1

(DUSER) 57/59 = 0.97

Availability rate =  $0.98 \times 0.97 = 0.951$  or 95.1%

Soc.Sci./Comm.:-

(DACQ) 124/124 = 1

(DCAT) 122/124 = 0.98

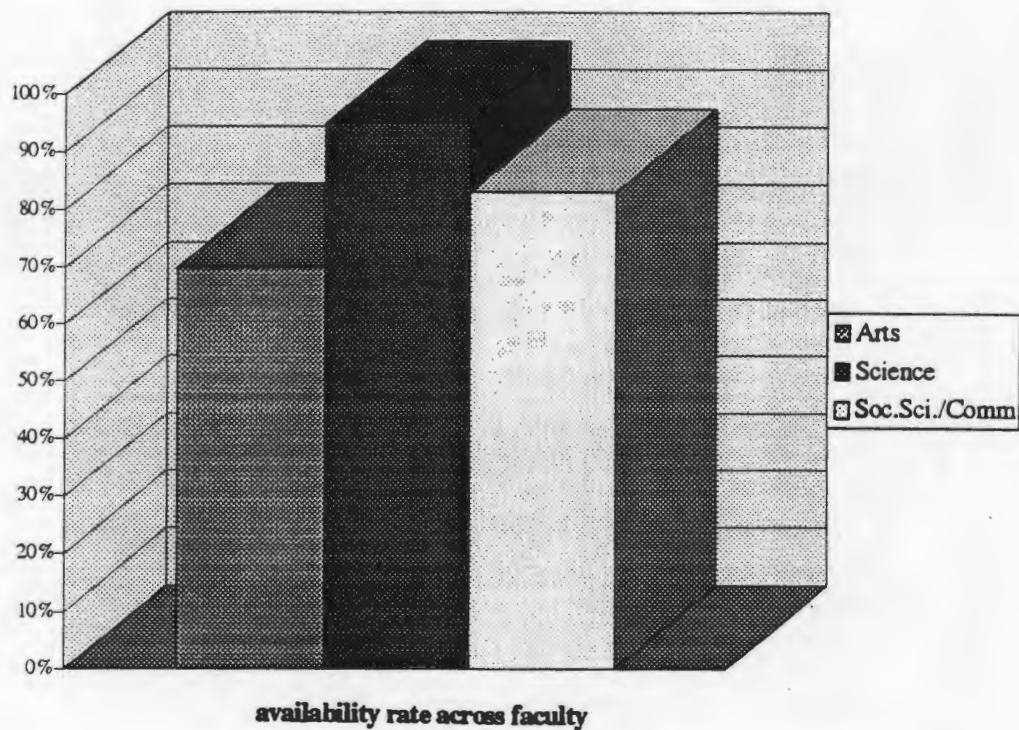
(DCIRC) 105/122 = 0.86

(DLIB) 105/105 = 1

(DUSER) 103/105 = 0.98

Availability rate =  $0.98 \times 0.86 \times 0.98 = 0.826$  or 82.6%

**Figure 13: User-reported availability rates across faculty (beginning of June)**



**Figure 14: User-reported availability rates across faculty (beginning of June 1996)**

The simulation study in **Chapter 4**, determined an average availability rate of 77.8% for the Arts, but the availability rates for the Sciences was 81%, and for the Social Science and the Humanities/Commerce faculties it was 86.8% (cf. **Table 4**). The variability across faculty indicates that factors such as time period do affect availability rates.

The availability across format in the user study (cf. **Figures 15 and 16**) indicated that the examination books were available 71% of the time, while photocopied articles had a very high availability rate of 94.1%, and monographs had the lowest success rate of 65%. The numerous multiple photocopies are largely responsible for the high availability. However, the scarce copies of high-demand monographs resulted in this

area having an availability rate of 65%. Likewise, in the simulation study (cf. **Chapter 4**), availability rates were lower for monographs (76.5%), than for photocopies (87.8%).

**User-reported availability rates across format (beginning of June 1996):-**

Of the 298 titles sought, there were 139 photocopies; 89 books; 69 examination books; and 1 video requested.

Percentage of total no. of items by format:-

Photocopies:  $139/298 = 46.6\%$

Books:  $89/298 = 29.9\%$

Examination books:  $69/298 = 23.2\%$

Video:  $1/298 = <1\%$

Availability across format:-

Photocopies:-

(DACQ)  $137/139 = 0.98$

(DCAT)  $135/137 = 0.98$

(DCIRC)  $132/134 = 0.98$

(DLIB)  $132/132 = 1$

(DUSER)  $132/132 = 1$

Availability rate =  $0.98 \times 0.98 \times 0.98 = 0.941$  or 94.1%

Monographs:-

(DACQ)  $89/89 = 1$

(DCAT)  $87/89 = 0.98$

(DCIRC)  $64/87 = 0.73$

(DLIB) =  $62/64 = 0.97$

(DUSER) =  $58/62 = 0.93$

Availability rate =  $0.98 \times 0.73 \times 0.97 \times 0.93 = 0.645$  or 65%

Examination books:-

(DACQ)  $69/69 = 1$

(DCAT)  $69/69 = 1$

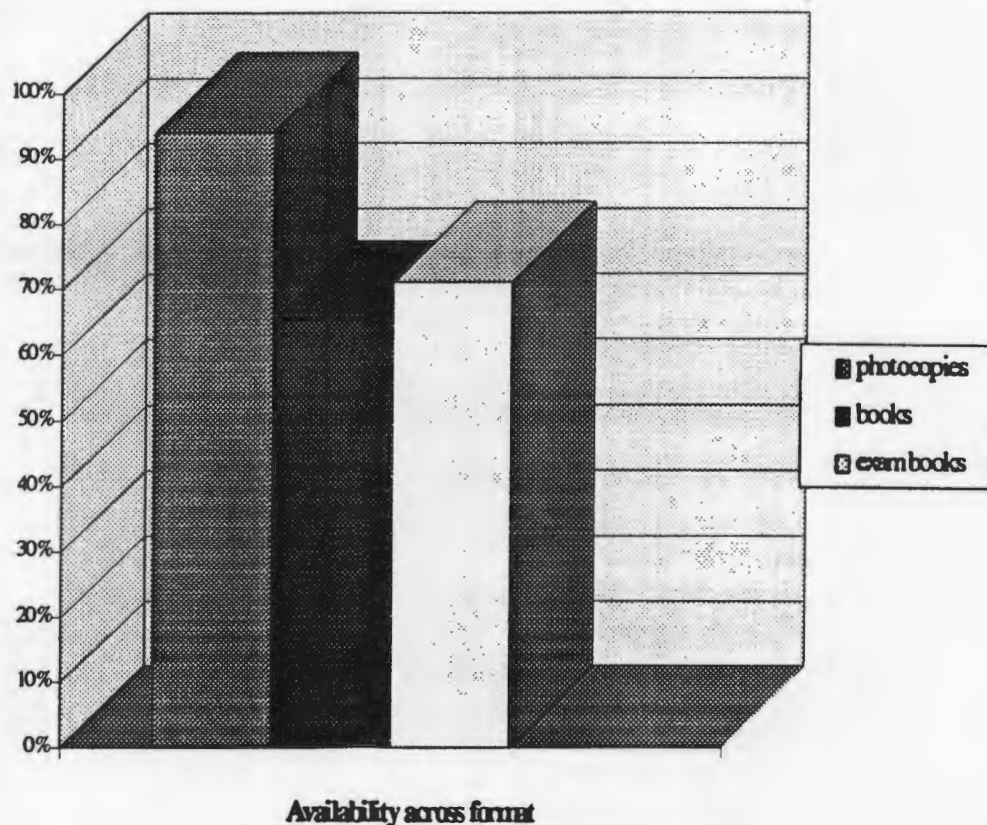
(DCIRC)  $54/69 = 0.78$

(DLIB)  $54/54 = 1$

(DUSER)  $49/54 = 0.91$

Availability rate =  $0.78 \times 0.91 = 0.709$  or 71%

**Figure 15: User-reported availability rates across format**



**Figure 16: User-reported availability rates across format (beginning of June 1996)**

Although the user study reported a high overall materials availability rate of 80% (cf. 5.3.3), and the simulation study determined an overall availability rate of 81.3 % (cf. 4.3.1), it was evident from the interviews (cf. 5.3.1) that at least one third of the students were not confident OPAC users and did not use the SLC facilities to the fullest. One can interpret this to indicate that 2/3s (66%) of the students feel that they know how to use the OPACs and how to locate the library materials they require. This figure could be considerably less in reality, but if the DUSER value is .66, it will lower any availability rate substantially. For example, a high availability rate of .80, from the library's perspective, could drop to  $.80 \times .66 = .528$  or 53%, from the user's perspective.

The point being made here is significant because quantified availability rates often appear to be surprisingly high, yet may not be a true reflection of the actual availability rate experienced by the individual user. This example shows how simple availability measures can be deceptive because they cannot adequately reflect the many complex factors that affect true availability. The interrelationship between the library, the academic staff, and the students also affects the overall availability rate in the SLC, because good communication between the three stakeholder groups is imperative for an efficient service that strives for the maximum materials availability of high-demand materials.

Comparatively low MAV-CAT and MAV-USER scores can alert one to the difficulties the users may be experiencing in accessing the library resources, and may justify the need for more extensive user education programmes, more user-friendly interfaces, and a more proactive marketing campaign to inform the users about the various facilities at their disposal. In **Chapter 3** we have already seen that new trends are emerging as to the use of the SLC, particularly regarding departments with very large student numbers. This could also account for seemingly high availability rates in the SLC, as the rates could perceivably drop if the larger departments were placing heavy demands on the system. The statistics collected and generated in a study of this nature are primarily descriptive and therefore it is important that they do not present misleading information. Moreover, the availability rate for individual items or titles may be very low for limited periods of time if they are very popular, yet the overall availability rate across a large number of items may be high. In this regard, it is noteworthy that the availability rate across format varied substantially (cf. **4.3.1**).

As can be seen from **Figures 15** and **16**, the availability rate for photocopies was 94%, whereas the availability rate for books was 65%

and for examination books, 71%. There are usually abundant multiple copies of photocopied articles and they are almost always accessible to the users unless there is a "run" on them for a brief period when a test or seminar is due. In contrast, there are much fewer copies of popular monographs, and thus they are more often unavailable to the users. The monographs are more often misshelved or deliberately hidden by users. The heavily-used monographs are also more difficult for the users to trace, because they are frequently on the reserve trolleys, or waiting to be shelved when not in circulation.

#### **5.3.4 The security problem as an obstacle to materials availability in the SLC**

Interviews with the students (**Chapter 5**), and academic staff and library staff (**Chapters 3 and 4**) all confirmed that items that were deliberately hidden, or misplaced, or illegally removed items from the SLC posed a continual source of frustration for the users. This problem is a long-standing one, which has been related in numerous past studies (Allardice, 1987; Research Surveys, 1994; De Jager, 1995) concerning the UCT library system, and may be exacerbated by reduced spending on shelf-reading staff (Banks, 1990; Agboola, 1995).

At least 50% of the interviewees voiced concerns about security issues and the problems of missing or overdue library materials. The high availability rates do not reflect the problem of lost or overdue items. High-demand items that have not been returned cannot circulate as heavily as they would have, had they been available and accessible on the shelves when sought. The most active part of the collection is the one most at risk of being mutilated, stolen, or illegally removed or hidden, yet this high level of inaccessibility is

often not reflected on the OPACs or in the circulation statistics, because the library staff are unaware of a missing item unless the users report their failure to locate it, and because the circulation statistics only reflect items that have been successfully located and borrowed.

The majority of frequent library users interviewed felt that the penalties for overdue or lost items were inadequate. Considerable frustration was experienced when users who had reserved items were unable to obtain them at the allocated times, because previous users had not returned the items promptly. Most of the students interviewed felt that library privileges for the habitual offenders should be withdrawn temporarily. Security issues are important in a short loan collection and warrant further attention. Thus a subsequent section on literature dealing with security issues in academic libraries will attempt to address these concerns. The UCT SLC system had been experiencing security problems with regard to the illegal removal of items from the Centre for some time, but recently steps have been introduced to combat the problem, by improving the security at the exits with electronic detection devices.

#### **5.3.4.1 Studies that address security issues in academic libraries**

Gregson and Hocking (1995) researched issues relating to the theft and mutilation of library material, to determine the extent to which students were effected by it and to investigate ways of reducing the problem. Focus group interviews and user surveys were used to collect data and to emphasise the importance of student involvement in library decision-making. It was found that frequent library users were more concerned about theft and mutilation of materials and the effect it had on their studies, than infrequent library users who attributed their inability to find

items due to their poor library skills. Most students were in favour of penalties such as the suspension of library privileges for those students found guilty of illegally removing library materials. On the whole, students did not support surveillance-based security measures.

This research confirmed previous studies that there is a need to work in partnership with students to combat crime through more acceptable non-confrontational means. This involved educating students about their responsibilities towards their fellow students, encouraging co-operation and a sense of collective responsibility, ownership and involvement, and depicting fines as an inducement to enhance availability for fellow students rather than as a penalty. Communication and consultation between the library staff and students are necessary prerequisites for developing effective crime-reducing strategies and for making the library "a more positive place to work and study" (Gregson & Hocking, 1995:196-197).

Sewdass and Kaniki (1995) investigated the extent of the problem of book theft at the University of Durban-Westville library and the possible reasons for this serious crime, in order to suggest ways of reducing the problem in similar academic libraries. They acknowledge that it is extremely difficult to eradicate the universal problem of theft from libraries, but propose that the problem should be analysed in terms of the underlying reasons for the theft so that the situation can be controlled where possible. Their study revealed that most book thefts were committed by second- and third-year students across all faculties and that the number of thefts in each subject area appeared to correlate with the corresponding number of students in each subject area (1995:211). This trend appears to be true in the UCT SLC situation where the books that were unaccounted for in the simulation and the user studies, were those in high demand for courses with large student numbers.

Other similarities in the findings of the University of Durban-Westville (UDW) study, are that the highest number of book thefts appear to be committed by students in the Arts faculty, who make up a larger percentage of the total student population. The UDW study also noted that "many books and articles on short loan were mutilated" and that although "entire books of such mutilated materials are not stolen, missing chapters render them useless" (1995:211). The UCT SLC staff have experienced the same problems and they recognise that this is a major obstacle to the availability of high-demand materials.

Electronic detection systems deter would-be offenders, although they are not foolproof. There is a need for continued user education in addition to the installation of security devices. The building itself may need to be redesigned to ensure stricter control measures and to provide more adequate study facilities including seating arrangements and enough photocopiers. The literature indicates that insufficient photocopying facilities and not enough multiple copies of textbooks and popular monographs exacerbate the theft and mutilation of books and journals in academic libraries (Sewdass & Kaniki, 1995:212). These issues demand attention in a short loan collection where the primary objective is to provide optimal access to core reading materials for undergraduate students. The electronic detection system at UCT was not operating functionally at the time of this investigation because it was obsolete and inaccurate. Since then the system has been upgraded and it is hoped that the security situation will improve substantially.

#### 5.4 Conclusions

Discussions with the students yielded valuable information pertaining to their perspective of the role of the SLC and their experiences in obtaining prescribed and core reading material throughout the first semester of 1996. It also revealed the more complex nature of the concepts of "availability" and "accessibility" as there are many hidden factors that may determine the final outcome, and these factors may not be evident in the traditionally calculated availability rates.

"The ideal library is organized so that its patrons expend minimum effort to obtain access to bibliographic materials when they need them. This is because many patrons, consciously or unconsciously, will weigh the cost of a service against the benefits of using it" (Baker & Lancaster, 1991:27). The "least-effort" principle implies that by reducing the barriers to information resources and services, one can promote library use. Access and convenience are important components of a good library service. There are various types of access that affect library use. Psychological access is gained by means of a user-friendly library system; intellectual access relates to the degree of information literacy and library competency skills possessed by the user; bibliographic access is achieved through information retrieval tools, including catalogues and indexes; and physical access has to do with obtaining the required item or service when needed.

Past research has identified four recurring accessibility factors:-

- a. Perceived accessibility determines the extent to which an information channel is used;
- b. Previous library experience enhances perceived accessibility;
- c. Accessibility precedes quality of information as a first criterion;

- d. High motivation is necessary to locate less-accessible sources (Baker & Lancaster, 1991:28-29).

The above-mentioned findings reiterate the importance of document delivery services and curriculum-support services in facilitating access to high-demand materials and for promoting library use among undergraduate students. The more accessible and visible library materials and services are made, the more they are utilised. The implication is that closed access materials or reserve materials may circulate more if moved to open stacks (3-day loan) or if they are more prominently displayed. Longer loan periods for core monographs may be more conducive for research purposes. However, the 3-day loan materials on the open shelves in the main Linear Library pose security problems as they fall outside the ambit of the SLC. Facilities and services may have to be redesigned in order to make them more accessible and convenient to the users.

Bibliographic access is often inhibited by OPACs that are not user-friendly or that are frustratingly slow and limiting in their searching capabilities. Students are more likely to use inadequate, but accessible materials than to spend time searching for more authoritative ones that are not readily accessible. The library must therefore ensure that delays, whether due to processing, shelving, or recall, are kept to a minimum and users should be guided to alternative high quality, relevant sources if necessary. By keeping appropriate statistics and by regularly evaluating the performance of the service from the user's perspective, the library can justify the need for duplicate copies of high-demand items and take remedial action to improve problem areas.



## Chapter 6: Conclusions and recommendations

### 6.1 Evaluation of the study process

Kantor (1984:12) outlines 5 criteria that can be used as the basis for evaluating any performance measure, namely: **fidelity, validity, intrusiveness, efficiency, and relevance.**

When measuring materials availability, the criterion of **fidelity** requires that one samples actual searches, rather than relying on opinions or suppositions. In this research project, the sample used in the simulation study was drawn from current reading lists of prescribed materials that were requested for SLC use, and the qualitative user study recorded actual user-reported searches. Both these studies were designed to represent current user needs. The simulation study portrayed the current, potential needs of the users, while the qualitative study surveyed the current, actual needs of the users as reported to the researcher after the search process.

With regard to the **validity** of the investigation, care was taken to conduct the simulation studies during typical periods of the semester rather than during peak periods so that the results would be comparable. The user study was conducted before the examination period when high-demand materials were likely to be in constant demand and many others returned late, illegally removed, or mutilated. An availability study during the actual examination period would have been biased and not representative of overall availability rates.

The **intrusiveness** of the study was minimal because of the methodology chosen. The quantitative simulation studies and

circulation counts were conducted by a single researcher, from a remote terminal so that the users' access to the SLC OPACs would not be inhibited. The follow-up shelf studies were also done unobtrusively. The qualitative interviews administered to faculty members, library staff, and students posed minimal disruption as a combination of methods was used to facilitate convenience and cooperation. For example, faculty could respond via e-mail, postal survey, or personal interview. Library staff provided consistent, open communication throughout the research period as they were interested in the project and were pleased to be notified of the outcomes. The users, similarly, were happy to be interviewed and to present their experiences and suggestions regarding the availability of high-demand materials.

With regard to the **efficiency** of the availability study, this study was limited in terms of manpower and time constraints. It is noteworthy that most of the availability studies discussed in the literature review were conducted as a team effort on a larger scale than this study. A large-scale team-effort could test a substantial sample of materials covering the entire spectrum of undergraduate needs (not just second-year students) and could do a more efficient job of tracing unfound items immediately. Specific objectives could be set for the study by the SLC staff whose task it is to liaise with academic staff and students and who have personal experience of the most common problems and frustrations encountered in the SLC system. It is clear that a study of such proportions is costly and labour-intensive, and the results must thus be of value to management to justify the costs incurred.

Finally, the **relevance** of the study will depend on the feasibility of the remedial action required to strengthen the under-performing areas

of the system, and to initiate new developments. Relevance can only be substantiated in terms of the library's mission and goals. In this case the study is highly relevant to UCT's mission of excellence in terms of providing adequate support for teaching and research, and in meeting the diverse needs of the undergraduate students.

Thus, while the limitations of the research need to be made explicit the study has been conducted in a sound enough manner to provide important input into the factors affecting the availability of high-demand materials in an academic library. The subsequent section will present the primary findings of the investigation, based on the sample group of titles randomly chosen for the quantitative availability study and the results of the qualitative, user-reported availability study. The research questions posed in Chapter 1, were addressed within the context of the study.

The most prominent findings of the study can be summarised under the following headings:-

- the new trends in the use of the SLC;
- the reasons for the high availability rates and low circulation statistics determined;
- the importance of communication for optimising availability;
- the SLC users' profiles and the need for information literacy;
- the library barriers to availability; and
- the challenge of print-based and electronic resources.

The delimitations and recommendations of the study will constitute the concluding remarks.

## 6.2 The most prominent findings of the investigation

### 6.2.1 New trends in the use of the SLC

The faculty study revealed the inadequacies of the current SLC system from the library and teaching staffs' perspectives. The results of the interviews with lecturers teaching second-year courses, exposed new trends in the use of the SLC and alternative means of making required readings available to the students. Frustrations with the slow, cumbersome, and obsolete loan request procedures, has led to a decline in the use of the SLC facilities. Generally, the smaller departments with less than 50 students per course/class find the SLC adequate, but departments with very large class sizes of more than 250 students find the short loan facility inadequate for making prescribed materials available to the students.

Of the departments surveyed, the Arts faculty made the most use of the SLC and had the greatest number of lecturers who issued reading lists to their students. The History, English, and Classics departments from the Arts faculty, placed the most titles on SL for second-year courses offered during the first semester of 1996. The faculty survey indicated that the departments of Sociology and Philosophy from the faculty of Social Science and the Humanities, and the departments of Environmental and Geographical Sciences, and Geological Sciences from the Science faculty also made substantial use of the SLC concerning the quantity of material placed in the SLC.

The Science faculty had the smallest class sizes, made the most use of textbooks which the students had to purchase for themselves, and used more departmental facilities for making high-demand materials available than other faculties. The combined Commerce/Social Science and

Humanities faculties had the largest class sizes on average and used the SLC facilities the least. The increasing class sizes had created a dependence on course readers for making a wide range of prescribed readings available to the students.

Innovative strategies have been, and are being, devised to overcome the shortcomings of the present SLC. Informal libraries and writing centres have been established within some departments and a preference for informal "customised publishing" in the form of course readers has replaced a dependence on the SLC for providing prescribed materials. Both the Arts faculty and the Social Science/ Commerce faculties use course readers, but for different purposes. In the Arts faculty, course readers are often produced for out-of-print materials and very obscure items that are difficult to obtain locally. In the Commerce/Social Science faculties, course readers are regarded as essential in providing access to a broad selection of articles from numerous sources, because the students cannot afford to purchase the expensive recommended textbooks, and because the library does not stock sufficient copies of core monographs for the large number of students requiring them.

Although copies of course readers are often put on SL, most departments ensure that each student receives a copy, paid for by a student levy. The copyright issue is taken seriously in some departments, but the urgency in making essential readings available to a large body of students on a regular basis inevitably results in copyright infringement; particularly in the large departments. The production of course readers is in conflict with copyright regulations unless prior permission is obtained from the various publishers concerned. Publishers' permission will be needed for the use of articles in course readers in the future. Although CALICO's newly appointed Publishing Liaison Officer will be responsible for administering the process of obtaining copyright agreements from the

publishers concerned, some resistance is expected from lecturers who regularly produce course readers. Resentment is likely to be directed at the lengthy time delays in obtaining copyright permission and in additional royalty payments. These factors may precipitate renewed demands on the SLC facilities, particularly for urgent materials needed by the undergraduates for tutorials and seminars as it will be some time before on-demand, electronic publishing will replace print-based materials. In sum then, the reliance on course readers, rather than the SLC, for making prescribed material available to undergraduates, has had a significant impact on the availability rates of SLC. However, availability rates are likely to decrease if renewed demands are placed on the SLC in the future.

Undergraduate library use is greatly influenced by the teaching methods used, the attitudes and expectations of the lecturers, and the co-operation between the library staff and the teaching staff. High availability rates in conjunction with low circulation statistics in the SLC suggest that students are not optimally using the facilities. The role of course readers and handouts has been highlighted above. On a positive note, low circulation rates in the SLC could also mean less dependence on prescribed materials and more extensive use of the main library's collection. The pressure on high-demand materials is alleviated when students can select their own relevant materials alongside the recommended ones stipulated on course reading lists. Those lecturers who encourage independent, library-based research and the use of a wide range of information resources are assisting their students in becoming self-sufficient users who are less dependent on prescribed readings, thus placing fewer demands on the system. Unfortunately this type of broader subject coverage is not evident in most undergraduate library use yet.

### **6.2.2 The reasons for the high availability rates and low circulation statistics**

The quantitative availability study repeatedly displayed high availability rates in the SLC and low circulation statistics. The high availability rates (in the region of 80%) for May 1996, were interpreted alongside the low circulation statistics recorded for the same period. A number of casual factors were found to be contributing to the high availability rates and low circulation statistics:-

- a. The larger departments had stopped using the SLC facility and were issuing their students with course readers and extensive handouts, thereby placing fewer pressures on the SLC.
- b. A large portion of the SLC material was no longer relevant and had not been updated as a result of poor communication between the lecturers and the SLC staff.
- c. Excess material that was supplementary rather than required reading, was being placed on short loan.
- d. Multiple photocopies of single articles comprised 42.3% of the sample taken of the SLC collection and had a very high availability rate of 87.8%, compared to that of 76.5% for the considerably fewer copies of core monographs, thus raising the overall availability rate.
- e. A small portion of monographs were found to be frequently misshelved or missing from the shelves but not checked out, suggesting that they may have been illegally removed from the SLC by students for certain periods and then returned. The "informal borrowing" of such monographs is not recorded on the automated system and thus not reflected in the calculated availability rates and official statistic records.

- f. Judging from the low circulation statistics (41,3% of the sample titles did not circulate during May 1996), the users were not utilising the collection to its fullest. The reasons for this need to be further investigated but they could include the use of course readers in large departments.
- g. In quantitative simulated studies, the availability rates may be high because the users' skills in retrieving items cannot be assessed. Furthermore, it is difficult to anticipate the number of user requests likely to be made simultaneously for each title.

### **6.2.3 The importance of communication for optimising availability**

The success of a reserve system depends on the close collaboration between library and academic staff to ensure the currency, relevancy, and adequacy of the collection for the students' academic requirements. Inadequate communication between the lecturers, library staff, and students results in an outdated and poorly circulating short loan collection that does not warrant the processing and maintenance costs involved.

Reading lists enable undergraduates to identify core reading material. They also assist library staff in selecting material for a short loan collection and in duplicating copies of titles that are likely to be in high demand by a large number of students. However, it is essential that the library is informed in adequate time of the expected demand for materials. It is also the individual department's obligation to ensure that sufficient copies of core monographs are placed on short loan to meet the demands of their students. Departmental library budget allocations need to be reviewed and directed towards duplicating high-demand materials for the SLC.

The simulation study illustrated the need for internal consistency and good communication channels within the library, and for collaboration with the teaching staff in maintaining a relevant SLC. The library staff are often unaware of the users' experiences and difficulties in negotiating library tools and may erroneously assume that the library service is meeting the users' needs. The user survey showed that certain library procedures, often assumed to be understood by the users, such as the shelf arrangement and the filing order of the photocopies, were confusing to some of the students.

Periodic multi-method availability studies, within the context of continuous performance evaluation, will assist the library staff in keeping attuned to the users' changing needs. The SLC staff remain committed towards providing a dynamic, proactive service that will include user training in electronic information tools beyond the mere provision of prescribed materials to undergraduates, while considering the special needs of the various student profiles. For this commitment to be made effective, it is imperative that the SLC staff achieve adequate representation on the User Services Division at library management level, to support the implementation of a new SLC concept based on the grassroots experience of the needs of the constituent user groups.

#### **6.2.4 SLC users' profiles and the need for Information literacy**

The survey of actual user-reported searches for high-demand items uncovered certain misconceptions of the service being offered and provided qualitative data on the effectiveness of the document delivery process. The results of the interviews conducted by the researcher among a random sample of SLC users in early June 1996, revealed diversity in student profiles, but commonality in the problems encountered with the SL system. Social Science and Commerce students

constituted 41% of the sample group, while 38% were from the Arts faculty and 21% from the Science faculty. First-year students were in the majority and there was a noticeable decline in the use of the SLC according to year of study, but further investigations are needed to determine the underlying reasons for this phenomenon. A larger proportion of first-year students reported difficulties in using the OPAC and in locating materials on the shelves, while most of the third-year students stated that they were familiar with the library tools. These opinions were recognised as being subjective and therefore difficult to quantify. Nevertheless the user's opinions were deemed important in assessing the effectiveness of the library service.

Availability and accessibility factors may be influenced by the language barrier, as 40% of the students interviewed did not have English as their home language and many of these students, from all years of study, experienced problems with the OPAC syntax and vocabulary. BORIS was considered to be adequate, but slow, frustrating, and limiting by a number of more experienced users, many of whom were unaware that additional searching capabilities had recently been added to the system. It was disconcerting to note that the majority of the first- and second-year students were merely using the SLC to access old examination papers, and that they seldom sought the assistance of the SLC staff in locating required materials or in learning how to use the information tools more effectively.

Contrary to the expectation that the SLC availability rate would be considerably lower during the study week (the period between the final classes for the semester and the start of the post-semester examinations), the user-reported availability study produced a constantly high availability rate. It is significant that, despite the apparently high availability rates recorded in this thesis, it was obvious to the researcher

from the interviews conducted, that at least one third of the students were unable to make the best use of the SLC because of inadequate library skills. True materials availability, from the users' perspective, is probably considerably less than that determined in a simulated study where an experienced researcher does the searching. Thus this thesis reinforced the view that purely quantitative availability studies need to be complemented with qualitative studies in order to accurately reflect users' needs.

The SLC can play a major role in developing information literacy skills amongst undergraduate students, because it is recognised as the one library facility that most of them encounter during their academic careers. The potential for implementing effective user education programmes in the SLC is undermined if the teaching methods and curricula of the various departments do not support the facility and if there is poor communication between the academics, students, and the library staff.

#### **6.2.5 The library barrier to availability**

The library barrier category was scrutinised more closely to identify processes that inadvertently delayed the availability of materials. Library procedures such as cataloguing and binding fall outside the ambit of the SLC, but they influence the ultimate availability rates. Future investigations could consider these operations in terms of document delivery times for SLC items.

The study revealed that recurring problems in the SLC included:-

- delays in processing new requests,
- the outdated "book-in-hand" reservation policy,
- the slow recall of overdue books that were needed or reserved by other users,
- the misshelving of monographs,
- insufficient copies of core monographs,
- the security issues related to missing or defaced materials, and
- too few OPAC terminals.

These issues can be addressed to a large extent. The library system can be upgraded to allow for the electronic processing and updating of SLC requests, and for automatic reservations to be placed on titles rather than individual copies of monographs. Rapid reshelving of material and regular shelf-reading will improve the availability of materials misshelved or misplaced by users. Closed access to the monograph collection would also alleviate access problems, but would necessitate a smaller, more defined collection. Security issues should be highlighted to inform the users of the negative effects of exploiting the system and to cultivate a spirit of mutual co-operation and ownership of the library's resources. The students should feel free to inform the staff of difficulties in retrieving items so that the reasons for non-availability can be traced. The OPAC should be regularly updated to accurately reflect the current status of any SLC item.

The study was not definitive concerning whether or not the 3-day loan materials improved availability rates for the users. What was clear though was that they presented security problems because they were on the open shelves in the main library and could thus not be controlled by

the SLC staff. The 3-day items should be housed in the SLC to facilitate access to them.

With regard to the very short 1-hour loan periods for certain materials, interviewees noted that it was not a problem if the material was a photocopy as it could be reproduced and returned. However, any monographs that were on such a restricted loan period were virtually useless to the user as the time constraints prevented any scholarly reading of the material. Even the 3-hour loan periods were inadequate for monographs that were prescribed in their entirety and not just for a couple of chapters. It would thus appear that 3-day loan periods are warranted for core monographs if there are multiple copies available and at least one copy is kept on 1- or 3-hour loan.

Certain textbooks for Commerce and Science courses are considered to be core material, but few students can afford to purchase these texts. Lecturers frequently place private copies of these textbooks on SL, because they recognise the demand for access to them. In view of this situation, the library may have to reconsider its "no textbook" policy in the future. It is evident from the investigation that the inaccessibility of required information causes inconvenience to the users and reduces the availability of materials. Although only a small portion of the collection is in high-demand, the most sought-after materials are more likely to be in circulation, overdue, misshelved, or missing. These items have high circulation statistics and low availability rates which are not reflected in the general availability rates.

The most serious availability problems are experienced with the limited copies of popular monographs and not with the multiple photocopies of articles, although the latter service is costly to process and maintain. A major problem with the core monographs in the faculties of the Arts, and

the Social Sciences and the Humanities, is the tendency for certain titles to be prescribed for a number of undergraduate courses that are running concurrently. For example, certain monographs are recommended for second- and third-year students, or in two Social Science disciplines. This doubles the expected demand for the books. Insufficient copies in the SLC results in demands being placed on special collections, such as the African Studies Library, that are meant to serve the research needs of senior students, postgraduates, and academic staff members.

#### **6.2.6 The challenges imposed by electronic and print resources**

The simulation study of **Chapter 4** constituted the major component of the research project and illuminated the less obvious obstacles to the immediate availability of high-demand materials, as well as areas of the SLC that were redundant. The feasibility of providing multiple photocopies of articles was questioned because of copyright infringement, the enormous processing costs incurred, and the discovery that many multiple copies were never used.

The overall user-reported availability rate was calculated to be 80.1%, but as in the simulation study, the availability rate of 65% for monographs was considerably lower than the availability rate of 94.1% for the photocopies. The necessity of excess multiple photocopies is questionable if one considers that 15 of the titles with 10 or more copies, never circulated during May and 3 of the titles with 10 or more copies never circulated at all during the first semester. Availability rates for photocopies are much higher than for monographs. The limited copies of heavily-used monographs pose the most serious availability problems in the SLC because they are most often on loan, misplaced, misshelved, on reserve or awaiting reshelving.

This scenario indicates the need for greater duplication of heavily-used monographs that are general resource books for many undergraduate students. The most active part of the collection is often rendered inaccessible to the users and yet this high level of unavailability often goes unrecorded because the status of these items is not reflected on the OPAC or in the circulation statistics. An electronic reserve system will alleviate the major problems encountered with SLC photocopies, but the problems of providing optimal availability of core monographs will remain until they too can be delivered electronically. At present the onscreen viewing of full-length documents is not viable for the UCT SLC, given the limitations of the current campus network.

The SLC has the potential for instilling and developing lifelong learning skills in the users because most undergraduate students depend on its facilities throughout their academic careers. The undergraduate students have varying levels of skills and previous library experience, and their specific needs must be addressed within the context of the changing academic milieu and converging information technologies. The current SLC is no longer adequate for the increasing student numbers, and the demands for access to a wide variety of electronic and print-based information resources. The growing trend towards access rather than ownership, and "just-in-time" rather than "just-in-case" services, necessitates a redesigning of the print-based information system to incorporate networking and an electronic reserve system.

This study has suggested that for the foreseeable future, print-based and electronic resources will coexist and that libraries will have to confront many of the problems they currently face. As Buckland (1992:59) notes: "Some balance will be needed between selected materials on paper, presumably the more heavily used and the less volatile material, and selective recourse to electronic documents for as much of the rest as

available". Despite the uncertainty of the future of print-based materials, the rationale for academic libraries will still be to make essential information resources available to the majority of the users in the most convenient and accessible manner.

### **6.3 Delimitations of the investigation and recommendations for the future**

Academic libraries are facing the challenge of tighter budgets, increasing student enrolments, greater diversity in students' backgrounds and library experience, and a call for greater accountability to all the stakeholders. A primary objective is to provide study and research materials for the users in the most cost-effective way. This study focused on the availability of high-demand materials for undergraduate students in an academic library. It involved a micro-evaluation of one aspect of a library's document delivery service, namely the immediate materials availability rate in a short loan collection. Related issues such as the document delivery time through recall systems and interlibrary lending, were not investigated but are areas for future research as they affect the accessibility of required documents.

Overall library performance can only be measured when the service levels of all divisions are related to one another and assessed in terms of the goals and objectives of the whole institution. However, for the purposes of this investigation, it was not feasible for the researcher to conduct a study of such proportions single-handedly, or to research the interrelationships between the different library departments such as acquisitions, cataloguing, binding, and inter-library loans that indirectly influence availability rates. Time and labour constraints limited this study to exploring only the most pertinent availability

factors affecting immediate materials availability. The delimitations also prevented the determination of availability rates for non-book materials such as videos, and electronic resources. These areas will need to be explored in the future, particularly as automated library systems become surrogates for manual studies.

Detecting and analysing the causal factors inhibiting access to materials are crucial aspects of an availability study, and Kantor's branching diagram proved to be a practical tool for displaying the results. A difficulty encountered in this study was the issue of multiple copies and how to account for the limited copies of core monographs and the abundant photocopies of single articles, so that the results would accurately reflect the availability rates across format. Each multiple copy had to be accounted for in the simulated availability study so that the results would not be distorted in favour of the titles with abundant copies. Only Kantor (1984) addressed the issue of counting each copy of a title as a fraction in an availability analysis and his method was therefore adopted as the most suitable for the simulation study.

The study indicated that overall materials availability rates can be misleading if accepted at face value. A introspective analysis of the reasons for the non-availability of high-demand materials revealed hidden access barriers such as poor information retrieval skills on the part of the users and inefficient organisational procedures on the part of the library. Generally, the availability rates determined were high, which suggests a high degree of general collection adequacy, little circulation interference, and acceptable levels of library "error". However, it was found that the items that are not available are likely to be those in the greatest demand and thus their unavailability may cause considerable dissatisfaction and inconvenience for the users. The users' expectations are dictated by past experience and if they are continually confronted with access barriers to

the information they require, they may become apathetic towards the library, thereby placing fewer demands on the resources and expecting less in return.

The user study confirmed the researcher's intuition that on an individual basis the availability rates experienced by the users themselves, are frequently much lower than those recorded in the literature. This scenario is precipitated by the various educational backgrounds of the students, as well as possible language barriers. Many frequent SLC users experienced difficulties in using the system, indicating a need for continuous user education programmes and constant dialogue between the staff and the users concerning future service improvements. The study reiterates the fundamental importance of constructive communication between the various stakeholders in meeting the educational goals of the institution. The SLC needs to operate in partnership with the students and the lecturers to facilitate optimal access to prescribed materials and to extend subject coverage to a wider range of resources.

The parameters of this study were defined in terms of the needs of undergraduate students, but if desired could be extended to include all users including postgraduates, researchers, and teaching staff. The qualitative user study was conducted on a small-scale to complement the quantitative simulation study, but should be incorporated into future automated studies as the users' perspective will remain an important facet of availability studies.

As this study was a "snapshot in time" of the availability rates of the current SLC, the study should be replicated in the future to determine how proposed changes in teaching methods and curricula, networking, and tighter copyright control affect availability rates. It

is envisaged that electronic reserve systems, with sophisticated technology and multiple access points, will provide maximum availability given sufficient expertise and training on the parts of the users. Nevertheless, availability rates will continue to be affected by the nature of the demands placed on the system and the extent to which the departments utilise the facilities of the SLC. Availability rates based on subject and keyword searching rather than known-item searching should be addressed in future studies as prospective information literacy programmes will encourage the use of a wide range of information tools rather than a dependence on prescribed materials.

Availability studies are labour-intensive, expensive, and time-consuming, and their value questionable. However, despite the pitfalls of sampling errors, subjectivity, and misleading results, this investigation proved that such studies have the potential to reveal the many hidden factors that may ultimately influence availability rates. If a multi-method approach is applied and the stakeholders consulted, availability studies are useful for weeding obsolete items, for duplicating high-demand items, and for developing and maintaining a relevant collection.

The SLC staff embarked on a thorough weeding programme following this study to eliminate the materials that had been identified as being redundant. Missing items were traced where possible and shelf-reading exercises were given more prominence. The SLC staff also endorsed the need for mutual collaboration with the academic staff and the students, for keeping abreast with the changing needs and demands of the undergraduate students. The results of the study underscore the interdependence of the various stakeholders (including library management, library staff, the lecturers, and the students), in affecting library provision and library use.

In the light of the context-specific problems encountered by South African students and in keeping with international trends, this study endorsed recent proposals by the SLC staff and independent consultants, that an undergraduate centre be established with a wide range of materials to meet the diverse academic needs of the UCT students. Such a centre should have adequate computer facilities for basic information literacy training, a reserve section for prescribed materials, and a selection of core monographs and journals for undergraduate courses. The reserve section should provide networking of materials that are currently part of the photocopied SL collection and closed access to SL monographs and journals. Video viewing facilities, study and photocopying facilities should also be housed within the SLC.





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**Personal communication 1996**

Abrahams, R. SLC library assistant. Personal communication, May 1996.

Baker, K. SLC librarian. Regular communication, March to September 1996.

Brey, A. SLC senior library assistant until April 1996. Personal communication, March 1996.

Harford, C. Circulation librarian, Linear Library. Personal communication, February 1996.

Lucas, J. SLC library assistant. Personal communication, May 1996.

Maree, R. SLC senior library assistant. Regular communication, April to June 1996.

McBurnie, H. Systems librarian, Linear Library. Regular communication, April to May 1996.

Oliver, V.G. SLC library assistant until April 1996. Personal communication, March 1996.

Pessenbacher, H. SLC library assistant. Regular communication, April to June 1996.

Prenter, K. SLC library assistant (contract position). Personal communication, May 1996.

Richards, M. Chief African Studies Librarian. Personal communication, October 1996.

Van der Merwe, J. Publishing Liaison Officer for CALICO. Personal communication, November 1996.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author outlines the various methods used to collect and analyze the data. This includes both primary and secondary data collection techniques. The analysis focuses on identifying trends and patterns over time, which is crucial for making informed decisions.

The third part of the document details the results of the study. It shows that there is a significant correlation between the variables being studied. The data indicates that as one variable increases, the other tends to decrease, suggesting an inverse relationship.

Finally, the document concludes with a series of recommendations based on the findings. It suggests that further research should be conducted to explore the underlying causes of the observed trends. Additionally, it provides practical advice for how the information can be used to improve current practices.

**Appendices**

**Appendix A: Explanation of acronyms and research projects referred to in the study**

**Appendix B: Covering letters, questionnaire and interview schedules and availability checklists**

## **Appendix A: Description of acronyms and research projects referred to in this study**

### **A.1 Aston University: Reading List Project (RLP)**

Smith (1993) describes a project initiated by the Library and Information Services (LIS) at Aston University to construct a database of courses offered by the University, with OPAC access to the reading lists received by the library. The primary objectives of the Aston reading list project were to involve library staff from the Information Services and the Acquisitions divisions; to initiate a two-way process between teaching staff and the short loan or reserve staff for compiling and updating reading lists; to establish appropriate acquisition and loan policies; and to make the current reading lists publicly available via the OPACs (Smith, 1993:90).

Representatives of the library and academic staff were interviewed to determine the best ways of communicating reading lists requirements. There appeared to be widespread ignorance amongst academic staff as to LIS procedures and the necessary requirements for acquisitions. A marketing programme was needed to inform to academics of the library services available to promote reading list material, as well as the preliminary steps necessary to create a successful short loan system. Collaboration between academic and library staff was crucial in building up an accurate database of courses and accompanying reading lists. Further co-operation was needed to ensure that the short loan materials were processed, monitored, selectively weeded as their use declined, and then relegated to the open stacks of the main library.

The course information maintained on the database contains the name of the lecturer responsible for teaching the course and the bibliographic information for each item on the reading list plus details of the usage of each copy are sent to the lecturer concerned at the end of the session for updating, deletions and additions (Smith, 1993:93). A review of the usage of such SLC photocopies revealed that "although non-used items are deleted from the SLC at the end of each session,...during the last session 50% of items had not been used, and a further 16% had been used only once. At a conservative estimate, this has wasted about five hundred hours of staff time!" (Smith, 1993:95).

## **A.2 Cape Library Co-operative (CALICO)**

The Cape Library Co-operative came into being in 1993, when five tertiary institutions in the Western Cape, comprising the Universities of Cape Town, Stellenbosch, and the Western Cape, and the Technicons of the Peninsula and the Cape, agreed to pool their respective library systems to create a single, computerised library system that would be housed separately but provide increased access through computer networking. The benefits of having a shared automated system are that students and staff at all the institutions will have identical access to all parts of the collection for study and research purposes and that they will receive training in advanced technological support for their studies and for the electronic age.

The regional Co-operative is already promoting the upgrading of library facilities in previously disadvantaged institutions and providing a cost-effective document delivery system consisting of the electronic delivery of short documents and the physical delivery of thousands of other materials monthly on behalf of the users. On-campus networking systems are being revamped for the new system and it is envisaged that

the online catalogue will soon have remote access on all campuses and eventually include access for schools, colleges, communities libraries, industry, and various other organisations. Computer and information literacy skills will be developed through the CALICO scheme. In July 1995 CALICO officially launched its information literacy project (INFOLIT), under the auspices of the Western Cape Tertiary Institutions Trust (WCTIT). For up-to-date information the CALICO Web page housed at Stellenbosch University Library can be accessed at:-  
<http://www.sun.ac.za/local/library/calico>.

### **A.3 Equal Opportunities Research Project (E.O.R.P.): *Overcoming barriers to learning ...* (1995)**

This study conducted among second-year students at UCT in 1995, investigated the conditions that enhance student learning; the extent to which the UCT environment is conducive to learning; and the students' knowledge of and use of university educational resources. A multi-method research approach was used, combining quantitative and qualitative methods. The sample group comprised "620 second year students in the departments of Accounting (Faculty of Commerce), Sociology (Faculty of Social Science) and Chemistry (Faculty of Science). The departments from which the sample was drawn are chosen on the basis of their being major undergraduate departments in their respective faculties. While not necessarily representing the trends of their faculties overall, certain, tentative, conclusions about trends between faculties may be extrapolated from the departments involved. Where faculty is referred to, throughout this report, the trends are those of the department from which the sample was drawn, rather than the faculty as a whole" (1995:8).

This study indicated that both material and human resources at the university are under-utilised. The library is particularly under-utilised, and undergraduate students use only the most basic information resources necessary for their course requirements. The library is primarily used for the accessing of short loan materials, and the Social Science students used these facilities considerably more than their Commerce and Science counterparts. "Faculty is therefore a major factor influencing the extent to which students use short loan. This trend is repeated in relation to students' utilisation of most other library resources and facilities. All library resources other than short loan are used by a minority of respondents. Only 6% refer to indices of journal articles or use sources other than UCT library (resource centres on campus or libraries off campus). The card catalogues or computers are used by 41% of respondents, while a sizeable number (37%) use the library as a quiet place to read or study, rather than as a source of information" (1995:21). Few students ask for library assistance, browse for material, or follow up references cited in their readings, and few are aware of the wide variety of potential reference sources.

*Conclusion:* The library is one of the university's most important academic resources. It is of great concern that this study, like other recent ones (Research Surveys), suggests that the library is so under-utilised and further research is needed to explore the reasons for this. Some of the factors that could be explored to address this problem are:-

- a. Finding ways for students to be made aware of the richness of the resources available in the library and the benefits of using them;
- b. Ensuring that students are competent in basic library skills, including the information searching and retrieval techniques, library procedures and arrangement and location of materials.
- c. Encouraging academic staff to place more emphasis on library-based research for course requirements (1995:22).

Other conclusions drawn by this study are that nearly half of the second-year students sampled, are struggling to pass their courses, including those whose first language is English, and who come from a relatively sound educational background. The interaction between students and academic staff is minimal and the perceptions and experiences of the teaching staff towards the students and the library, influences the level of utilisation of its resources (1995:43-44).

#### **A.4 Information Literacy Programme (INFOLIT)**

INFOLIT is the Information Literacy Programme, funded by the Reader's Digest Association, and granted to CALICO in 1995 for promoting information literacy by supporting educational initiatives which ensure that students learn how to access, use and evaluate information. The long term goal is to enable students to acquire transferable information literacy skills, "resulting in a more informed, active, motivated and productive citizenry" (Karelse, 1996:4). In the initial stages of the programme, INFOLIT will sponsor projects at undergraduate level with the aim of integrating information literacy into courses and curricula to transform teaching and studying methods. A research process is also underway to arrive at an operational definition of information literacy with which to audit and assess information literacy projects at the CALICO institutions.

#### **A.5 Research Surveys (1994)**

During 1993 a commercial organisation, Research Surveys, conducted a number of user surveys, at the request of the UCT Senate Library Committee, to investigate the various stakeholders' opinions regarding the use and support of the UCT libraries. The following conclusions were drawn based on the data obtained from the user surveys among

faculty library committees, undergraduate students, academics, and researchers at the university:-

- With regard to the adequacy of the library system for research, it was acknowledged that there were some areas of excellence like the African Studies Collection, but that there were inequalities in the resource provision for research. The Interlibrary lending facility was too slow and materials identified through literature searches were often unavailable.
- With regard to the adequacy of the collection for teaching purposes, required texts were frequently unavailable when needed, and it took too long to process new texts. To circumvent the problem of “missing” texts, extensive use of lecture notes was made in the Science faculties, whereas course readers and photocopied materials were relied on in the other faculties. All faculties faced the problem of students who were unable to purchase the expensive textbooks, yet it was felt that the library should not become a textbook provider. The perception was that the SLC should be strengthened by extending its facilities and by improving its efficiency. Prominent findings were that:-
- Many interviewees from the non-Science faculties were not confident electronic media users and they found the online catalogue, BORIS, difficult and frustrating to use. There was support for full-text databases, provided that the system could support simultaneous, multiple access, and that hard copies of core journals would still be purchased.
- There was a recognised need for training in automated information retrieval tools and for better communication between the library and the users.

- The issue of security and vandalism was raised as a perpetual problem that needed to be addressed, but there was no support for a closed-access library system (Research Surveys, 1994:21-24).

#### **A.6 Scottish Collaborative On-demand Publishing Enterprise (SCOPE)**

The University of Stirling was one of the first universities to merge information, computer, and communications technology into an integrated information service for the academic environment. In 1994 the University of Stirling, in partnership with Napier University, was awarded a grant to develop "on-demand and electronic publishing as a viable means of delivering course materials to cope with increasing student numbers" (Di-Placito, 1996:375). Such developments were to benefit undergraduates throughout Scotland by reducing the costs of producing course readers. Moreover, the costs in repairing, replacing and maintaining monographs would decrease, and lecturers would be able to request the most current texts and articles from local and other institutions for inclusion in the digitisation and electronic storage of texts. Copyright agreements and royalty payments would be negotiated with publishers for electronic text provision and on-demand printing. Future innovations would include "on-screen viewing and the ability to select material via the local Opacs" (Di-Placito, 1995:375). Raven (Marcus & Raven, 1996:34) reports that SCOPE has already produced five sociology course packs and has found that in Scottish universities there is a need for printed course readers with electronic products because of a lack of "technical literacy" amongst the students.

**Appendix B**



## School of Librarianship

Education Building  
Rondebosch 7700 · Cape Town · South Africa  
Telephone: (021) 650-3091 **Secretary**  
Telegrams: Alumni Cape Town · Telex 5-22208  
Fax No: (021) 650-3489  
Electronic mail (Internet): sol@education.uct.ac.za  
Director: **Professor P G Underwood**

Department of Chemical Engineering  
University of Cape Town

22 April 1996

Dear

Re: CHE 232F

I am researching the availability of high-demand materials for undergraduate students in the Linear Library, as part of a Master's degree in Library and Information Science. Students often complain that the materials they need for study purposes are not readily available in the library. This study will determine the extent to which the library is currently meeting the needs of the students by providing essential materials timeously. In order to conduct a valid "materials availability study" I need to check a sample of relevant references that are needed by undergraduates for seminars, coursework and assignments for this semester. I am concentrating on second year courses and would greatly appreciate your co-operation in providing me with copies of prescribed reading lists for the second year courses you are teaching during the first semester.

I would also like information with regard to the number of students taking your courses, and your comments concerning the role of the library in making the items on the reading lists available to your student. Please would you complete the brief questionnaire attached and return it to me, with the recommended reading lists. You can e-mail me at education/crgshi if you have any queries or if you are available for a personal interview.

Yours sincerely,

(Mrs) S. Leibbrandt

Project Supervisor: Dr K. de Jager, School of Librarianship

Questionnaire / Interview Schedule for lecturers teaching 2nd-year courses

Lecturer -  
 Course code -  
 Course title -  
 No. of students taking course -  
 Duration of course (year/semester) -  
 Dates for assignments and tests -

(Please circle the appropriate response and use the space provided for additional comments)

1. Do you issue your students with recommended reading lists for tutorial, essay, and examination purposes?  
 YES/NO

Are additional reading lists made available at a later stage during the duration of the course?  
 YES/NO  
 Any comments?

2. Are any major textbooks prescribed for the course?  
 YES/NO

If YES, do the students have to purchase them?

3. Do you compile "course readers" (i.e. collated readings from various sources) or issue your students with course handouts and notes?  
 YES/NO

Any comments?

4. Do you make use of the Short Loan Centre (SLC) facilities in the Linear Library for your taught second year courses?  
YES/NO

Please comment on how you use the SLC? (e.g. for required reading material, supplementary reading, seminar papers and tutorials, lecture notes and overheads, non-book material such as videos)

5. Are there any departmental facilities (e.g. an informal "library", writing room, or laboratory, within the department) for making prescribed or required readings available to the second year students?  
YES/NO

Any comments?

Thank you for taking the time to respond to the questions.

Yours sincerely,

(Mrs) S. Leibbrandt

Project Supervisor: Dr K. de Jager. School of Librarianship

## FACULTY STUDY

Sheet1

| code | faculty        | department           | course code | no. of students | reading lists | textbooks | course readers | items on SL | number | dept. 'library' |
|------|----------------|----------------------|-------------|-----------------|---------------|-----------|----------------|-------------|--------|-----------------|
| 0    | arts           | arkans               | AFR 201W    | 22              | 1             | 0         | 1              | 1           | 14     | 0               |
| 0    | arts           | arkans               | AFR 212F    |                 |               |           |                |             | 3      |                 |
| 0    | arts           | archaeology          | AGE 203F    | 24              | 1             | 0         | 1              | 1           | 4      | 0               |
| 0    | arts           | lecturer 2           | AGE 203F    | 24              | 1             | 0         | 0              | 0           |        | 1               |
| 0    | arts           | classics             | CLA 209F    | 50              | 1             | 0         | 1              | 1           | 76     | 1               |
| 0    | arts           | lecturer 2           | CLA 209F    | 50              | 1             | 1         | 1              | 1           | 25     | 0               |
| 0    | arts           | classics             | CLA 211F    |                 |               |           |                |             |        |                 |
| 0    | arts           | theory of literature | DOA 200W    |                 |               |           |                |             | 13     |                 |
| 0    | arts           | drama                | DRM 200W    |                 |               |           |                |             | 28     |                 |
| 0    | arts           | english              | ELL 200W    | 33              | 1             | 1         | 1              | 1           |        | 0               |
| 0    | arts           | lecturer 2           | ELL 200W    | 350             | 1             | 1         | 0              | 1           |        | 0               |
| 0    | arts           | lecturer 3           | ELL 200W    | 200             | 0             | 1         | 1              | 1           | 117    | 0               |
| 0    | arts           | lecturer 4           | ELL 200W    | 30              | 1             | 1         | 0              | 1           |        | 0               |
| 0    | arts           | english              | ELL 202F    | 35              | 1             | 0         | 0              | 1           | 61     | 0               |
| 0    | arts           | lecturer 2           | ELL 202F    | 40              | 1             | 1         | 0              | 1           |        | 0               |
| 0    | arts           | lecturer 3           | ELL 202F    | 35              | 1             | 0         | 1              | 1           |        | 0               |
| 0    | arts           | lecturer 4           | ELL 202F    |                 |               |           |                |             |        |                 |
| 0    | arts           | french               | FRN 201W    | 17              | 1             | 1         | 0              | 1           | 18     | 0               |
| 0    | arts           | german               | GER 202/3W  | 5               | 1             | 0         | 1              | 1           | 4      | 1               |
| 0    | arts           | hebrew               | HEB 265F    | 35              | 1             | 0         | 1              | 1           | 10     | 1               |
| 0    | arts           | history              | HIS 202F    | 130             | 1             | 1         | 1              | 1           | 49     | 1               |
| 0    | arts           | history              | HIS 212F    | 67              | 1             | 0         | 1              | 1           | 110    | 0               |
| 0    | arts           | history              | HIS 216F    | 45              | 1             | 1         | 1              | 1           | 109    | 0               |
| 0    | arts           | lecturer 2           | HIS 216F    | 45              | 1             | 1         | 1              | 1           |        | 0               |
| 0    | arts           | linguistics          | LDN 200W    | 27              | 1             | 1         | 0              | 0           | 4      | 1               |
|      |                |                      |             |                 | 19            | 11        | 13             | 18          | 645    | 6               |
| 1    | commerce       | accounting           | ACC 213F    | 800             |               |           |                |             | 1      |                 |
| 1    | commerce       | business science     | BUS 210F    | 410             | 0             | 1         | 0              | 1           | 1      | 0               |
| 1    | commerce       | business science     | BUS 212F    | 65              | 0             | 1         | 0              | 0           |        | 0               |
| 1    | commerce       | business science     | BUS 230F    | 330             | 0             | 1         | 0              | 0           |        | 0               |
| 1    | law            | commercial law       | CML 201F    |                 |               |           |                | 1           | 5      |                 |
| 1    | commerce       | economics            | ECO 201W    | 550             | 1             | 1         | 1              | 1           | 8      | 0               |
| 1    | commerce       | lecturer 2           | ECO 201W    | 500             | 1             | 1         | 0              | 1           | 13     | 0               |
| 1    | commerce       | information systems  | INF 200W    | 190             | 0             | 0         | 1              | 1           | 3      | 0               |
| 1    | commerce       | information systems  | INF 201F    | 320             | 0             | 1         | 0              | 1           |        | 1               |
| 1    | soc sci/hum.an | philosophy           | PHI 207F    | 59              | 1             | 0         | 1              | 1           | 44     | 0               |
| 1    | soc sci/hum.an | philosophy           | PHI 237F    |                 |               |           |                |             | 17     |                 |
| 1    | soc sci/hum.an | politics             | POL 217F    | 200             | 1             | 0         | 1              | 0           |        | 0               |
| 1    | soc sci/hum.an | politics             | POL 224F    | 65              | 0             | 0         | 1              | 0           |        | 0               |
| 1    | soc sci/hum.an | politics             | POL 225F    | 200             | 1             | 0         | 1              | 0           | 2      | 0               |
| 1    | soc sci/hum.an | psychology           | PSY 200W    | 430             | 0             | 0         | 1              | 1           | 30     | 0               |



|   |      |             |     |              |
|---|------|-------------|-----|--------------|
|   |      | 1           | 26% | 274 titles   |
|   |      | 2           | 12% | 129 titles   |
|   |      | TOTAL: 100% |     | 1048 titles  |
| use of shorloan by faculty (sample):                                  | code |             |     |              |
|   |      | 0           | 57% | 171 titles   |
|   |      | 1           | 29% | 87 titles    |
|   |      | 2           | 14% | 42 titles    |
|   |      | TOTAL: 100% |     | 300 titles   |
| use of course readers by departments in the three faculty categories: |      |             |     |              |
|   |      | 0           | 19% | 7/11 depts.  |
|   |      | 1           | 25% | 9/12 depts.  |
|   |      | 2           | 6%  | 2/13 depts.  |
|   |      | 50%         |     | 18/36 depts. |
| prescribed or highly recommended textbooks (pop.) -                   |      |             |     |              |
|   |      | 0           | 14% | 5/11 depts.  |
|   |      | 1           | 25% | 9/12 depts.  |
|   |      | 2           | 25% | 9/13 depts.  |
|   |      | 64%         |     | 23/36 depts. |
| departmental "library" facilities for students (population):          |      |             |     |              |
|   |      | 0           | 17% | 6/11 depts.  |
|   |      | 1           | 8%  | 3/12 depts.  |
|   |      | 2           | 11% | 4/13 depts.  |
|   |      | 36%         |     | 13/36 depts. |

B.4 Checklist sample for simulated study

|                         |  |                         |        |
|-------------------------|--|-------------------------|--------|
| date:                   | 2 May 1996   |                         |        |
| item no.                | 31   |                         |        |
| department              | History  |                         |        |
| course code             | HIS 216F   |                         |        |
| no. of students:        | 50   |                         |        |
| shelf no.               | 305.5670972981 BECK                                |                         |        |
| author                  | BECKLES, H   |                         |        |
| title                   | Natural rebels                                     |                         |        |
| loan period             | 3 hours  | no. of copies on SL - 3 |        |
| availability            | on shelf:  | ✓✓✓ checked             | yes no |
|                         | in circulation:                                    |                         | yes no |
|                         | library error:                                     |                         | yes no |
|                         | missing:   |                         | yes no |
| comments                |  |                         |        |
| CRN                     | 104427   |                         |        |
| circulation statistics: | 30 May 1996 - 2 May 1996: 118 - 117 = 1 (may only) |                         |        |

|                         |   |                         |        |
|-------------------------|---|-------------------------|--------|
| date                    | 2 May 1996  |                         |        |
| item no.                | 32  |                         |        |
| department              | History   |                         |        |
| course code             | HIS 202F  |                         |        |
| no. of students:        | 170   |                         |        |
| shelf no.               | 306.36209687 BREA   |                         |        |
| author                  | WORDEN, N and CRAIS, C. (eds)   |                         |        |
| title                   | Breaking the chains   |                         |        |
| loan period             | 3 hours   | no. of copies on SL - 3 |        |
| availability            | on shelf:-  | ✓ checked               | yes no |
|                         | in circulation:   | ✓                       | yes no |
|                         | library error:  |                         | yes no |
|                         | unaccounted for:  |                         | yes no |
| comments                | additional copies: 1 in African Studies Library; 1 in Education Library |                         |        |
| CRN                     | 483340  |                         |        |
| circulation statistics: | 30 May 1996 - 2 May 1996: 190 - 120 = 70 (may only)                     |                         |        |

Checklist for simulated availability study

## BOOK Plus Monthly Statistics Summary

May 1996

For the period 01/05/1996 to 31/05/1996

Library SHORT LOAN CENTRE  
Location Jagger Short Loan

| Type | Description                  | Count<br>This period | Count<br>Last Year | % Change | % This Lib | % All Libs | Count this Year<br>(from 01/01/96) |
|------|------------------------------|----------------------|--------------------|----------|------------|------------|------------------------------------|
| 001  | Loans - Items                | 25906                | 33780              | 23-      | 100.00     | 33.94      | 64949                              |
| 002  | Loans - Borrowers            | 15264                | 19833              | 23-      | 100.00     | 40.56      | 39708                              |
| 003  | Returns                      | 26141                | 34075              | 23-      | 100.00     | 34.03      | 64995                              |
| 004  | Reservations Made - All      | 1733                 | 2809               | 38-      | 100.00     | 35.89      | 4791                               |
| 005  | Reservations Made - Public   | 0                    | 0                  | None     | None       | None       | 0                                  |
| 006  | Reservations Cancelled       | 141                  | 360                | 60-      | 100.00     | 15.98      | 464                                |
| 007  | Reservations Advised         | 0                    | 0                  | None     | None       | None       | 0                                  |
| 008  | Reservations Unfulfilled     | 316                  | 439                | 28-      | 100.00     | 48.46      | 799                                |
| 009  | Reservations Collected       | 1327                 | 1932               | 31-      | 100.00     | 40.27      | 3548                               |
| 010  | Reservations Uncollected     | 0                    | 95                 | None     | None       | None       | 1                                  |
| 011  | Loan Extension #1            | 914                  | 1013               | 9-       | 100.00     | 11.35      | 2337                               |
| 012  | Loan Extension #2            | 85                   | 85                 | 0        | 100.00     | 3.44       | 196                                |
| 013  | Loan Extension #3            | 25                   | 5                  | 400      | 100.00     | 2.90       | 37                                 |
| 014  | Loan Extension #4            | 5                    | 1                  | 400      | 100.00     | 2.22       | 7                                  |
| 015  | Loan Extension #5            | 1                    | 0                  | None     | 100.00     | 2.22       | 1                                  |
| 016  | Loan Extension #6            | 1                    | 0                  | None     | 100.00     | 4.76       | 1                                  |
| 017  | Loan Extension #7            | 0                    | 0                  | None     | None       | None       | 0                                  |
| 018  | Loan Extension #8            | 0                    | 0                  | None     | None       | None       | 0                                  |
| 019  | Loan Extension #9            | 0                    | 0                  | None     | None       | None       | 0                                  |
| 021  | Items Added                  | 850                  | 1120               | 24-      | 100.00     | 15.72      | 3845                               |
| 023  | Items Deleted                | 1497                 | 99                 | 1412     | 100.00     | 51.92      | 3698                               |
| 024  | Items Added For              | 960                  | 1313               | 26-      | 100.00     | 14.74      | 4660                               |
| 025  | Items Deleted For            | 1557                 | 147                | 959      | 100.00     | 39.04      | 4089                               |
| 026  | Catalogues Added             | 154                  | 179                | 13-      | 100.00     | 4.40       | 742                                |
| 027  | Catalogues Changed           | 824                  | 697                | 18       | 100.00     | 12.34      | 5859                               |
| 028  | Catalogues Deleted           | 329                  | 26                 | 1165     | 100.00     | 31.54      | 804                                |
| 029  | Authorities Added            | 32                   | 40                 | 20-      | 100.00     | .72        | 205                                |
| 030  | Authorities Changed          | 0                    | 0                  | None     | None       | None       | 2                                  |
| 031  | Authorities Deleted          | 80                   | 2                  | 3900     | 100.00     | 6.02       | 181                                |
| 032  | Serial Catalogues Added      | 0                    | 0                  | None     | None       | None       | 0                                  |
| 033  | Serial Catalogues Changed    | 0                    | 0                  | None     | None       | None       | 2                                  |
| 034  | Serial Catalogues Deleted    | 0                    | 0                  | None     | None       | None       | 0                                  |
| 036  | Borrowers Added              | 29                   | 7                  | 314      | 100.00     | 14.00      | 109                                |
| 037  | Borrowers Changed            | 112                  | 103                | 8        | 100.00     | 11.41      | 379                                |
| 038  | Borrowers Deleted            | 0                    | 0                  | None     | None       | None       | 186                                |
| 039  | Borrower Enquiries by Number | 4398                 | 5793               | 24-      | 100.00     | 21.29      | 12187                              |
| 040  | Borrower Enquiries by Name   | 155                  | 200                | 22-      | 100.00     | 7.52       | 605                                |
| 041  | Location Changes - Automatic | 37                   | 24                 | 54       | 100.00     | 4.83       | 168                                |
| 042  | Location Changes - Permanent | 132                  | 169                | 21-      | 100.00     | 11.94      | 1406                               |
| 043  | Location Changes - Temporary | 0                    | 0                  | None     | None       | None       | 0                                  |
| 044  | Location Changes - Current   | 134                  | 170                | 21-      | 100.00     | 8.83       | 1401                               |
| 045  | Status Changes               | 102                  | 206                | 50-      | 100.00     | 10.07      | 241                                |
| 046  | Status Changes - Automatic   | 0                    | 1                  | None     | None       | None       | 4                                  |
| 047  | Requisitions Added - All     | 0                    | 0                  | None     | None       | None       | 0                                  |
| 048  | Requisitions Added - Public  | 0                    | 0                  | None     | None       | None       | 0                                  |
| 049  | Requisitions Deleted         | 0                    | 0                  | None     | None       | None       | 0                                  |

## BOOK Plus Monthly Statistics Summary

May 1996

For the period 01/05/1996 to 31/05/1996

Library SHORT LOAN CENTRE  
Location Jagger Short Loan

| Type Description                   | Count<br>This period | Count<br>Last Year | % Change | % This Lib | % All Libs | Count this Year<br>(from 01/01/96) |
|------------------------------------|----------------------|--------------------|----------|------------|------------|------------------------------------|
| 050 Orders Added                   | 0                    | 0                  | None     | None       | None       | 0                                  |
| 051 Orders Deleted                 | 0                    | 0                  | None     | None       | None       | 0                                  |
| 052 Serials Subscriptions Added    | 0                    | 0                  | None     | None       | None       | 0                                  |
| 053 Serials Subscriptions Deleted  | 0                    | 0                  | None     | None       | None       | 0                                  |
| 054 Reservation Notices Printed    | 0                    | 0                  | None     | None       | None       | 0                                  |
| 055 Overdue Notices Printed - L 1  | 21                   | 29                 | 27-      | 100.00     | 3.44       | 61                                 |
| 056 Overdue Notices Printed - L 2  | 3                    | 16                 | 81-      | 100.00     | 1.72       | 17                                 |
| 057 Overdue Notices Printed - L 3  | 0                    | 0                  | None     | None       | None       | 0                                  |
| 058 Borrower Cards Printed         | 0                    | 0                  | None     | None       | None       | 0                                  |
| 059 MARC Records In                | 0                    | 0                  | None     | None       | None       | 0                                  |
| 060 MARC Records Out               | 0                    | 0                  | None     | None       | None       | 0                                  |
| 061 All Catalogue Enquiries        | 30147                | 31426              | 4-       | 100.00     | 18.93      | 93228                              |
| 062 OPAC Enquiries                 | 19936                | 22720              | 12-      | 100.00     | 17.85      | 62425                              |
| 063 OPAC Enquiries - Successful    | 15674                | 16605              | 5-       | 100.00     | 17.91      | 48980                              |
| 064 OPAC Enquiries - Unsuccessful  | 8638                 | 10197              | 15-      | 100.00     | 17.27      | 27221                              |
| 065 OPAC Enquiries - Catalogue     | 7361                 | 9765               | 24-      | 100.00     | 13.28      | 21751                              |
| 066 OPAC Enquiries - Copies        | 10346                | 5902               | 75       | 100.00     | 22.14      | 28569                              |
| 067 OPAC Enquiries - Borrower      | 0                    | 0                  | None     | None       | None       | 0                                  |
| 068 OPAC Enquiries - Library News  | 0                    | 0                  | None     | None       | None       | 0                                  |
| 069 Borrowers Added For            | 28                   | 7                  | 300      | 100.00     | 10.18      | 108                                |
| 070 Borrowers Changed For          | 43                   | 29                 | 48       | 100.00     | 4.38       | 214                                |
| 071 Borrowers Deleted For          | 3                    | 4                  | 25-      | 100.00     | 1.07       | 33                                 |
| 078 MARC Authorities In            | 0                    | 0                  | None     | None       | None       | 0                                  |
| 082 Routing Reservations Made      | 0                    | 0                  | None     | None       | None       | 0                                  |
| 083 Routing Reservations Cancelled | 0                    | 0                  | None     | None       | None       | 0                                  |
| 084 Routing Reservations Collected | 0                    | 0                  | None     | None       | None       | 0                                  |
| 085 Serial Claims Printed          | 0                    | 0                  | None     | None       | None       | 0                                  |
| 086 Acquisitions Claims Printed    | 0                    | 0                  | None     | None       | None       | 0                                  |
| 087 Reservation Cancell'n Notices  | 0                    | 0                  | None     | None       | None       | 0                                  |
| 088 Reservation Expiry Notices     | 0                    | 0                  | None     | None       | None       | 0                                  |
| 089 Reservation Lapsed Notices     | 0                    | 0                  | None     | None       | None       | 0                                  |
| 090 Reservation Recall Notices     | 0                    | 0                  | None     | None       | None       | 0                                  |
| 091 Borrowers Re-registered        | 0                    | 0                  | None     | None       | None       | 0                                  |
| 092 Borrowers Re-registered For    | 1                    | 0                  | None     | 100.00     | 2.70       | 1                                  |
| 093 Serial Items Accessioned       | 0                    | 0                  | None     | None       | None       | 0                                  |

**MATERIALS AVAILABILITY SURVEY: SHORT LOAN CENTRE**

(Beginning of June 1996)

(Questionnaire to be used by researcher for interviewing SLC users)

Please answer the following questions concerning the materials you searched for today.

ARE YOU:  Undergraduate  Postgraduate  
 Other

HOME LANGUAGE:  English  Other:

COURSE CODE(S):

**ITEMS SEARCHED FOR ( Author / title/ shelf number):-**

(Only give details of items for unsuccessful searches, for follow-up purposes)

**FOUND ON SHELF?**

1. \_\_\_\_\_  Yes  No
2. \_\_\_\_\_  Yes  No
3. \_\_\_\_\_  Yes  No
4. \_\_\_\_\_  Yes  No
5. \_\_\_\_\_  Yes  No

**DID YOU EXPERIENCE PROBLEMS IN THE FOLLOWING AREAS:-**

Using the online catalogue  Finding items on the shelf  
 Other? (please explain)

**HOW OFTEN DO YOU USE SHORT LOAN?**

Once a month  More than once a month  
 Less than once a month  Exam time

**ADDITIONAL COMMENTS:-**

THE UNITED STATES OF AMERICA

DEPARTMENT OF JUSTICE

FEDERAL BUREAU OF INVESTIGATION

MEMORANDUM FOR THE DIRECTOR

FROM: SAC, NEW YORK

SUBJECT: [Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]