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**An Evaluation of the
Effectiveness of the Learning Resource Centres
in the Colleges of Education in Oman**

**By
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(BA, DipEd, MEd)**

**A thesis Submitted to the Faculty of Education at the
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ABSTRACT

This study reports on an investigation of the effectiveness of the Learning Resource Centres (LRCs) in the Colleges of Education in Oman. It considers the aims of the LRCs/libraries and explored the extent to which the LRCs achieve their aims and identified the defects which represent obstacles to improving the LRCs. The extent to which the LRCs support the Colleges of Education to achieve their aims is also explored.

Accordingly, this thesis examines the effectiveness of the LRCs and leads to recommendations, which if implemented, will improve the LRCs for the users. In order to achieve the research purposes the study surveys the LRCs in the Colleges of Education in Oman. The survey includes observation of all six LRCs, responses to questionnaires from 140 academics and 436 students and interviews with 24 employees from the staff of LRCs. In consideration of the fact that the Ministry of Higher Education in Oman (MOHE) tries to benefit from the Canadian experience in LRCs/libraries, interviews were conducted with nine employees working in LRCs/libraries at six Canadian Universities.

The study indicates that, in general, the LRCs have satisfactory factors such as the provision of resources, accessibility, support from personnel to users, training of users to develop their skills and increase the utilisation of facilities. Consequently these enhance the possibility of achieving the aims of the LRCs as well as supporting the Colleges to attain their aims. The availability of the previous factors also indicates to the reasonable effectiveness of the LRCs. On the other hand, the findings of the study consider that the main obstacles to improving the LRCs are: centralisation of acquisition of human and material resources at the MOHE, space, policy, and the incomplete classification system and catalogue. Finally the study proposes recommendations which can overcome the identified obstacles and improve the effectiveness of the LRCs in the Colleges of Education in Oman.

DEDICATION

I wish to dedicate this work to my father and brothers

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DECLARATION

I declare that this thesis is my own work and has not been published or submitted in support of any degree or qualification.

Bakhit Al-Mahri

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ABBREVIATIONS

ERIC	Educational Resources Information Centre
IT	Information Technology
LC	Library of Congress
LCD	Data Show Projector (Liquid Crystal Display)
LNG	Liquefied Natural Gas
LRC	Learning Resource Centre
MOHE	Ministry of Higher Education
OHP	Over Head Projector
OPAC	Open Public Access Catalogue
PI	Performance Indicators
RBL	Resource Based Learning
SCONUL	Society of College, National & University Libraries
SPSS	Statistical Package for Social Science
SQU	Sultan Qaboos University
UWE	University of the West of England

CHAPTER ONE

INTRODUCTION

This research aimed to investigate the Effectiveness of the Learning Resource Centres (LRCs) in the Colleges of Education in Oman. It was conducted through an investigation of the level of satisfaction of students and academics with services provided through the LRCs in their Colleges of Education. The views of staff of LRCs were also explored through a series of semi-structured interviews and additionally an observation of staff of LRCs and students activities in the LRCs was conducted. The study was also designed to learn from the experiences of others, particularly in Canada. The final aim of the study was to propose suggestions which could improve the effectiveness of the LRCs.

1.1 Selection of the Study

The education system in Oman still relies to a great extent on expatriates. In the academic year 2000/2001 there were 26416 teachers (17743 Omanis and 8673 expatriates/foreigners) (Ministry of Education, Web Site: <http://www.moe.gov.om> 10/10/2002).

Hence, there is an urgent need to create better opportunities for the development of local education professionals. Accordingly seven educational institutions for teacher training have been established in Oman. The institutions responsible for teacher training in the Sultanate of Oman are: Sultan Qaboos University (SQU) (2500 students) and six Colleges of Education (8708 students in 2000/2001) (Statistical Statement at Department of Students Affairs in the Ministry Of Higher Education, 'MOHE').

The Colleges of Education play an important role in preparing teachers for primary and secondary school teaching. One of the important recent changes to these Colleges was the introduction of the Learning Resource Centres (LRCs) in 1997, which replaced the conventional libraries in the Colleges. Each LRC has a library, two computer laboratories, multi-media laboratory (self-access laboratory) and a media laboratory. These LRCs are equipped with new educational technologies both hardware and software. Currently the LRCs are managed by expatriates from Canada. This is due to the shortage of qualified Omanis in this field as well as the need to utilise the wider Canadian experience.

The Ministry of Higher Education (MOHE) regarded the establishment of the LRCs as a high priority, essential to the support of the learning and teaching process in recognition of the significant role the LRCs can play in these Colleges.

Despite the great attention that the MOHE pays to the LRCs in Colleges, there were no studies conducted on the effectiveness of the LRCs in the Colleges of Education in Oman or studies about how well are these LRCs performing. There were however several studies carried out on libraries, librarianship and educational technology in Oman in particular in schools and the Sultan Qaboos University (SQU). Besides, the Directorate General of Scholarships at the MOHE has all the titles of studies conducted or under research for all Omani postgraduate students. Therefore, before selecting this study, I registered with the MOHE and made sure that the proposed subject "*Evaluation of the Effectiveness of the LRCs in the Colleges of Education in Oman*" had not yet been studied.

1.2 The Purpose of the Study

The research intends to investigate the effectiveness of the Learning Resource Centres (LRCs) in the Colleges of Education in Oman. To find out the extent to which the LRCs are effective, I identified the following elements as requiring investigation: the LRCs adequacy in meeting the needs of users' (mainly; students and academics) LRCs achievement of their aims and the obstacles in the way of improving the LRCs; the extent to which the LRCs support the Colleges of Education to achieve their aims. Consequently, this research is an attempt to address the LRCs' effectiveness and leads to recommendations, which will make the LRCs more effective for the users.

1.3 Research Questions and Hypotheses

The general questions guiding this research are:

1. How effective are the LRCs in the Colleges of Education in Oman?
2. Do the LRCs meet their aims and objectives? (aims and objectives are included in chapter 8)
3. What are the obstacles in the way of improving the LRCs and how can these obstacles be overcome?
4. How to improve the effectiveness of the LRCs in the Colleges of Education in Oman?

As the research developed a further question (Q.5) emerged i.e.

5. To what extent the LRCs support the Colleges of Education to achieve their aims?

Questions 2, 3 and 5 were set in the context of answering the first research question

“1. How effective are the LRCs in the Colleges of Education in Oman?”

The following hypotheses apply to the effectiveness of the LRCs in the Colleges of Education in Oman.

1. The introduction of the LRCs to the Colleges of Education in 1997, is a new experience for the Colleges of Education in Oman. Staff of LRCs mostly comprise of new employees from Oman with limited working experience and expatriates who are also experiencing working in another country. Accordingly the LRCs are expected to experience new challenges with strengths and weaknesses which are required to be determined.
2. The incomplete formal policy of LRCs is expected to cause barriers to the provision of adequate services. This was noted during the researcher working experience in an LRC.
3. Centralisation of acquisition of material and human resources at the Ministry of Higher Education (MOHE) in Oman is expected to affect the acquisition of adequate human and material resources. Accordingly this is more likely to influence and delay the achievement of the effectiveness of the LRCs in the Colleges of education in Oman.
4. Although the learning and teaching process in the Colleges of Education is expected to be supported through the utilisation of the new educational technology provided in the LRCs and specialised staff, there is also a possibility for the existence of under-use of such educational technology. Hence it is hoped by this study to identify the satisfactory utilisation of different educational technology materials and clarify the reasons for any unsatisfactory utilisation of the services. The research intends to reveal suggestions which could encourage and increase the benefit from the LRCs, particularly in the purpose of learning and teaching.
5. By identifying the defects and obstacles and proposing feasible solutions the research is expected to contribute to the enhancement of the effectiveness of the LRCs in Oman. Therefore, a methodology to enhance the effectiveness of the LRCs in Oman will be developed.

1.4 Structure of the Thesis

Chapter One presents an introduction to the study and states the research questions that are investigated. Chapter Two presents a general introduction to Oman. Chapter Three is a review of the literature about the role of the LRCs and libraries in supporting the process of teaching and learning in education. This Chapter includes relevant aspects to be referred to in the investigation of the effectiveness of the LRCs in Oman. Chapter Four describes the methodology used during the gathering, analysis and interpretation of the data included in this study. This includes both quantitative and qualitative methods. Finally this Chapter sheds light on the limitations of the study. Chapter Five presents the analysis of students' and academics' responses to the questionnaires which is intended to measure their level of satisfaction with the services of the LRCs. Chapter Six consists of the results extracted and analysed from the interviews with the staff of LRCs in Oman and the staff of LRCs/Libraries in Canada in addition to aspects that Oman can learn from the Canadian experience. Chapter Seven describes the data collected from the observation conducted in the LRCs. It is concerned with activities and general aspects related to the work process and organisation in the LRCs. Chapter Eight discusses the effectiveness of the LRCs in the Colleges of Education in Oman. This considers the achievement of the aims of the LRCs' and their support to the Colleges of Education to accomplish their aims. Finally this Chapter identifies the main obstacles to improving the LRCs and discusses methods of overcoming these obstacles. Chapter Nine concludes the findings of the study. Finally Chapter Ten highlights recommendations which require consideration for the improvement of the LRCs in the Colleges of Education in Oman.

CHAPTER TWO

INTRODUCTION TO OMAN

2.1 Introduction

This section aims to provide the reader with an overall view about Oman, where the study took place. This is through discussing several aspects about Oman, such as its geography, economy, social structure and education system, ending with the Colleges of Education and their associated LRCs which represent the core of the study.

2.2 Geography

The Sultanate of Oman is located in the South East of the Arabian Peninsula.

The coastline extends 1,700 kilometers from the Strait of Hormuz in the North to the Republic of Yemen and overlooks the Arabian Sea, the Arabian Gulf and the Gulf of Oman. The Sultanate of Oman borders the Republic of Yemen in the South, the Strait of Hormuz in the North, the Arabian Sea in the East and Saudi Arabia and the United Arab Emirates in the West. Oman is the third largest country in the Arabian Peninsula after the Kingdom of Saudi Arabia and the Republic of Yemen. The entire land area is about 309,500 sq. km (Ministry of Information, 2000, and Al-Rabiey, 2002,). The location of Oman is shown in Figure 2.1.

The Omani landscape is wealthy and varied with remarkable differences. The high mountains, the emptiness of the Rub' Al-Khali's sands (Empty Quarter), the green hills in the Southern region (Dhofar) with monsoon rains and the varied coastlines from sandy beaches to rocky bays (Hawley, 1995). The most important part is the coastal plain which occupies nearly 3% of the whole land area. The mountain ranges represent almost 15%. The remaining part of the country (82%) almost consists of sand and gravel (Ministry of Information, 2000).

The country is divided into eight administrative regions which are sub-divided into fifty-nine districts or wilayats (Al-Mufraji, 2000). The regions are: Muscat the capital, Al Batinah Region, Al Dakhliyah (the Interior Region), Dhahira Region, Ash Sharqiyah Region (the Eastern Region), Dhofar Region (the Southern Region), Al-Wusta Region (The

Central Region) and Musandam Region (the Northernmost part of Oman) (Al-Rabiey, 2002). A map of Oman is shown in Figure 2.2.

Maps:



<http://www.sitesatlas.com/Maps/Maps/604r.htm>

Map of the Arabian Peninsula

Figure 2.1 Map of Arab Peninsula

SULTANATE OF OMAN
(REGIONS AND GOVERNORATES)

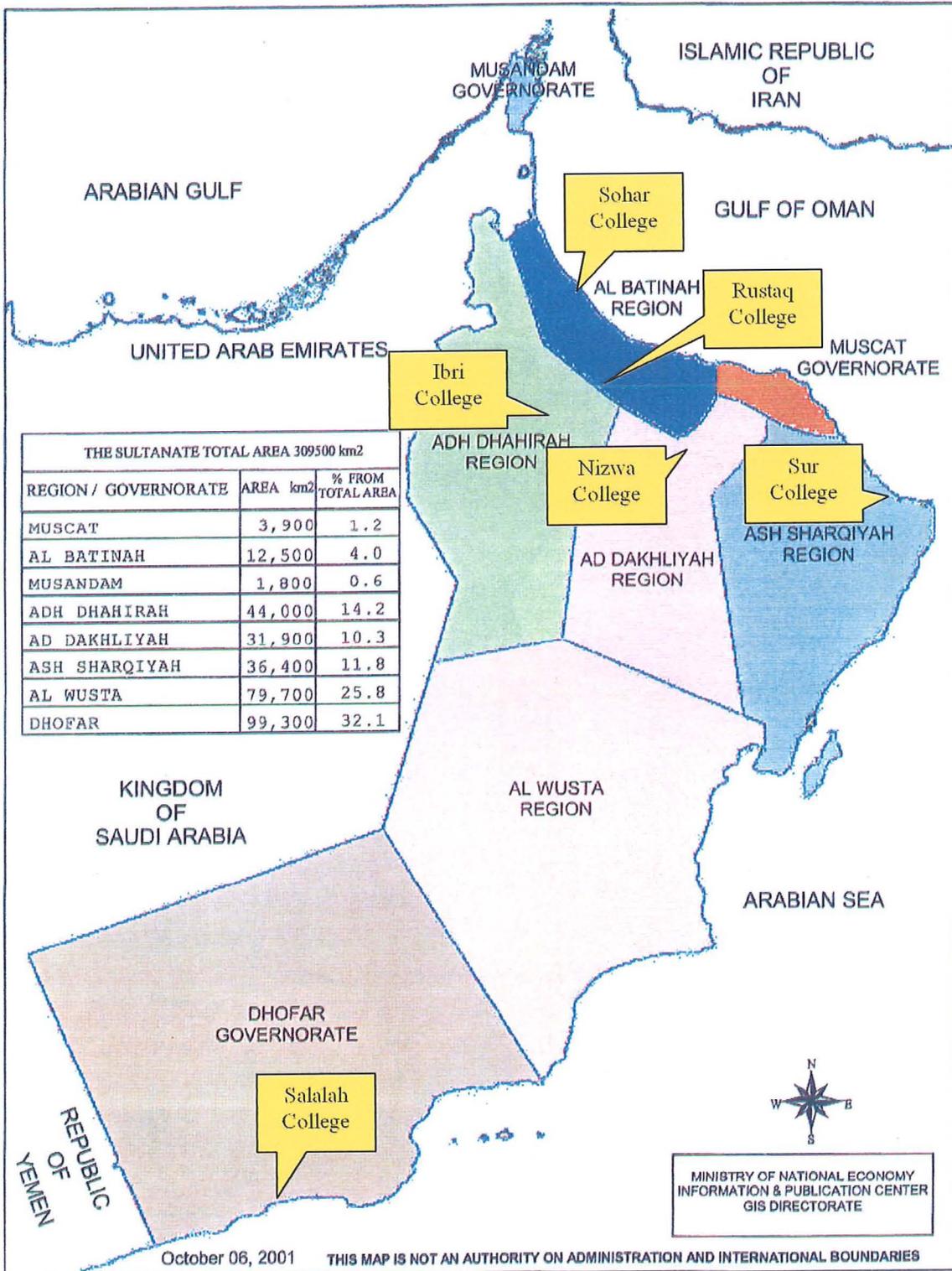


Figure 2.2 Map of Sultanate of Oman

2.2.1 Climate

The climate varies across the country. It is hot and humid in the coastal areas in summer; while dry in the Interior apart from the high mountains which usually have a moderate climate throughout the year. The Southern region (Dhofar) has a moderate climate and regular monsoon rains in summer. The rainfall in the other regions is unpredictable (Ministry of Information, 1999).

2.3 Economy

Prior to 1967 the Omani economy was almost inactive when it was totally based on subsistence agriculture and fisheries. Currently the Omani economy relies to a great extent on oil (Al-Mufraji, 1991).

Despite the Omani economy consisting of various resources, oil represents the main part. The first commercial exports started in 1967. In 1999 the production of oil was stated to be 300 million barrels with an average of 904,000 barrel a day. The price of Omani crude oil in the same year was US\$17.35 per barrel. However the policy of the Ministry of Oil and Gas is to control the production to a level that does not exceed 6.5% of remaining reserved per year (Ministry of Information, 2000). In 1999 the oil reserves was 5.56 billion barrels (Ministry of Information, 1999). In addition Liquefied Natural Gas (LNG) started to represent one of the main elements of the Omani economy. In recent years the Omani Government signed several big contracts for exporting Liquefied Natural Gas (LNG) with big International companies. Agriculture is also an important factor in the Omani Economy. In 1993 about 102,659 people worked in the agriculture sector, about 12% of the working population in Oman. Since Oman's coastline extends 1,700 km fishing is a major component of the Omani economy. More than 150 kinds of fish and crustaceans have been discovered in the Omani waters. In addition the total fish stocks in Oman were estimated to be 4.69 million tonnes (Ministry of Information, 2000).

However the Government is trying to build a national economy based on private business enterprise in a competitive atmosphere in order to establish a strong private sector through the support of Government (Ministry of Information, 2000).

2.3.1 Budget

The budget for the year 2000 in the Omani currency Riyal Omani (RO) was stated to be RO 2, 440 million. RO1, 899 million was placed to year 2000 expenditure, RO 489 million? for investment and RO 52 million allocated for supporting the private sector. The estimate for oil income for the year 2000 was RO 1, 507 million, which equals 72% of the total projected expenditure (Ministry of Information, 2000).

2.4 Social Structure

2.4.1 Population

The population of Oman in 1998 was 2,287,642. In 1999 the population was estimated at 2.3 million; 1,684, 847 Omanis and 602, 795 Expatriates. The annual birth rate increase is 2.5% with a life expectancy of 71.6 years. The population density 6.5 inhabitants per square Km (Ministry of Information, 1999). The population is located mainly in the coastal strip.

2.4.2 Religion

The Omanis adopted Islam in the first decade of Islam (Ministry of Information, 1995). Therefore Islam represents the religion of the Country (Ministry of Information, 98/99). There are three Islamic sects in Oman; Shia represents the minority while others are Sunnis and Ibadhis. Omanis are tolerant both of practitioners of different sects within Islam and also of foreigners who are allowed to practice their Christian ceremonies (Ministry of Information, 2000).

2.4.3 Language

Arabic is the official language and English is widely used for communication and trading. It is also to some extent used in higher and professional education (Al-Abri, 1995). Hawley (1995) illustrated that some Omani inhabitants speak some different languages instead of or in addition to Arabic which makes Oman unique in Arabia. The main examples are Kumzar dialect amongst the Shihuh [in Musandam - further North of Oman] and four languages in Dhofar (the Southern Region). These languages are Shahri (Jibali), Mahri, Harsusi and Batahiri. None of these languages is written.

The language used in the Colleges of Education is Arabic. There are some English classes offered for students.

2.5 Education in Oman

2.5.1 Educational Development in Oman

Development relies to a great extent on the educational system adopted by the state. Education has, therefore, played a main role in the economic development and progress in the developing countries. Their quality of education was beyond their economic development and advancement in the last few decades (Al Zakwani, 1997). Therefore, the Sultanate of Oman pays high attention to locate education in the top list of priorities. (Ministry of Information Oman 98/99). Since 1970 Oman has started to offer free education with a capability to absorb almost 100% enrolment ratio of eligible students (Al Zakwani, 1997).

Thus the current formal education system in Oman was begun in 1970. Before that there were only three primary schools in Oman. Two schools in the Capital Muscat and one in the Southern Region (Dhofar). In those days the number of students at these schools did not exceed 909. There were only 30 teachers in these schools (Bahwan, 1994). These schools were devoted to boys only (Ghawas, 1998). Beside these schools there were traditional religious schools in different areas of the Country (Bahwan, 1994).

Since 1970 there has been a programme of expansion which has spread education all over the country (Bahwan, 1994). Accordingly the number of enrolled students (boys and girls) in 1975 reached 55752 (Ministry of Education, 1999/2000). In the academic year 1995/94 the number of students increased to 474888, girls represent 48% of this total (Al-Ghafri, 1996). In the academic year 2000/2001 there were 554845 students, 993 schools and 26416 teachers (17743 Omanis and 8673 foreigners) (Ministry of Education, Web Site: <http://www.moe.gov.om> 10/10/2002). Therefore the year 1970 is recognised as the starting point for the development of current education in Oman (Bahwan, 1994). This shows that within three decades (between 1970-2000) the number of schools in Oman in 2000 exceeded the number of students in 1970 as remarkable evidence for the development of the Educational System.

In addition there was also educational development in the Oman institutions, colleges and universities. This will be shown later in this chapter.

Education in Oman is provided free in all of the Government educational stages. Free transport is also offered to schools. In addition the Ministry of Education provides students from rural areas with free residences so they can continue their education (Ministry of Education, 1999/2000).

2.5.2 Educational System and Stages

The educational system and stages were described in the Ministry of Education's Annual Book of Educational Statistics for the Academic Year 1999/2000. No.30.

2.5.2.1 General Education Structure

General Education consists of the three stages; the stages and their durations are as follows:

Primary: 6-years, accepts students from the age of 6-8 years.

General Preparatory: 3-years.

General Secondary: 3-years. From second year this stage is divided into a science stream and an arts stream.

The majority of students join this type of education (general education).

2.5.2.2 Basic Education

Basic education is a unified 10-year education. It accepts pupils at the age of 6 years.

After this system students can join the general secondary stage. This system was introduced in Oman in the academic year 1998/1999 in 17 schools in Oman (Ministry of Education, 1999/2000).

In the academic year 2000/2001 the number of basic schools in Oman reached 101 (Ministry of Education, Web Site: <http://www.moe.gov.om> 10/10/2002). The basic education system attempts to meet learners' basic education requirements of knowledge, skills and values, enabling them to carry on their education according to their interests and abilities. It also seeks to prepare learners for the requirements of future developments (Ministry of Education, 2001). In addition each basic education school is provided with an LRC, LRC's technician, computer teachers and LRC's teachers (Ministry of Education, 2001). These LRCs may represent one of the main advantages of the basic education schools, since they are not available in the general education schools.

2.5.2.3 Schools for Students With Special Needs

This type of school for learners with special needs has been established in Oman from 1980. They were prepared for students with difficulties such as lack of hearing or speech etc. However these schools are very limited in Oman.

2.5.2.4 Literacy Classes and Adult Education

This system is divided into two stages: The first stage consists of literacy classes for adults extending for two years until primary four level. The second stage begins at primary five level. This ends at the end of secondary level.

In addition to these types of education there are schools and institutions belonging to other establishments and Ministries rather than the Ministry of Education.

2.5.2.5 Private Schools

The private schools in Oman consist of the following types and stages; basic education, pre-primary, primary, preparatory and secondary. In the academic year 2000/2001 the number of students in these schools was 23850 and the number of private schools in the same academic year was 132. Moreover there were 1801 teachers in these schools (Ministry of Education, Web Site: <http://www.moe.gov.om> 10/10/2002). This type of education is under the inspection of the Ministry of Education.

2.5.3 Higher Education

This section describes higher education, teacher education in Oman and Learning Resource Centres in the Colleges of Educating.

2.5.3.1 An Overview of Higher Education in Oman.

2.5.3.1.1 Government Higher Education

Sultan Qaboos University (SQU) is the first and the only Government University in Oman. It was opened in the academic year 1986/87. This indicates that higher education has been provided late in Oman.

However there are various institutions and colleges established gradually in Oman. Most of them were established in the nineteen-eighties. The institutions and colleges are mostly

supervised by Ministries related to their specialisation. For instance Health Institutions (1982) are supervised by the Ministry of Health. Technical and Industrial Colleges (1984) are under the supervision of the Ministry of Labour and Vocational Training. [There is only one of these Technical Colleges which has a four-year programme, equivalent to university level]. The Colleges of Education (1995/96) and the College of Sharee'a and Law (1997) belong to the Ministry of Higher Education (MOHE). Sultan Qaboos University (SQU) currently is a government sponsored establishment (Al-Rabiey, 2002).

SQU started to offer post-graduate programmes in 1993. These programmes are for Master's degree (Ministry of Information, 1999). In addition in the academic year 1999/2000 the MOHE was responsible for 9,133 students, 635 of them were studying for a Master's Degree or a Doctorate. This includes students studying abroad and those studying within the Country (Ministry of Information, 2000).

2.5.3.1.2 Private Higher Education

Private Higher Education is supervised by the MOHE. In recent years the MOHE encouraged the private sector to establish private Colleges and institutions of higher education (Ministry of Information, 1999). This is to maximize the opportunity for students to join higher education level and to meet employment requirements.

The private colleges offer post-secondary education mainly in, computer science, information technology, administration, business and, engineering (Ministry of Information, 98/99).

Private colleges used to provide diplomas to their graduates, but now they can award bachelor degrees when they meet the requirements set by the MOHE. Currently there are at least eight private Colleges in Oman and four private universities to be launched within a few years. One of these private universities has started to accept students in the academic year 2001/2002, in Sohar (Al-Rabiey, 2002).

2.5.3.2 Teacher Education

Teacher training in Oman has been developed according to the requirements of the general education system in the Ministry of Education to occupy teaching jobs in schools.

Therefore expatriate teachers were employed to overcome the problem of shortage of teachers in the short term (Al-Tobi, 2002). On the other hand the Ministry of Education sought to Omanize [replacing employees of other nationalities with Omanis] educational jobs such as teachers, headmasters, and educational inspectors (Al-Husani, 1999).

Consequently this played a great role in the development of teacher education in Oman.

From the early nineteen-seventies the Ministry of Education started to develop programmes to train Omanis for teaching. In 1972 the Ministry of Education set-up first courses for in-service teachers. In 1976/77 the Ministry of Education established the first teacher training institution for pre-service candidates. This was provided for those who accomplished seven years of general education. In 1977/78 two Secondary Teacher Training Institutions were established to replace the previous institution. These new institutions accepted candidates after completing nine years of schooling. The period of learning in these institutions was three years. These institutions continued until 1983/84 and later in 1984/85 were replaced by Teacher Intermediate Colleges (Al-Salmi 1994). These Colleges enrolled candidates after completing secondary school level (12 years-schooling).

Teacher Intermediate Colleges (two-years system) started in Oman in the academic year 1984/85 to prepare teachers for primary stage. There were nine colleges. This system is the fourth system in Omani teacher programmes. It sought to improve the ability of Omani teachers and unify their qualifications. This is through upgrading the qualifications of those teachers with grades lower than those of the Colleges of Education (with two-years programme). The teachers with lower qualifications were provided with courses during summer to reach the level of graduates of these (Bahwan, 1994).

In addition, since 1986/87 the College of Education at Sultan Qaboos University (SQU) has been offering teacher education programmes at university level. The graduates of this college are prepared to teach in both preparatory and secondary schools (Al-Hammami, 1999).

2.5.4 Colleges of Education

2.5.4.1 Introduction

To respond to the needs of preparatory and secondary schools Teacher Intermediate Colleges needed to be developed to university level to provide teachers with Bachelor degrees. Therefore in 1995/96 six of the nine Teacher Intermediate Colleges were upgraded to 4-year system university level. "The Colleges of Education" (Al-Tobi, 2002).

These Colleges are divided into three groups; Two Colleges are for male students in Nizwa and Sohar, two for female students in Ibri and Rustaq and two Colleges for male and female students in Sur and Salalah.

The Learning Resource Centres (LRCs) represent significant features for the Colleges of Education. Therefore the LRCs are described and investigated in the following parts.

2.5.4.2 Learning Resource Centres (LRCs)

In 1997 each of the Colleges of Education was provided with a Learning Resource Centre (LRC). Each LRC in these Colleges consists of three sections: Library, Computer laboratories and Media laboratory.

The library section has printed and non-printed materials. Each computer section in the LRCs consists of three computer laboratories, two teaching labs and one multi-media lab. Besides computers each computer section is provided with various equipment, materials, and software etc. The media section consists only of one media lab equipped with audio-visual materials.

Therefore each LRC represents a hub for its College and provides departments and students with educational technology resources and services. The LRCs offer an integrated learning method of learning through combining the library resources with computer and media labs technological equipment and materials. Staff of LRCs are always available to help academics and students to utilise the LRCs' services and meet their needs (Al-Rabiey, 2002).

CHAPTER THREE

LITERATURE REVIEW

3.1 Background

3.1.1 Historical Background to LRCs

Learning resource centres have gradually developed over the years as a response to changes in education. Tucker et al (1987) can identify no specific starting point for the emergence of the resource centre. They pointed that resource centres were developed between the 60's and 70's, because of changes in the education approaches at that time. This view is shared by Amanda Scott (1997) who indicated that there have been noticeable changes in approaches to teaching and development of education. These changes demonstrate a shift from the traditional approaches of training to a resource-based approach. Tucker et al (1987) also suggested that the use of interactive audio-visual resources has overcome the passivity of traditional approaches in the educational process. The result of this was the development of resource-based learning theory. Moreover they pointed that most of the new approaches were used in combination with traditional methods. Scott (1997) suggests that the support for changing learning approaches can be attributed to the following reasons:

- They offer an opportunity to reduce costs
- They promote independent learning
- They can reduce rates of absenteeism.

Tucker et al (1987) mentioned that the initial concept of resource centres began simply with an open space containing all learning resources including printed and non-printed materials. This manner of school with resource-based ideas began to appear in Britain in the early 70's. In the early stages of resource centres they represented the simple technology of the times in which they were developed. Tucker et al suggested that as part of the change and development of education the ``resource centre`` become part of educational vocabulary.

CHAPTER THREE

Scott (1997) indicated that studies conducted by the Industrial Society show that the main reason for the increase in the appearance of learning centre organisations is the spread of information technology. This is true for 50 per cent of the learning centres. Other purposes such as creating an effective reference library system, and encouraging the development of multi-skilled studies. Brewer (1998) suggested that there has been a noticeable change in the educational technology, particularly in the use of information and communication technology. He described these changes as a revolution, which has taken place mainly in the past ten years.

Bosworth (1995) believed that the use of educational technology has developed gradually from the using of some early resources, such as magic lanterns followed by radios, slide and overhead projectors, TVs and video recorders etc. Thus learning resources centres came into being in stages. He also pointed out that many colleges created new units, which developed to become flexible study centres with a variety of different learning programmes.

Many of those flexible learning units were situated in the library, because the library is provided with skilled staff and a variety of educational materials. As this happened the abilities and responsibilities of librarians grew beyond offering books to users (Bosworth, 1995).

Cowan and Browns (1995) placed emphasis on the importance of identifying the influences on the academic library during the last thirty years in order to recognise the differences between a learning centre and a traditional library

Scott (1997) noted that recent studies indicated that traditional public libraries have been working towards shedding their old negative image. Thus users need to be made aware that the learning centre is different from the traditional library with a less formal atmosphere where it is acceptable to talk and even to drink coffee. It was hoped that this awareness would encourage the more frequent use of the learning centre. Bosworth (1995) suggested that the increasing use of computer technology such as use of on-line and CD-ROM

programmes led to the development of LRC. This technology and associated resources are expensive and require well-trained and qualified staff to support their use, it is therefore effective to locate them in an accessible base.

3.1.2 Conclusion on Background

It can be seen from the above that learning resource centres have developed through stages. Initially the changes occurred in response to changes in teaching and learning approaches as these moved from didactic teaching to supported self-learning and resource-based learning. In the early stages resources were fairly basic. Later the resources responded more to educational needs and began to influence the process of education. Resources were centralised in one area which led to the development of a co-ordinated approach to resource management. The resources bases were created as separate entities then linked to the library in most cases. Finally resource bases developed into learning resource centres.

3.2 Definitions

Before reaching an agreed definition of a learning resource centre and related concepts it is relevant to consider some descriptions of a learning resource centre in common usage. At a conference held by the Royal Institute of British Architects regarding the development of learning resource centres for the future, McDonald (1995) highlighted that there is significance in the words of the title Learning Resource Centre. He argued that: Learning highlights the need to support learning rather than research. Therefore the priority here relates to the provision of places for the reader rather than accumulating large collections. This according to McDonald is because of the shift from an emphasis on teaching style to learning strategies and students spending most of their learning time in libraries or learning resource centres.

The words “learning resource” together indicate electronic sources, other non-print materials and computers and other equipment. The word “centre” expresses the idea of a building or place for learning. McDonald believed that, despite the development of educational technology and networking, students like to learn together in a structured

environment where equipment, materials and qualified staff are provided for assistance (McDonald 1995).

Bulpitt (1995) suggested two reasons for describing the Adsetts Centre at Sheffield Halam University building as a 'Learning Centre' rather than a library. The first is that learning is a main objective of the University. The second is to emphasise the difference between the modern centre and traditional libraries.

3.2.1 Designation of Learning Centres

A variety of terms are used, often inter-changeably to describe learning centres. Some institutions and authors make no difference in describing different learning centre facilities. For example, the Scottish Library Association used the term 'library' to indicate any central library, resource area or learning resource centre (Scottish Library Association, 1999). In addition McDonald noted that there are a range of terms used by institutions to describe their library or learning resource centre, for example: Learning Centre, Resource Centre, Learning Services, Library, Information Services and Flexible Learning Centre (McDonald, 1995).

Although there are differences in the names of learning centres Brewer suggests that the terms 'Library' and 'Learning Resource Centre' might not indicate totally different models. He suggests that they do not describe exact concepts, because of some generic differences. He relates these differences to the information technology (IT) development and the institution's approach to teaching and learning. However he suggests that the most significant characteristic of the learning resource centre concept is the combination of both independent and group study (Brewer, 1996).

It is clear, from the above that there is a need to explore further the terminology used to describe resource-based learning systems. The following definitions offer a useful basis from which to explore the concepts further.

3.2.2 What is Resource-Based Learning (RBL)?

Resource-based learning is:

"Learning based on the use of materials selected and, may be, designed and produced, to meet specific goals."

(Clarke, 1982, p.27 cited in Cooper, 1993, p.2)

Resource-based learning means:

"The learning is based on the resources. They are there for the pupil to make as much use of as his abilities and interests dictate."

(Scottish Curriculum Development Service 1984, p. 2)

Another definition of RBL:

"Resource-based learning is a way of organising and delivering the curriculum in a flexible but controlled way, taking into account student learning styles."

(Cooper, J 1993, p.2)

3.2.3 What is an Open Learning Centre?

In her research Scott (1997) investigated the views of students on a training course about the definition of open learning centres. Some of the replies were as follows:

"A library of resources, mostly text based, that allows people to develop in areas that may not be covered by training courses."

"Anything from a multimedia station to an audio player". 'It's a bit like a library isn't it?'"

(Scott, 1997, p.2)

Although Scott believes that there is no specific model of an open learning centre, she suggests that there are basic criteria for recognising learning centres. In her definition of a learning centre she states that:

"A learning centre is a mechanism, it is a path that people can take, and there is no right or wrong way of doing it."

(Scott, 1997, pp.2-3)

3.2.4 What is a Learning Resource Centre (LRC)?

Accordingly a learning resource centre is:

"A physical location designed so that individuals and/or groups of learners can pursue their own learning programmes on a timetable and/or drop in basis."

(Lee, 1997, p.10)

Walklin says:

"A learning resource centre has been defined as; 'typically, a collection of all forms of learning resource together with some equipment for their manufacture and use by students and teachers."

(Walklin, 1990, p.84)

Michele et al (1993) pointed out that although technology was developed for information storage and recovery it is gradually changing the LRC into a centre for independent, self-based experiential learning. Their definition of LRC is that:

"It is no longer passive in its role; it is no longer a simple collection or physical objectives; it is rather, a centre where students actively create, evaluate, experience and interpret a world of information through technology."

(Michele et al, 1993, p.1)

3.2.5 Conclusion on Definitions

The previous definitions indicate that there is a trend in the educational process of teaching and learning towards putting more emphasis on the learners. This allows them to learn actively by themselves at their own pace and in their preferred styles through using materials and equipment provided.

The above definitions show that there is no obvious criteria which determine the difference between learning facilities, such as open learning centre, learning resource centre and library. As we saw earlier Scott (1997) does not distinguish between open learning centre and learning centre in her discussion defining all such centres as learning centres.

It can be seen from both McDonald's (1995) illustration that institutions use different names for their library/learning resource centre facilities. As well as the use by the Scottish Library Association (1999) of the term 'Library to refer to both library and resource centres that; institutions have not yet come to an agreed specific terminology for their learning centres/libraries.

It is apparent therefore that there can be many overlaps in the use of names as well as in the functions provided by the centres whether they are libraries or learning resource centres.

3.3 Aims and Objectives for LRCs

3.3.1 Introduction

This section will look at the aims and objectives of learning resource centres. It is important to be clear about how these terms are being used and what is meant by the terms 'aims' and 'objectives'.

Ennis (2000) suggests that "aims" specify the goals of the establishment and the learning resource service while objectives are more detailed than aims. "Objectives" are the steps along the way to fulfilling the aims and must be assessable and feasible within resource and time limitations. Thus objectives should be structured in a way that enables them to be assessed according to service standards, and benchmarks.

This section will concentrate on aims, as these are more general to a range of LRCs. Objectives are more specific to individual LRCs. De Silva and Turriff (1993) suggest that learning resource centres have a crucial part to play in support for learning. The aims provide a foundation for development as the basic management tool of the LRC and provide a guide to the role of the librarian within a changing structure.

Tierney and Whitney (1993) supports this view suggesting that the developing role of the LRC is usually based on the aims of the institution as well as educational aims.

3.3.2 Aims

In a case study manual based on real examples of learning resource centres at school and FE college LRC describing "*Developing Effective Learning Resource Centres in Schools and Colleges*" Lee (1997) pointed out that the following elements were identified by managers and staff interviewed, which made them state that the learning resource centres were established to:

- "open up learning opportunities
 - provide improved, more effective methods of teaching and learning
 - increase learner motivation, overcome learners fears
 - reach and support individual learners more effectively, especially, adults"
- (Lee, 1997, p.27)

CHAPTER THREE

Walklin (1990) believes that LRCs were established principally to serve users (full-time and part-time teachers and students). Their initial purpose was to utilise resources efficiently to support learning. Walklin suggests that learning and teaching resource service:

- *“encourages the effective use of all appropriate media and materials in the support of the curriculum*
- *makes materials and equipment readily available to enable staff to develop and capitalise on their teaching skills and expertise*
- *creates the environment , facilities and materials for learning through which individual student differences of abilities, learning skills and speeds may be catered for.”*

(Walklin, 1990, p.84)

De Silva and Turriff (1993) illustrated that the most important role of the LRC is supporting the requirements of the curriculum. This has to be supported by appropriate means including learning and teaching resources, an appropriate environment, programmes which support the development of learning skills and information services. Success will depend upon management support and the skills of the librarian. They suggest the following general aims for a library resource centre (LRC):

- *“to identify and provide resources for both curricular and leisure needs;*
- *to provide for the information needs of the school;*
- *to encourage and promote reading;*
- *to provide opportunities for pupils to develop learning skills;*
- *to provide facilities to support a range of learning activities;*
- *to support the development of independent learners;*
- *to liaise with other information providers;*
- *to identify support for curriculum developments;*
- *to support the staff development needs of teachers,*
- *to participate in the evaluation of courses.”*

(De Silva and Turriff, 1993, p. 12)

Ennis (2000) considers the issue from the perspective of further and higher education. She suggests the following as a typical statement of aims for LRC in her Guidelines for Learning Resource Services in Further and Higher Education:

- *“to identify and provide access to the learning resource services required to support the learning, teaching and research activities of the institution*
- *to manage those resources efficiently, effectively and economically*
- *to establish an environment conducive to study and which caters for multiple learning styles and for individual and group learning*
- *to liaise with boards of study or course committees and students to establish their requirements and to cooperate with management and other support services to meet these needs*

- *to teach users about the learning resource service facilities and to develop their information skills*
- *to maintain effective links with staff of the institution in order to understand and, where necessary respond to changes in education, approaches to learning, and corporate policy” (Ennis, 2000, p. 9).*

3.3.3 Conclusion on Aims and Objectives

Learning resource centre’s (LRC) aims are essentially based on the major aims for the institution, educational system and the learning outcome. Therefore we can see that the aims described earlier are very similar although some of the authors give much more detail or have different priorities than others. Primarily the LRC is established to support the education system to achieve its tasks. Hence it was meant from the establishment of the LRC to create a variety of opportunities for learners to participate actively in learning. That is through the most effective use of the resources and facilities provided in order to fulfil the educational aims.

From the above the aims for learning resource centres could be described as follows:

- to provide the institution with a variety of resources and information and offer access to the services available.
- to offer more learning opportunities
- to provide flexible methods of learning and teaching
- to enhance the motivation of learners
- to support users to gain the skills of independent learning and working in groups
- to improve learners skills in problem solving
- to provide users with abilities to find, use and evaluate information
- to support students, teachers and researchers
- to provide support to meet curriculum needs
- to manage resources efficiently, effectively and economically
- to liaise with other members in the institute to identify their requirements in order to meet their needs as well as to respond to any development in education approaches and system.

These aims should form the basis of understanding of the concept of a learning resource centre and a clarity about the role of those involved in it. They should be further supported by the development of objectives, which can be measured effectively. These should be developed at the establishment level in response to local need as well as being grounded very firmly within the aims.

3.4 Roles

The roles of the LRC are usually based on the original aims and the services provided. This section will look at the main roles for LRC's. The main roles of an LRC include the following elements:

3.4.1 Provision of Resources and Facilities

It is obvious that one of the main roles of a learning resource centre is providing resources and materials for the purpose of learning and teaching.

The Scottish Library Association (1993) pointed out that library services to clients include access to library stock (collection of Books and other materials). This view is shared by Ennis (2000) who indicates that the learning resource centre plays a significant role in enabling effective learning through the provision of information, knowledge, resources and facilities. O'Donohoe et al, uses the results of a survey conducted at the Polytechnic of Wales in 1991 on the counselling and guidance needs of mature students to support this. This survey reveals that libraries/learning resource centres provide a wide range of learning sources (O'Donohoe et al, 1992). The library collection should be enhanced by the provision of learning facilities (e.g. photocopiers, computing facilities and on-line information systems etc) (Scottish Library Association, 1993).

3.4.2 Facilitate Access to All Types of Knowledge

The introduction of new educational technologies in library resource centres (LRCs) made the role of LRCs develop beyond merely providing resources and services to taking a developmental role in learning and teaching (De Silva and Turriff, 1993).

It is necessary to organise resources and make information accessible for users at school to improve learning, otherwise clients will not be able to fulfil their tasks (De Silva and Turriff, 1993). The Scottish Library Association recommends that libraries should be open for users at times which are convenient to them, extending the hours of opening to include evening and weekend hours in order to offer flexible learning (Scottish Library Association, 1993). Moreover, based on the Canadian Libraries Association statement of intellectual freedom, Schenk indicated that for the improvement and preservation of intellectual freedom the responsibility of the Canadian Library is to assure and facilitate the access to all types of knowledge and intellectual programmes. Therefore libraries should gain and provide the widest selection of materials and ensure that they are easily accessible (Schenk, 1994).

3.4.3 Support Education at All Levels

The report of the Libraries Review Group of the Joint Funding Council (1993) states that libraries in higher education have played in recent years and will keep playing a significant role in meeting the information needs of clients (students, teachers and researchers).

Michele. et al (1993) suggest that the development of the role of the LRCs also includes leadership. LRCs offer effective technical support in the use of educational technology (e.g. electronic classroom, distance education, computer-based learning Internet and multi-media software etc.) and they are involved in influencing the curriculum through their choice of resources and development of the curriculum alongside faculty members.

The Joint Funding Councils' Libraries Review Group refers to surveys on the importance of the support offered by the library service to clients. These surveys revealed the importance of library facilities, adequate resources and competence of staff to achieve quality in all subjects. They also emphasise the importance of the adequacy of library services as a main factor for supporting teaching. Also libraries represent a vital resource for researchers to meet their needs in all subject fields (Joint Funding Councils' (1993) Libraries Review Group: Report).

Finding the necessary information for clients is one of the librarians' most important duties. By searching the library itself and external libraries by using a computerised system a librarian can find resources to support the needs of the client. (Scottish Library Association, 1993). De Silva and Turriff support this idea as an important element of the duties of learning resource centre staff by ensuring that librarians should offer the guidance for users to meet their needs (De Silva and Turriff, 1993).

3.4.4 LRC Staff Support in the Curriculum Development

The provision of facilities and materials to support academic staff in delivering the curriculum is one of the main roles of a learning resource centre (Ennis, 2000). Also the staff work abreast with members of the faculty in developing curriculum (Michele. et al, 1993). Hence when there is a new curriculum to be applied or when teachers want to use new strategies towards effective teaching and learning, librarians have to respond to these new demands by planning for the acquisition of resources to support course requirements. They should also support this with information skills courses (De Silva and Turriff, 1993). It is also suggested that resources should be arranged according to the curricular requirements (De Silva and Turriff, 1993).

3.4.5 Enhance Students' Skills

It is therefore clear that LRCs play a crucial role in building the skills of users in different fields, which enables them to achieve more in the learning and teaching process. Michele. et al (1993) believe that the development of the role of LRCs involves noticeable changes in various ways of learning, access to information and information skills (e.g. information finding, use and evaluation) to suit different learning styles. O'Donohoe. et al (1992) and Ennis (2000) also support this by indicating that learning resources play a fundamental role in developing students learning and researching skills. To maximize the utilisation of the services provided clients' abilities and knowledge should be developed. Hence librarians are required to develop the skills of staff and students in using the new technologies. Also they are required to support staff in creating a learning-skills programme (De Silva and Turriff, 1993). The Scottish Library Association emphasises the importance of an orientation course for students and academic staff to ensure their competence in making

good use of the services provided and their skills in independent learning (Scottish Library Association, 1993).

3.4.6 Learning Environment/Atmosphere

It is clear that a comfortable atmosphere creates a positive environment to enhance the achievement of users in learning and teaching. Ennis highlights the necessity for the provision of facilities and a suitable atmosphere to enable students to learn at their own pace, either individually or in a group, at times appropriate to themselves (Ennis, 2000).

The Singapore Ministry of Information and the Arts (1994) indicated that it had been proved that learning can be effective as part of a social process. Accordingly this requires libraries to be ready to promote their role in stimulating learning. It is imagined that the learner would gain knowledge through taking part in a range of activities (such as talks, lectures, forums and exhibitions etc.) which take place in libraries. Participants in such activities have opportunities of interaction and learning from each other as well as from the organisers of the events

O'Donohoe suggests that librarians could play an essential role in offering an agreeable atmosphere for mature students through working informally with them (O'Donohoe, et al 1992). The Singapore Ministry of Information and the Arts (1994) supports the fundamental role librarians can play in offering a suitable learning environment by suggesting that libraries should play a significant role in enhancing learning by providing a comfortable atmosphere. In such a setting knowledge may be acquired in a casual way through social interaction so it is important to encourage this instead of just providing access to the sources available.

Wenger suggested that social theory of learning is not a replacement for other theories of learning which deal with different features of the issue. It rather has its own hypothesis and focus. Hence it forms a consistent basis for analysis which could lead to the development of coherent principals and suggestions for understanding and smoothing the process of learning. Theories for social practice are concerned with daily activity and actual-life

settings, but with an emphasis on the social structure of shared resources. This is through groups' arrangement of their activities, mutual interaction and understanding of the world (Wenger, 1999).

With regard to Vygotsky and the design of learning environments, Tryphan and Vanèche indicated that the main plan for the community of learners project is inventing learning environments that offer opportunities for group contribution and discussions, interaction which enhance thinking, argumentations and refutation (Tryphan and Vanèche, 1996).

In addition to the importance of providing a suitable learning environment De Silva and Turriff (1993) believe that the arrangement of LRC should meet the needs of clients by providing suitable furniture, hardware and software, etc., in order to encourage clients to use and benefit more from the resources of the LRC (De Silva and Turriff, 1993).

3.4.7 Conclusion on Roles

Essentially a LRC is a place where a wide range of sources are gathered and made available to users. Thus provision of sources and facilities has become a primary role for the LRC and the sources are expected to meet the needs of users. The next step is to facilitate access to the resources and information provided in order to encourage users to benefit effectively from the services. Clients need to be supported and encouraged by staff to enable them to use information technology. Therefore one of the main roles of librarians is to support users and guide them to meet their needs. The librarians should also contribute to the development of the curriculum within their institutions by supporting teachers to plan their strategies for the new curriculum and supporting them in delivering their subjects.

Librarians also are required to train users to gain skills in order to enable them to use all types of sources, interpret information at the LRC and solve problems. In addition the LRCs seek to provide a convenient learning environment to encourage users to participate in various activities (both social and academic) in order to get the maximum benefit of the provided resources.

3.5 Services

3.5.1 Introduction

Corrall and Brewerton suggest that technological developments provide a variety of opportunities for the organisation of information to meet the needs of clients. The quality of a library used to be judged by the collections of books and materials, while today the value of a library is based on the services and the delivery of information to users, regardless of their location (Corrall and Brewerton, 1999). This idea is shared by a survey of 4,084 continuing education students in a small Canadian undergraduate university which reveals that library collection is of secondary importance, because more frequent use is made of the xerox machines and the study areas (Williams, 1995).

Developments in educational technology also offer more chance of providing alternative ways of learning for individual learners and groups in a manner convenient to them. Some examples of these services are:

- It has been possible to develop self-service facilities including open-access collections, self-issue, returns and booking, downloading, etc.
- There is a move from distributed delivery of materials to desktop access and virtual library tours (Corrall and Brewerton, 1999).

3.5.2 Contribution to the Local Community

A survey by the Canadian Association of College and University Libraries (1993) on 51 Canadian Academic Institutions showed that 98 % of institutions responding to the survey indicate that they offer services to outside users. The services include borrowing, inter-library loan, CD-ROM and computer online searching (Canadian Association of College and University Libraries, 1993). Another survey, of UK public libraries, conducted in the early 1990s revealed that more than 30 different service elements were provided, of which almost one third were provided by more than half of the 139 respondents (Corrall and Brewerton, 1999).

3.5.3 Special Services

Corrall and Brewerton (1999) indicate that the development in educational technology gives the chance of providing specific services to meet the needs of particular groups of users such as learners with specific difficulties. This is supported by the survey by the Canadian Association of College and University Libraries (1993) on 51 Canadian Academic Institutions which indicates that 20 % of the surveyed institutions offer specific services for specific groups of users (Canadian Association of College and University Libraries, 1993).

3.5.4 Distance Education

Some believe that distance education is a means of increasing provision whilst maintaining the quality of learning and teaching at less cost. This is based on the ability of distance education to serve large number of clients and reduce the length of time staff spend in face-to-face teaching, (Burt, 1998). Dagiene and Grigas (1993) share this view, believing that the purpose of distance education is to provide a suitable method obtaining advanced level at reduced costs.

In contrast some consider face-to-face communication to be the ideal method of effective education. Thus they look at the lack of the face-to-face contact as a fundamental defect in distance education (Burt, 1998). Holt; O'Brien; Williams (1992) emphasis the importance of direct communication in the educational process, and suggest that the main benefit of using the computer is to support low-grade tasks. The computer cannot replace face-to-face interaction in complex subjects (Holt, O'Brien and Williams, 1992).

Cleyle (1992) discusses the University of Regina (Canada) as an example of those universities which provide distance education. This shading highlights the advantages and disadvantages of distance learning as follows; The University of Regina offers around 150 distance education courses each year. Delivery is on-site, and through video conferencing. The courses serve nearly 2,600 students, faculty, and instructors. Graduates from distance education programmes are awarded comparable qualifications. The on-campus residents

had the advantages of direct and straightforward access to an academic research library, which the off-campus student lacks (Cleyle, 1992).

3.5.5 Equality

Apeji suggests that:

"In this age of democratisation, ensuring equitable access to information regardless of age, sex, race and wealth is crucial both for the educational system and the future"

(Apeji. E. A. 1999,p.12)

Despite the great importance of providing equal opportunities in employment, it is necessary to consider the different needs and experiences of students when applying this policy to learning resources (Sunderland, 1998).

3.5.6 Opening Hours

The convenience of users is of crucial importance in setting up a timetable for use of the facility. Users should be paramount in considering the use of the centre during their working hours otherwise would think that they do not represent a priority in the use of the services. That the organisation is giving more priority to the financial cost than the needs of the user (Scott, 1997). For example; some institutions give special consideration to their users' circumstances. Bristol Polytechnic (Now the University of the West of England "UWE") made some developmental changes in order to improve services to part-time students. These changes led to an increase in financial resources, which was invested in raising the number of staff, thus enabling the library to extend the opening hours (Heery, 1993).

3.5.7 Marketing The Services

There is a need to define the market to change the culture of using the model of the learning organisation. Once the nature of the market is identified the priority will be to consider what type of people would be the target of the organisation. This can be done by using a questionnaire methodology which could cover people's needs and circumstances (Scott, 1997). A survey of 4,084 continuing education students in a small Canadian undergraduate university showed that students who attended a formal orientation to library services used the library more than twice as much as those who did not join such orientation programmes.

Also, discussing the use of library services by tutors through course work led students to make more use of library services than others who lacked this encouragement (Williams, 1995). Learning Resource Centre staff at Edge Hill College in England offer a limited induction programme for first year students only covering the LRC basic services, using the catalogue and the OPAC (Burns, 1995). After the induction to the centre people need frequent reminders. There is a need to relaunch the centre, here a marketing plan is required with new activities, but also with a repetition of some of the activities done first time around. These activities need to be done continuously for marketing purposes (Scott, 1997).

Carpmael and Morgan, (1992) indicated the reasons for a reappraisal of the library orientation tour at UWE, which include the increase in students' numbers, the expansion of library organisation, the amount of time of the orientation tour for the number of groups of students and the overload of information for students in the first few days at the institution. Therefore, UWE conducted a workbook programme project (using questionnaire survey and discussion groups of students) to develop an alternative orientation to the library instead of the induction tour programme. It was also intended to assess the effectiveness of the induction. The results of the survey revealed the effectiveness of the workbook orientation method and confirmed its usefulness for the future.

3.5.8 Conclusion on Services

The development of technology shifted the emphasis of the LRC/library from the quantity of materials to the provision of services and delivery of information as well as devising alternative ways of learning. The services at LRC/library are not exclusive to the members of their institutions, but also serve the local community. Despite the importance of the equality of access and information services, the LRC has the flexibility to respond to the needs of specific users with different requirements and various levels of skills. Distance learning is one of the characteristics of a LRC/modern library which was not available in a conventional library. The provision of such a service is not enough in itself to create an effective LRC. Organisations have to define their customers well then market their services

by introducing clients to the services and running activities, which could make users continuously aware of the services in order to benefit from the services available.

3.6 Staff

The role of the librarian has become much wider than their traditional one. That is due to the rapid increase in information and its availability. Also library users and research scientists are becoming increasingly involved with information (Savenije, 1999). Hence the National Council for Educational Technology (1990) emphasises that librarians need to up-date their level of knowledge and experience to match the rapid changes in the development of education as well as to be aware of new methods in the educational process.

Apeji, Suggests that a teacher-librarian with double qualification would seem to be the ideal employee to manage the school library to ensure that students are active in their learning (Apeji, 1999). Libraries will need to prepare themselves to respond to the users requirements, which will necessitate the setting up of a network which librarians can use as a base to help scientists to retrieve and arrange information (Savenije, 1999).

In addition to the skills librarians should have Apeji (1999) believes that the teacher-librarian should have some particular abilities such as the management of information resources, discussion of the curriculum to ensure appropriate support, management of users ensuring that they receive support in order to build their skills to meet their study needs.

3.6.1 Status of Librarian

Dakshinamurti states that the development of the establishment and the understanding of its objectives depend basically on the improvement, incentive, and job satisfaction of its staff members (Dakshinamurti, 1992).

Despite recognition of the importance of job satisfaction for the improvement of any organisation the National Council for Educational Technology indicates that educational librarianship is not well recognised, because it is so poorly paid and has no clear career

structure. Despite this lack of recognition, it requires a high level of awareness, experience and skills. Accordingly to attract well-qualified people to librarianship improvements should be made to the salary and the career structure should be clarified (National Council for Educational Technology, 1990). For example, in Canada the academic faculty and administrators define the librarian differently and of lower status than members of faculty (Shiflett, 1981 cited in Crowley, 1997).

3.6.2 Contributing to Academic Activities

Institutions should ensure that they benefit fully from the role of the librarians. Librarians should be involved in all decisions regarding information management at their institution and not be kept from other aspects of organisational management (The Joint Funding Councils '1993' Libraries Review Group Report). Therefore Rhonda (1993) believes in the need for co-ordination between teachers and librarians. The college faculty can explain the purpose of the assignments required from their students which could enable librarians to support students to get relevant sources. Also teachers can make sure that they ask students to do assignments that have related resources at the library. In the institutions where the school library contributes to the policy and the planning process for the curriculum they are able to assure that the resources provision suit the needs of the curriculum and librarians are prepared well to meet the developing needs of the users (National Council for Educational Technology, 1990).

3.6.3 Study skills

Many of the users may come to the organisation with no experience of using the services and they may have forgotten what they have studied and how to learn. (Scott, 1997). Rhonda, agrees with this view by indicating a big gap between the skills students bring with them and the skills they require to use the library effectively in order to achieve the aims of their study (Rhonda, 1993). A survey conducted at the Polytechnic of Wales in 1991 on the counselling and guidance needs of mature students identified study skills as a main obstacle for them, because many had a long gap since they had left education.

"Students often elect for a 'neutral' source of study skills support in preference to lecturers who will be assessing them"

(O'Donohoe. et al, 1992, p.42).

Julien and Leckie (1997) state that although librarians have adapted to the educational technology, there is a need for more concentration on promoting the skills of clients toward information literacy.

Moreover Dakshinamurti (1992) pointed out that surveys demonstrate that when a library is widely automated, it needs a continuous training programme for the library staff in order to respond effectively to the demands placed on them by developments. It is therefore necessary to improve the skills of users of information organisations. Hence O'Donohoe, et al (1992) describe the usefulness of the library for gaining learning skills instead of the 'cook book' approach to study skills where the skills are taught separately from educational practice.

3.6.4 Students Adjustment

Teaching staff and library staff play a significant role in supporting students to settle to their study. Mature students need to be welcomed and encouraged towards the educational environment. Hence the way in which library staff deal with mature students is an important element, which requires that the librarian is aware of the needs of mature students. In addition students may feel more comfortable to seek help from librarians not just in information matters but also in academic issues, because they are not involved in the assessment of students (O'Donohoe, 1992).

3.6.5 Conclusion on Staff

The rapid growth of information and the involvement of researchers and learners in the use of information requires changes in the roles of librarians and requires them to advance their experiences and abilities to meet the changes and the needs of users. Despite recognising the importance of job satisfaction for the growth of any organisation it appears that librarianship is not perceived as a profession of high status. Librarians should be involved in all aspects of information management in their organisation, because the more librarians work with the teaching faculty and administrators the more the aims of the establishment can be achieved. Study skills represent a common difficulty and an important priority for

clients. Thus librarians should play a significant role in training and supporting clients to gain learning skills. Librarians also have to be aware of the requirements of mature students needs so they can contribute effectively in the students' adjustment to their study.

3.7 The LRCs Building/Environment

3.7.1 Location

It is clear that a suitable location gives the establishment more chance of achieving its purposes. McDevitt, (1996) states that the best location for a self-access facility should meet two requirements. The first, security should be considered at the start of the planning for the project. The second, access is a prime priority for a self-access unit in order to make the best utilisation of the facilities. The unit must be accessible for clients at convenient times and place.

3.7. 2 Security

Security represents a common problem for libraries, therefore the need for its improvement has been internationally recommended. A new building which contains up-to-date collections and computers, could be at risk (McDonald, 1995). Accordingly the security for stock, staff and users should be considered in the design of the library (Rogers, 1995). The design also needs to address issues of health and safety (McDonald, 1995).

The management of security aims to ensure: confidentiality of information from unauthorised access and use. Integrity of information to protect it from unauthorised manipulation or processing. Conversely it also has to ensure availability of information to those authorised to access and utilise the services. Information considered to be highly confidential requires specific storage and provisions for controlled access and circulation. Information-related technology, such as hardware, systems, network etc, requires physical protection from security risks and environmental dangers such as water damage (Bryson 1999).

Unfortunately, good security assessments usually conflict with convenience and safety (McDonald, 1995). Therefore security ought to be provided according to the level of the

risk and potential dangers to the organisation. The necessity of security, however, should not prevent work activities or information flow, nor create barriers to the resources provided. Security rather should be balanced with the need to make information available for decision-making (Bryson 1999).

3.7.3 Accessibility

The consideration of people with disabilities is one of the important elements that should be given attention (McDonald, 1995). Accordingly Oldroyd, (1992) points to different needs for people with disabilities which must be considered, such as the need for wheelchair access and lifts etc. It is also important to consider the ease of accessibility not only for disabled but also for people who carry heavy equipment to the centre, who can be seen to be in a situation similar to that faced by disabled people (Feilden, 1995).

3.7.4 Space

The Follett report (Joint Funding Councils` (1993) Libraries Review Group) revealed that although establishing good learning space is of priority, it sometimes does not receive satisfactory attention compared with staffing, resources, collection, finance, etc. (McDonald, 1995). In addition Raddon and Dix (1989) reveal that planning for the adaptation of the existing spaces or new spaces is related to many constraints such as the local authority, establishment and finance etc.

The Follett report, (produced by Sir Brian Follett, the Vice Chancellor of Warwick University, for the Higher Education Joint Funding Councils in December, 1993) stated that for new libraries one space should be provided for every 6 full-time equivalent students (Rogers, 1995).

Space is an important element which must be included in the planning and managing process for the development of services in the whole system (McDonald, 1995). Raddon and Dix (1989) indicate to the following elements which should be considered in planning a library resource centre:

- The users opinions

- Formal activities and informal activities such as exhibitions
- Special collections
- Visiting speakers
- Production for materials
- Administrative and an area for volunteer staff
- Group discussion area

All of these elements must be included principally in any planning process related to building and space.

3.7.5 Noise

Noise represents one of the commonest problems in libraries, some noises are acceptable and some not (Oldroyd, 1992). Feilden agrees with this view by suggesting that it is normal to see the various activities are not appropriate in learning resource centres (Feilden, 1995, p.13). McDonald, (1995) also adds to this, believing in the difficulty of controlling noise in large reading rooms. He also suggests that it is of vital importance to arrange for noisy activities to be sited away from quiet study areas. This suggestion is echoed by Oldroyd, (1992) he believes that libraries usually require quiet places for different occasions for both staff and clients. Thus it is worthwhile considering having an area for group activities, using building features to absorb noise e.g. carpet, sound proofing etc.

3.7.6 Design

Two important points should be considered from the beginning for designing a library. Firstly the involvement of the librarian, because the librarian has a specific perspective which is not shared by others such as architects and administrators. Secondly in designing, allow for flexibility to accommodate changes for at least for the next twenty years (Oldroyd, 1992). According to a recent conference concerned with the information impact on library buildings McDonald points out:

"It was recommended that the building structure design should be planned for fifty years, the utilities fifteen, and the fixtures and fitting for seven."

(McDonald, 1995, p.24)

Oldroyd indicates the necessity of considering the requirements of computer network cabling and energy efficiency. Design should be related to; number of users, size of stock, necessary facilities, number of entrances and exits and number of staff etc. Moreover the shape should be considered. It is possible to make the building attractive at an economical cost (Oldroyd, 1992).

3.7. 7 Environment

The suitability of the LRC environment plays an essential role in the comfort of both LRC staff and users. Rogers highlighted that the environment in libraries must be stable, and equally appropriate for people, materials and IT hardware (Rogers, 1995). Additionally Oldroyd believes that a healthy and safe environment for all users and staff is a fundamental element to be considered (Oldroyd, 1992).

3.7. 8 Conclusion on the LRCs Building/Environment

Location usually plays a crucial role for the clients' use of the organisation. There are recommendations which highlight the importance of the security of the building, staff, and materials. There is an equal emphasis on the ease of access especially for those with special needs as well as allowing for the work circumstances. Space must be considered well in any planning for LRC/library. There are main elements such as expected activities and materials, which must be included in the consideration of space and building structure. Noise represents one of the chronic problems for the library. Therefore it is considered a difficult problem. However the difficulty can be lessened by having special areas for some particular activities, which cause noise. It is so important that the design of the library/LRC is planned carefully with the consideration of the number of users and staff as well as the size of stock and activities. Moreover the shape of the building should be considered in trying to create an attractive environment. Finally the environment as a whole plays a significant part in creating a welcoming ambience for clients and staff, which also needs to be considered in any planning process.

3.8 Impact of LRC on Teaching and Learning

The main purpose of a library is to support and enhance learning and teaching through the provision of the required materials and resources (Apeji, 1999). Myhill (1996) agrees with this view saying that the library plays a fundamental role in the training of teachers by providing appropriate information and data. The library not only makes teaching an enjoyable process, but also it can facilitate learning (Apeji, 1999).

3.8.1 The Involvement of Technology in the Educational System

As was described previously, the development of educational technology has had a significant impact upon the methods of learning and teaching adopted in the education system.

Savenije pointed out that technological development is immersed in library and learning and teaching. Therefore it is difficult to distinguish between the activities of the library and the educational process. Moreover the borders between the information offered by the library and the data delivered by teachers are declining and will disappear sooner or later (Savenije, 1999). In addition, learning resource centres have been changed greatly by technology from being merely a collection of physical objects to a resource to support independent and self-paced learning (Michele, 1993).

3.8.2 Changes in Strategies of Learning and Teaching

The current emphasis is on assisting students to learn the skills of acquiring and developing information, instead of the traditional approach where the student is passive, waiting to be taught (Apeji, 1999). Maier et al (1998) support this view, suggesting that taking into account modern changes it is no longer sufficient for a teacher to give students only a given text of knowledge.

Change has also been required because the number of students is growing at a faster rate than the increase in resources. Hence, new approaches have been developed to overcome the problem. One of the solutions is the emphasis on shifting from a teaching approach to a learning approach (Brewer, 1998). The new approach gives the learner more opportunities

to gain information, solve problems and make decisions (Apeji, 1999). Maier et al (1998) believe that the new approach highlights that the teacher should facilitate learners' exploration of an area of study, assisting them to build up a basic foundation in a subject and enabling them to be skilled in finding new learning methods for themselves. Consequently this demands more independent study and more use of learning resources as well as wide use of group based study activities (Brewer, 1998).

3.8.3 Resource-Based Learning (RBL) Approach

The provision of learning resources led to new approaches to learning such as resource based learning RBL etc. The concept of resource-based learning as illustrated in the section 3.2.2 means providing the learner with a variety of resources to use for the purpose of learning at his/her own pace rather than the traditional approach of direct teaching. This new approach allows more informal contact between the teacher and the students. In this situation the student can get assistance only when this is really necessary. This approach to learning gives the student more confidence in his/her work as well as giving the learner opportunities to progress according to his/her ability and pace (Scottish Curriculum Development Service, 1984).

Scott suggests that a set course is not always the most effective method of meeting the learning needs of students. Therefore, she supports the idea of resource-based learning to encourage individual development. Consequently, setting up a learning centre might offer worthwhile support to learners to develop the skills required for self directed study as well as offering a structure for learning (Scott, 1997).

3.8.4 Self-Access Learning

The previous changes in education led to new approaches combined with new facilities such as self-access centres etc. For instance self-access centres for language learning can offer a variety of materials and machines for the utilisation of users. This offers a choice of opportunities and flexibility for learning language, which are rarely provided in a traditional classroom style. The learner is encouraged to work independently away from the control of the teacher (Aston, 1993).

Self-learning centres can represent an economic approach replacing direct teaching method (Dickinson, 1987 cited in Aston, 1993). Self-access can therefore be seen as providing two strengths. Firstly, it improves learning, and secondly, it is a method for reducing teaching costs (Aston, 1993).

3.8.5 The Use of Educational Aids

The development of educational technology creates a resource which mediates the teaching and learning process. There are advantages and disadvantages of using such resources as discussed in Walklin (1990) some of these advantages include:

- There is a possibility of reduction of cost in the teaching of large groups as well as in the need for original resources.
- There is more variety of content and form of lessons.
- Distribution of information is fast.
- There is better preparation and delivery of lessons compared with classroom teaching.

On the other hand, disadvantages include:

- Preliminary costs could be high.
- Interaction between student and teacher could be inhibited in some programmes.
- Students may get confused because of too much detail.
- Educational aids could be used for entertainment and not only for learning purposes.

On the whole, the role of any educational resource is to support the teacher's explanation and to expand communication to increase the understanding of the student (Walklin, 1990). The learner should be aware that there are a range of services provided and should not limit him/herself to the use of services but also that he/she should be active and make effective use of the assistance which is available (Aston, 1993).

3.8.6 Conclusion on Impact of LRC on Teaching and Learning

Basically the library and LRC have been provided to support the educational process through the provision of resources and materials. Technological development in education

has had a considerable influence on teaching and learning activities. The provision and equipping of the LRC/library with resources and materials has led to the development of new educational approaches such as resource-based learning (RBL). This approach includes a shift from the traditional teaching style to an emphasis on learning which makes the educational process student-centred rather than relying on the teacher. Also learning via self-access represents one of the new methods of learning which gives the learner several choices of using learning materials and resources. This approach to learning has been developed to improve education and reduce cost. However the use of educational aids has advantages i.e. the provision of a various methods of learning and reduction of cost and disadvantages such as the limitation of the interaction between student and teacher and the high cost in the initial stages.

Overall educational technology plays an important role in the advancement of the educational process despite the disadvantages it may cause in some cases.

3.9 Funding

Financial problems are forcing many educational establishments to reduce some of their programmes. Services sections such as learning resource centres are usually among the first to be affected by these financial cuts (Duncan, 1987). In recent years there have been many cuts in the funding of libraries. Birenbaum describes the work of Brenda Hurts, manager of acquisitions for the Canada Institute of Scientific and Technical Information, who illustrates the problem in Canada:

‘I don’t think there’s an academic library left in Canada that has not had significant cuts’

(Birenbaum, 1995, p.6)

There are three factors which have a significant influence on library funding. First, the numbers of users. Second, cost of library materials. Third, the amount of use of the library. Allocated funding should reflect these factors (Scottish Library Association, 1993).

However although the size of the budget is of fundamental importance this does not ensure effective use of resources. Wendy Cooling (Head of Children’s Book Foundation at The

Book Trust) draws from her experience visiting schools to suggest that it is obvious that the most generous budget does not necessarily lead to the best library (Cooling, 1993).

3.9.1 Cuts of Subscriptions

Myhill (1996) shows that the cost of subscription to journals has doubled in recent years. Birenbaum, (1995) describes a study by the U.S-based Association of Research Libraries, which includes 13 Canadian members, the team indicates a gradual decline in the number of scholarly journals and monographs purchased recently because of the increase in cost and the reduction of budget.

What also makes the matter more complicated is that academic publishing is dominated by a few main publishers who raise the prices, which as a result forces the universities to reduce the amount of journals to which they subscribe. Although the budget allocated for education-related journal subscription is limited there is a huge increase in use of such material, which raises concerns for the effective operation of libraries/LRCs (Myhill, 1996). Consequently this usually leads to an increase in the demand for the interlibrary loan service as has become obvious in recent years in Canada and the U.S, where the use of interlibrary loans has doubled. This is attributed to the shortage of stock to meet the needs of users (Birenbaum, 1995). Therefore directors of these support services will have to consider the most effective way to ensure their continued survival (Duncan, 1987).

3.9.2 Obtaining Financial Support

The services provided by the centre are correlated to budget allocation. Accordingly the manager of the centre should look for every method of obtaining financial support (Duncan, 1987). The responsibility of the manager of the LRC is to advise the financial administrators at the educational establishment, to set-up estimates and budgets and to manage expenditure within approved objectives. Thus he/she should prepare a detailed budget plan (Ennis, 2000). The Scottish Library Association, 1993, turn this around by recommending that librarians should provide their colleges with estimates of budgets and inform the financial manager of the library's resource requirements (Scottish Library Association, 1993). The LRC manager is accountable for the administration of the budget

and must be well acquainted with the financial policy (Ennis, 2000). Duncan also suggests that the manager should develop a good working relationship with funding decision-makers (Duncan, 1987).

To avoid the reduction of budgets Ennis, (2000) and Duncan, (1987) recommend that allocated funds should be exploited immediately to the full to meet the needs of the centre. When there is a need for changes in the expenditure, these have to be made with reference to the plan, objectives and performance goals. It is important that the manager of the LRC has the authority to transfer funds from one section to another (Ennis, 2000). The manager should not be complacent with the allocated money, because it would be unusual for an organisation to have its needs fully met (Duncan, 1987). At the same time Ennis, (2000) believes that the successful manager has to be realistic in delivering what is possible.

In addition it is also worth noting that the director of learning resources may publish literature about survival strategies in journals which are usually read by decision-makers in academic support fields (Duncan, 1987).

3.9.3 Income Generation

Usually library staff support administrators engaged in financial matters at the establishment by providing them with required information and consultancy besides other commercial activities (Scottish Library Association, 1993). Both Ennis (2000) and the Scottish Library Association (1993) demonstrate how the LRC/Library may contribute directly in income-raising activities by promoting services for outside users, by providing photocopiers and selling stationery materials such as computer disks etc. The collection of fines for overdue items is another sort of income generation. In addition income generation should be considered as an additional credit for the library and not affect its base funding (Ennis, 2000) and (Scottish Library Association, 1993).

3.9.4 Conclusion on Funding

In recent years LRCs/Libraries have been subjected to financial cuts. Alongside this the subscription price of journals is increasing steeply. Therefore, there has been a reduction in

the number of subscriptions to journals and monographs. As a result this led to a lack of resources to meet the needs of clients which in turn put pressure on the interlibrary loan services. Certainly these financial problems require financial strategies to overcome or eliminate its effect on the services provided by LRC/Library. The manager of the LRC/Library can play a significant role in obtaining the maximum financial support for the centre. The LRC/Library manager should prepare a budget plan related to the services provided and meeting the agreed objectives. The manager of the LRC/ Library should have a good working relationship with decision-makers in financial affairs. He or she should be authorized to modify the allocated funding according to any new needs within the LRC/Library and should not hesitate to use the budget. Publications by LRC/Library staff should be utilised for advertising the survival strategies adopted in their establishments. Moreover income generation is one of the financial means that support the LRC/Library. That is through the contribution to the activities of the educational establishment, which should be considered as an advantage of the LRC/Library. Increasing costs for example in the case of educational journals have to be met with increased funding or the costs will just be transferred to another section such as interlibrary loans. It is apparent that there are budget constraints which have to be considered when determining what services can be provided by LRC/library but these constraints should not be allowed to detract from the primary purpose which is to meet the needs of clients.

3.10 Evaluation

In researching this subject I was aware that there was a wide range of literature which could be considered broadly relevant to the topic. I chose to concentrate only on those references which were directly applicable to the research aims. This meant that some well-respected references, e.g. research published by SCONUL (Society of College, National & University Libraries) concerning the evaluation of British libraries has not been included in the evaluation section of this study as it included a level of detail which was specific only to British libraries.

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Principally evaluation is performed in order to assess need for improvement and/or to assure the quality. Bamber, (1992) demonstrated the necessity of regular checking and feed-back of any feature of library service in order to respond effectively to clients.

Further, Raddon and Dix (1989) suggested that evaluation is a feature of curriculum development, which influences decisions on modernization and changes. As a consequence it is essentially concerned with the collection and organisation of data and information. De Silva and Turriff (1993) also thought that evaluation aims to realise and improve practice in an educational context.

Hania (1997) illustrated that the time assigned for users' education is generally limited which discourages librarians from allocating some of it for evaluation rather than education. Preparation and analysis of surveys also requires too much time from staff. Consequently this limits the formal evaluation of libraries' programmes.

Raddon and Dix (1989) believed that evaluation in the domain of librarianship is in its early stages, because it has been focused on evaluation of programmes and materials in relation to users education and improving the programmes provided. Therefore this could produce more effective programmes.

Williams' (1995) study of academic library use revealed that the importance of the library has shifted from providing a collection of materials to meeting users information needs. This has implications when one is considering the evaluation of a library. However Williams indicated the necessity of maintaining the collection in conjunction with the increasing range of information services to meet the needs of users.

The Scottish Library Association (1993, p.49) indicated:

"Quality is easy to recognise, but difficult to define."

Lithgow (1994) agrees with this thought by illustrating the difficulty of obtaining accuracy in defining evaluative concepts such as performance measurement.

Moreover in Raddon and Dix (1989) a description of performance measurement as an aspect of evaluation showed that it is easy to assess the quantitative features of performance of services such as the number of clients, the size of the library, the level of satisfaction etc., but it is more difficult to identify and assess the qualitative features. Harvey, (1998) supports this by indicating that academic reliability on the qualitative methodology of evaluation is still hard to achieve.

Bryson (1999) also shared this view, believing that information services are usually considered a difficult area to measure using both qualitative and quantitative methods because many of the benefits, which need to be measured, are linked with outcomes that can not be evaluated directly.

It is necessary to identify aims and objectives before any assessment can be undertaken because it is difficult to assess services in isolation from policies and objectives (Raddon and Dix 1989). Moreover De Silva and Turriff (1993, p.75) state:

“Evaluation compares what was intended with what actually took place.”

3.10.1 Objectives Setting

Newell (1993) describes the ability of attaining the objectives with efficiency through the best utilisation of resources as the path to the effectiveness.

Lithgow (1994) explained that performance measurement is intended to clarify the extent to which something is achieved. Therefore Lithgow suggested that the assessment of performance contains a review of all activities undertaken within the institution to accomplish its declared objectives. Bamber (1992) showed that once the objectives are identified the resources required to meet them will be recognised by the library.

3.10.2 Performance Indicators (PI)

Hania (1997) highlighted the concentration on performance indicators as a widespread method of evaluating academic libraries. Bryson (1999) illustrated that performance indicators are one method of finding out whether a particular objective is being attained.

Assessing the achievement of objectives was also emphasised by Walklin (1990) through clarifying the importance of transforming objectives into performance goals in the evaluation of educational aspects, which require identification of the outcomes to be fulfilled.

Hence (Lithgow, 1994) added that when it is not possible to achieve a precise evaluation it is preferable to refer to performance indicators to provide an indication of an institution's performance.

When using performance indicators Bryson (1999) highlighted the necessity of forming them in direct relevance to the purpose as well as to the specific objectives of service. Accordingly the director of information services is required to identify suitable information to evaluate the service's performance. This gives the basis of performance indicators.

Hania (1997) demonstrates that the current emphasis on performance indicators in higher education may lead to more monitoring from their parent institution on the way they plan and perform their programmes.

3.10. 3 Defining Terms

In order to increase understanding of performance measurement indicators it is useful to define a number of terms namely:-

3.10. 3.1 Inputs:

The resources such as equipment, materials, funding, and staff etc, which are designated to achieve particular objectives (Baxter 1992), Lithgow (1994) and Bryson (1999).

3.10.3.2 Outputs:

The amount of work or activities accomplished, compared with planned objectives (Lithgow, 1994) and (Bryson, 1999).

3.10.3.3 Outcomes:

The results for clients of the services provided, with relation to quality and achievement (Baxter, 1992) and (Bryson, 1999).

3.10.3.4 Efficiency:

Efficiency compares how well the inputs elements are being utilised to produce the resulting outputs. Efficiency usually seeks to achieve maximum benefit at minimum cost (Baxter, 1992), (Lithgow, 1994) and (Bryson, 1999).

3.10.3.5 Effectiveness:

Effectiveness considers the quality of outcomes in relation to the objectives. The perspective of the user is important in considering the appropriateness of the objectives (Baxter, 1992), (Lithgow, 1994) and (Bryson, 1999).

3.10.4 Examples of Evaluation

The following examples demonstrate the most common aspects which need to be covered in the evaluation of an LRC.

Dr. Gloria Terwilliger (1983) (*The Director of the Learning Resource Centre at Alexandria Campus, Northern Virginia Community College*) showed that appraisal of an LRC can be facilitated when certain principles are considered. These principles concentrate on co-ordination of the utilisation of facilities besides integrating human and technological resources. As a result this could lead to more effective support of teaching and learning. Terwilliger suggested several methods of evaluating the role of the LRC. These methods were:

- Self-evaluation by LRC staff.
- Evaluation by faculty and students surveys.

Terwilliger added that the LRC staff should be notified of the results of the evaluation. Finally recommendations should be drawn up in order to improve the LRC.

To identify indicators of effectiveness and monitoring improvement in learning resource centres, Lee (1997) recommends that the LRC needs to set-up a resource sheet (a checklist with headings). The investigators can use such sheet to evaluate the effectiveness of the LRC. Then the investigator ticks the indicators of effectiveness under each heading. Lee's example includes the main aspects namely: Management, Funding, Communications, Curriculum, Staff development, Equipment, Space, Access, and Monitoring evaluation. Each of these aspects' headings is divided into related elements used as indicators of effectiveness.

However evaluation needs to be more than tick boxes. Evaluation needs to explore the context of the subject which is to be assessed by identifying its strengths and weaknesses leading to proposals for improvement.

The Scottish Library Association (1999) also proposed 13 key indicators most relevant to self-evaluation of a library resource centre. These keys are concerned with:

- The quality of programmes, achievement, and users needs and ethos.
- Provision, organisation and utilisation of resources, materials and spaces.
- Provision of effective staff and senior teachers.
- Setting-up and carrying out a development plan.

These indicators can be used in a framework, scoring each indicator using four set levels. This can give a guide to possible future performance.

3.10.5 Conclusion on Evaluation

Despite the importance of conducting regular evaluation of LRC/Library services for improvement and meeting users needs, the time which managers of staff allocate to evaluation is limited. Therefore evaluation in the field of librarianship appears to be still in its early stages. It has been shown that, while it is possible to measure quantitative features in an LRC or library, it is more difficult to measure those elements related to qualitative issues. However, performance indicators could represent the most appropriate method of evaluating the quality of work in an LRC through modifying the intended objectives into

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performance indicators which can then be measured to indicate effectiveness. In evaluating an LRC the following aspects need to be covered.

- Provision, and organisation of a variety of resources, materials and equipment.
- Provision and development of effective staff.
- Provision of spaces.
- Management, communications and organisation.
- Access to facilities and utilisation of facilities and staff.
- Funding

The above elements should be investigated as an integrated unit of human and technological resources. These aspects need to be formed into a framework for evaluating an LRC and applied to the objectives intended for the centre itself and the parent institution.

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

This chapter describes the processes followed during the gathering, analysis and interpretation of the data included in this study. It begins with the design of the research then demonstrates the data resources by referring to the literature review and the sample of the study. The chapter then discusses the research tools used including both quantitative and qualitative methods. This includes the development and piloting of the instruments used; questionnaire interview and observation. An explanation of the protocol adopted in conducting the survey follows. The analysis of the data collected is also discussed. Finally the chapter clarifies the limitations of the study.

4.2 Research Design

The research design used a case study approach, but actually surveyed all LRCs in the Colleges of Education in Oman. The methodology included the collection of both qualitative and quantitative data. Interviews (semi-structured) and questionnaires containing closed and open-ended questions were the methods chosen. A semi-structured observation technique with both quantitative and qualitative data provided further information.

4.3 Data Resources

4.3.1 Literature Review

The literature review in this research represents the base for the other resources used to collect data in this study. Hence before identifying the elements which needed to be covered in this study a general review of the literature was conducted on relevant studies and references. Since no studies have been carried out on the LRCs in Oman the literature used described different contexts. The literature review includes relevant issues and elements to be referred to in the assessment of the effectiveness of the LRCs in Oman.

4.3.2 Sample

Identification of the required population of the study is the initial decision for the researcher. This study depended to a great extent on survey approaches Questionnaires,

Interviews and Observation. The thoughts of those conducting previous surveys of this type therefore were considered in the selection of the sample.

The number of subjects (participants) to be included in a research questionnaire population presents a problem to which there is no agreed answer (Clegg, 1999). Munn and Drever (1993) confirm this lack of consensus by indicating that, there are no definite rules about sample size.

Accordingly it is important that the researcher makes sure that he/she has the appropriate number of participants for the study being conducted (Rudestam and Newton, 1992). Where a large variation in response is predicted there is a requirement for a large number of subjects (Clegg, 1999).

Simpson and Tuson (1995) clarified that the size of the sample in an observation has less effect on the reliability of data collected by saying:

'Gathering and processing observation data are labour-intensive activities, the sample size in any such study is usually quite small. However, a small sample does not necessarily make the research unsound'

(Simpson and Tuson 1995, p.26).

They justified that observation methods, do not aim to gather representative data, because the sample will be selected by the researcher as suitable for the process of the research topic rather than randomly (Simpson and Tuson, 1995).

Case study may lead to false conclusions if an unusual case is studied therefore the researcher is required to be aware of the possibility of gathering unrepresentative data. Drever (1995) suggested that bias is more likely to happen when researcher asks for volunteers to be interviewed. Hence it is important that the researcher selects the sample of interviewees himself and encourages them to participate (Drever, 1995). In addition consideration of the sex, race and physical characteristics of subjects is important, because these factors may affect the data collected from the sample (Clegg, 1999).

On the other hand it could be difficult for an individual researcher to obtain a true random sample. Therefore the researcher may be forced to accept anyone available and ready from

the whole population. Such a sample is generally acceptable as long as the required data is collected and the sample is clearly identified (Bell, 1993).

When the researcher anticipates variations in collection of data, because of effects which may be attributed to interviewees levels of responsibilities, the division of interviews into groups according to the positions and jobs of the interviewees is required (Drever, 1995).

A random sample gives each member of the population under study an equal chance of being chosen (Bell, 1993). There are two main types of forming a random sample; systematic sampling and simple random sampling (Al-Rabiey, 2002).

Systematic random sampling depends on selecting a sample from the population in an organised way. For example the sample of the population could be selected according to an alphabetical list or by using a numbered list, preparing random number tables from disorganised digits that gives an equal chance for each member of the population of the study to be included (Clegg, 1999). For instance if a sample of 100 is required from a population of 1,000 then every 10th person could be chosen (Al-Rabiey, 2002).

Simple random sampling relies on selecting the required number of the sample from a list of the population. It is recommended here that the selected sample should have characteristics similar to the entire population. However this method is not without problems, because a complete list of the population is required and this is often is not available (Cohen and Manion, 1994).

Although a random selection method is very common in research studies and could be the most suitable way to conduct surveys it also has weaknesses which could lead to errors or bias (Al-Rabiey, 2002). Hence any researcher needs to be aware of this and keep such considerations in mind.

Munn and Drever (1993) deduced several rules about sampling which any researcher must consider:

"- Define your population clearly, so that anyone could judge exactly who belongs within it and who does not.

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- *If possible, include the whole of your population in your survey, so that you can speak with certainty about their answers.*
- *If, not sample at random. This allows you to report with a measurable degree of uncertainty.*
- *The bigger your sample, the greater the certainty, but the certainty may not increase in proportion to the work involved*
- *Sometimes it is permissible to depart from random sampling but you need to be clear about your reasons for doing so” (Munn and Drever, 1993, p.18).*

Therefore to collect comprehensive data from a representative sample the samples of this study are; students, academics, and staff of LRCs at the Colleges of Education and the six LRCs. In addition this study also included interviews with staff of LRCs/libraries in six Canadian Universities.

A simple random sampling method was used in this study particularly with students’ and academics’ questionnaires. This is because the questionnaires were sent to the Colleges to be distributed by members of the Colleges themselves. Interviews and observation were carried out by the researcher. Observation was conducted on all of the six LRCs, and a member from each section (library, computer and media) and an administrative member Head/Assistant Head of an LRC were selected for interviewing.

Students in the Colleges of Education in the academic year 2000/2001, when the study was conducted, numbered 8708 and there were 87 staff of LRCs (Ministry of Higher Education, Department of Students Affairs’ Statistic, 2001). Academic staff members in the Colleges in the academic year 2000/2001 were 532 (Al-Rabiey, 2002).

No.	No of LRCs	No of Academics	No of Students	No of Staff of LRCs
Total	6 LRCs	532 (300)	8708 (1200)	87 (24)

Table 4.1 number of the survey’s population in the academic year 2000/2001 in Oman. Figures in bracket represent numbers of questionnaires sent and interviews conducted.

The number of questionnaires distributed to the Colleges were: 200 students’ questionnaires and 50 academics’ questionnaires for each of the six Colleges. Interviews were carried out with 24 of the staff of LRCs. One employee was selected from each section besides the head/Assistant Head of an LRC. Moreover observation activities were conducted in each of the six LRCs.

No.	No of LRCs	No of Academics		No of Students		No of Staff of LRC
Total	6 LRCs	Sampled population	Response rate	Sampled population	Response rate	24 members
		300 (56%) of total population (532)	140 (26%) of total population = (47%) of sampled population	1200(14%) of total population (8708)	436 (5%) of total population = (36%) of sampled population	(28%) of total population = (100%) of sampled population
					M 211(49%) F 242(51%)	
					One respondent did not answer this question	

Table 4.2 shows the number and percentage of the sampled population.

Table 4.2 illustrates that the survey has been conducted in the six Colleges of Education in Oman as follows: Observation of six LRCs. 300 academic questionnaires were distributed in the six Colleges and 140 returned representing 47% of the sampled population which equals 26% of the total population. 1200 students questionnaires were distributed and 436 returned representing 36% of the sampled population which equals 5% of the total population, 211 (49%) male students and 224 (51%) female students. 24 employees of the staff of LRCs were interviewed representing 100% of the sampled population which equals 28% of the whole number of the total population (87) of LRC staff.

Moreover interviews were conducted with nine employees working in LRCs/libraries at six Canadian Universities as described in the Canadian section (chapter six). This part of the study was undertaken because the LRCs in the Colleges of Education in Oman are managed by Canadians and the MOHE tries to benefit from the Canadian experience in

LRCs/libraries. The Canadian aspect allows the work in Oman to be put in the context of a more established system.

4.4 Instrumentation: Research Tools

4.4.1 Quantitative and Qualitative data

Although that both methods are widely used, and share basic principles, each is deeply established on a different style. Accordingly each method has its strengths and limitations (Neuman, 2000). Lithgow (1994) illustrated that quantitative methodology suits research dealing with statistics and large random samples and qualitative methodology gives an opportunity to evaluate the views of people involved in libraries such as users and librarians.

Neuman (2000,p.123) clarified the differences between quantitative and qualitative research in the following table:

Quantitative	Qualitative
- Test hypothesis that researcher begins with.	- Capture and discover meaning once the researcher becomes immersed in the data.
- Concepts are in the form of distinct variables.	- Concepts are in the form of themes, motifs, generalizations, and taxonomies.
- Measurements are systematically created before data collection and are standardized.	- Measurements are created in an ad hoc manner and are often specific to the individual setting or researcher.
- Data are in the form of numbers from precise measurement.	- Data are in the form of words and images from documents, observation, and transcripts.
- Theory is largely causal and is deductive.	- Theory can be causal or noncausal and is often inductive.
- Procedures are standard, and replication is assumed.	- Research procedures are particular, and replication is very rare.
- Analysis proceeds by using statistics, tables, or charts and discussing how what they show relates to hypotheses.	- Analysis proceeds by exacting themes or generalisations from evidence and organizing data to present a coherent, consistent picture.

Table 4.3 Differences between quantitative and qualitative research

Moreover Neuman (2000) considers that the best research often combines the features of both qualitative and quantitative styles. Lithgow (1994) supports this theme stating that using both methods increases the reliability of collected data. Hence both techniques are used in this research to maximise the strengths of each.

4.4.2 Data Collection Instruments

To carry out comprehensive research about the effectiveness of the LRCs in the Colleges of Education there is a need to use more than one method to collect data, which can be analysed to obtain satisfactory results. Therefore the following research methods have been used; questionnaires, interviews, and observations.

4.5 The Questionnaires

4.5.1 The Questionnaire in Educational Research

Questionnaires are a popular method of collecting information particularly in large scale surveys which seek to gather information from a large number of people.

A questionnaire method quite often depends on quantitative aspects, but it may also contain qualitative aspects (Bell, 1993). Therefore there are two types of questions: closed and open. Cohen and Manion (1995) illustrated that putting a tick in boxes in answering a questionnaire is generally familiar to respondents and preferable to circling numbers. However this suits closed questions whereas open questions require space for answers.

The questionnaire technique has a number of advantages; as illustrated below:

- Questionnaires can save time because the researcher can draw up the questionnaire in his/her own home and they can be completed by respondents in their home.
- The questionnaire allows the researcher to collect information from a large population.
- Anonymity is a significant characteristic in a questionnaire technique, which encourages respondents to answer frankly.
- Questionnaire has a possibility of a high return rate in educational research.
- All respondents are provided with the same questions in the same order, such opportunity is not always available in other research methods (Munn and Drever, 1993).
- It is an adequate, quick method to conduct a research.
- It is considered as a cheap means to get certain information (Bell, 1993).

However there are pitfalls which require the researcher to be conscious in question construction. Some of the common pitfalls which a researcher needs to avoid in a questionnaire are;

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- Leading questions.
- Ambiguous language.
- Complex questions.
- Annoying questions. (Cohen and Manion, 1995).
- Questions which cover sensitive issues,
- Presuming questions,
- Questions that require the respondent to search for knowledge, because he/she may not know the answer readily (Bell, 1993).

Thus to create a well designed questionnaire which could gain rational results it is important that the questionnaire is carefully constructed and planned. Leedy and Ormrod (2001) outlined 12 guidelines for developing a questionnaire that encourages the population of the study to respond effectively. These guidelines are summarised in the following:

- Keep the questionnaire short.
- Use simple, clear language (unambiguous language).
- Avoid any needless assumptions implicit in the questions.
- Avoid bias or leading questions.
- Seek consistency or uniformity of questions.
- Decide in advance how the responses will be coded.
- Keep the respondents mission simple. So they can easily cooperate with you.
- Include brief instructions.
- Associate any item with unclear purpose with logical justifications.
- Use a clear attractive format which uses easily read fonts.
- Perform a pilot test to explore any difficulties.
- Inspect the questionnaire items carefully to make sure it addresses its purposes (Leedy and Ormrod, 2001).

Hence Cohen and Manion recommended that the questionnaire should be constructed to be simple, clear and attractive, so it could easily guide respondents (Cohen and Manion, 1995). However the questionnaire should be constructed in a way that enables it to meet the purposes of the study. Therefore Hessler says:

“There is no mystery to designing a good questionnaire. Know what you want to ask, know how you are going to analyse it, and keep it short” (Hessler, 1999, p. 91).

4.5.2 Development of the Questionnaires in the Study

The development of the questionnaires went through a few stages namely:

Selection of the items to be included in the questionnaires, drawing the questionnaires construction and piloting of the questionnaires. These stages are explained in the following.

4.5.2.1 Selection of the Items to be Included in the Questionnaires

The research questions played a significant role in selecting the items of the questionnaires for both students and academics at the Colleges of Education in Oman. Before identifying the elements of the questionnaires I used the research questions (see chapter one, p.2 and 3) which aim to investigate the effectiveness of the LRCs as the main elements to identify what I need to explore through using the questionnaire technique with students and academics.

Reviewing the literature on the effectiveness of learning resource centres and related studies provided me with important data which was essential for the selection of the research elements. References on questionnaire methodology were also reviewed and utilised to a great deal. These gave guidance on how to design an appropriate questionnaire through putting into consideration the principles which need to be included or avoided.

During the first year of my study (1999/2000) I attended a course on educational research methods at the Department of Education (at Glasgow University) to define suitable research methods which could be used for the research. In the same academic year I have also got a chance to join a conference on librarianship. This conference allowed me to meet people with experiences and interests related to the research topic. Then when I came to the stage of designing questionnaires I contacted some of them and sent forms and examples of the questionnaires they use in five learning resources centres or libraries in Britain. This also gave me more ideas on how to outline questionnaire structures.

Moreover there were regular meetings for research students at the Department of Education to discuss students' research. This was a valuable opportunity for me to discuss and revise my research instruments and the items included.

Using the previous steps enabled me to formulate the questionnaire forms for students and academics in the Colleges of Education. This was done in a way that could lead to the collection of valuable data concerning the views of students and academics towards the Learning Resources Centres in their Colleges.

4.5.2.2 The Questionnaires Construction

The questionnaires construction included closed and open-ended questions, the scale ranges used for the closed questions varies from 1-3 to 1-5 from the highest to the lowest. These ranges are associated with an additional choice (not applicable) to give respondents an opportunity to mark it when a certain question does not apply to them or when they have no experience of a particular aspect. The variation of scales depended on the extent to which each issue required to be explored. Copies of the questionnaires used in this study are included in the Appendices two and three.

The closed questions were used to obtain quantitative data related to particular aspects and those open-ended questions were provided to give respondents opportunity to express their own views towards the LRCs in their Colleges of Education. These open-ended questions allowed the collection of any useful data not covered by closed questions.

The questionnaires were divided into two types one for students and another for academics. This division minimized confusion or mistakes for respondents. There were general aspects included in both types. These aspects are:

Information about respondents such as their Colleges, gender, departments age etc., collection, borrowing system, organisation, computing facilities, study materials, audio-visual and micro teaching facilities, staff, signs and instructions, new acquisition information, space, study places, opening hours, environment, building, time spent using the LRCs sections, usage of facilities, training courses in the LRCs and users general satisfaction with the LRCs.

Moreover there were questions dedicated for students or academics only as illustrated in the following:

The questions dedicated for students only covered; variation of usage level of the LRCs and learning methods.

The questions which were dedicated for academics only included; nationality, timetabling and booking, involvement of academics in teaching in the LRCs, unused materials and equipment at the LRCs and incentives or encouragement in the use of educational technology.

In addition there were open-ended questions for both samples of respondents (students and academics) these questions are related to; the most liked and disliked aspects about the LRCs, changes and facilities users want to see in the LRCs. Finally respondents were offered an open-ended question for any comments or additions that were not included in the questionnaires.

As demonstrated earlier, research questions represented the basis upon which the questionnaires were constructed. Hence the questionnaires aspects were included to gain the required data from users which could explore their satisfaction with the LRCs as well as to identify the requirements of improving users utilisation of the LRCs in learning and teaching.

4.5.2.3 Piloting of the Questionnaires

Questionnaires were translated into Arabic (the mother tongue) of the intended samples, before the piloting activities. An Arabic language expert was asked to read the questionnaires and comment. His suggestions and comments were considered and the required changes were done before piloting the questionnaires. After translating the questionnaires to Arabic, the English versions required a slight modification to match the new Arabic versions.

The students' questionnaire was piloted with 13 students (7 males and 6 females) from two Colleges. The academics' questionnaire structure was tested with 6 academics from two Colleges. Five of them tested the Arabic version. The sixth one was a British member teaching English at one of the Colleges so she checked the English version. However the English version has been reviewed by the research group at the Department of Education in its regular meetings.

The piloting was important to assess how comprehensive the questionnaires are and to clarify any ambiguity in the questions. Piloting the questionnaire also was important to identify how long it would require for completion.

From testing the questions I realised that further clarification was required for a few questions to suit the respondents understanding, and there was a need to add a few items to cover some other important issues. Piloting the questionnaires indicated that around 15 to 20 minutes is required to complete a form.

4.6 Interview

4.6.1 Interview in Educational Research

The interview is described by Hessler (1999) as one of several methods of monitoring social actions or subjectively significant performance. Neuman (2000) also identified the interview to be a short-term, secondary social communication between two unfamiliar persons with the clear purpose of one person achieving specific data from the other.

There are a variety of interviews' types including the face-to-face interview and the telephone interview (Neuman, 2000). These represent the most common types of interviews. In addition there are some other kinds of interviews such as those conducted by letter or by e-mail. (<http://www.galion.lib.oh.us/html/genefamily2.html>).

Cohen and Manion stated that the purposes of the interview are many and varied. It can be used as a means of appraising, assessing or collating data (Cohen and Manion, 1995). Data is acquired in a prepared conversation in which the interviewer asks pre-arranged questions and records the responses of the interviewee (Neuman, 2000).

Interviewing is no more valuable than many other data-gathering means such as questionnaires, direct observation etc. It is the most sociological of all the techniques because it involves deep dealings between the investigator and the interviewee (Hessler, 1999). In addition Bell clarified that a skillful interviewer can follow up thoughts, probe answers and explore motives and feelings, in a way which the questionnaire can never accomplish (Bell, 1993). Moreover methodologists emphasised that interviewing

demands significant knowledge and training for effective performance. Interactive skills are also required to enhance the validity and reliability of the data (Hessler, 1999).

Interviewing can be individual one-to-one or focus-group interviews. Drever illustrates the most common reason for group interviews as that the group involved has some significance for the research. In this technique one interviewer talks to a number of people. This kind of interview should only be chosen when absolutely necessary, because controlling the discussion is difficult and the recording can be noisy and confused (Drever, 1995). It is explained in Cohen and Manion that group interviews are useful when a group of people have been working together for some time or share a purpose as well as sharing some group ideals. Group interviews are less effective with personal matters or when the researcher needs to focus the questions on a particular member of the group (Cohen and Manion, 1995). For the reasons detailed above a one-to-one interview technique has been adopted as the most appropriate for this research.

The interview technique can be formal where usually it is prepared in advance and tape-recorded (Holloway, 1997). In this type of interview the researcher quite often conducts the interview very formally (Bell, 1993).

It also can be informal in a conversational style where the researcher may ask about the observed activities (Holloway, 1997). In this type of interview the respondent almost determines the shape of the interview (Bell, 1993).

There is a range of designs for interviews such as structured, unstructured and semi-structured interviews. Bell (1993) explained that a structured interview can take the shape of a questionnaire or checklist prepared entirely by the interviewer rather than by the respondent. First-time researchers may feel more comfortable using a structured interview style. Moreover this saves a lot of time at the analysis stage. On the other hand this manner of structure requires the interviewer to decide what questions are to be asked and he/she may miss important issues.

Researchers often prefer to use unstructured (non-standardised interviews) and semi-structured interviews. Unstructured interviews can include open-ended questions. The researchers use key words to remind the interviewee to talk about a specific topic. This type of interview suits research when little is known about the topic to be investigated (Holloway, 1997). In addition an unstructured interview centred around the subject with a skilful interviewer can gain a wealth of important data. On the other hand it requires a lot of time for the analysis (Bell, 1993).

In a semi-structure interview (the focused interview):

“The interviewer sets up a general structure by deciding in advance what ground is to be covered and what main questions are to be asked.” (Drever, 1995, p.1)

Thus Holloway illustrated that semi-structured has a more detailed and focused research agenda (Holloway, 1997). Therefore it is likely to consist of a mixture of both closed and open questions (Drever, 1995).

The interview technique has a number of advantages included in the following:

- The face-to-face interview has the greatest response rate (Neuman, 2000).
- The interviewee is expected to answer all the questions.
- The researcher can illustrate any ambiguities and correct any misunderstandings in the questions (Drever, 1995). This could be attributed to spending a longer time with the interviewee.
- The face-to-face manner gives an opportunity for the observation of the surroundings and allows using visual aids and nonverbal interaction (Neuman, 2000).
- The interviewer can infer more information from the interviewees' expressions from his/her body language (Drever, 1995).
- The face-to-face technique gives the chance to use extensive probes (Neuman, 2000). This is usually done when the respondent's answers are not clear (Drever, 1995).
- In particular with open-ended questions there is a chance that they could lead to unexpected responses which may reveal results unthought of in the hypothesis (Cohen and Manion, 1995).

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Although the interview method includes many advantages it has disadvantages and has the potential to be exposed to bias. Therefore some common factors can be described as follows:

- In qualitative research the interviewer can influence the study both negatively or positively.
- Lack of rapport or over rapport between the interviewer and respondent could affect the result of the study.
- An interview requires time. For instance the time for a qualitative interview varies from 45 minutes to an hour and half or more. This depends on the time available and staying power of the interviewee (Holloway, 1997). Moreover a semi-structured interview often takes between 45 minutes and an hour. This is in addition to the time required by the researcher for travelling and for social talk. Furthermore processing the interview takes time. After conducting the interview the researcher needs to process the work. This may involve transcription of the interview, or detailed note taking from play back, followed by some kind of coding or other form of analysis (Drever, 1995).

Furthermore interviewer bias represents an important factor which quite often leads to untrustworthy data. Neuman (2000) demonstrated interview bias in the following categories:

- Errors by respondent such as forgetting, misunderstanding and lying etc.
- Unintended errors from the interviewer e.g. interviewer negligence, his/her misreading a question, recording the wrong answer, or contacting the wrong respondent.
- Intentional modification of answers by interviewer.
- Influence due to the interviewer's expectations about the interviewee's circumstances.
- Failure by interviewer to probe properly.
- Affect on the answers due to interviewer's appearance and manner of communication.

In order to conduct a valuable interview that can reveal worthwhile data the interviewer needs to make every effort to benefit from the advantageous features of the interview style. The interviewer also needs to be aware of the potential disadvantages of the interview technique used to avoid, or at least to keep to minimal level their influence on the results.

In order to make the most of the interviewer's time he/she is required to keep the following general guidelines in mind, (Galion Library, 2003).

- "- Prepare a list of questions prior to the interview.*
- Use open-ended questions*
- Listen to responses. Do not interrupt*
- Take notes. Use audio recorders where appropriate*
- Ask follow-up questions. Stray from your list of questions when needed.*
- Be considerate. Some sensitive issues may bring back memories. If the interviewee does not want to answer don't press.*
- Set a general time limit. One to two hours is about right for most interviews.*
- Be courteous. Write a thank-you note, and offer to share what you find. "*

(<http://www.galion.lib.oh.us/html/genefamily5.html>).

Furthermore the following elements need to be considered while the interviewer is conducting the interview:

- Begin with establishing rapport, preparing the questions in advance should not restrict the natural style of the interview.
- Follow the plan. This helps the interviewer to keep the interviewee on track.
- Clarify the construction and type of questions to interviewee.
- Use warm-up questions by giving the candidate one or two examples of the kind of questions which will be used (http://www.psc-cfp.gc.ca/ppc/assessment_cp2_e.htm).

4.6.2 Development of Interviews in the Study

The stages of the development of the interviews used in this study consist of the selection of items to be comprised in the interviews, constructing the interview and piloting of the interviews. These steps are explained in the following.

4.6.2.1 Selection of the Interview Items

Selection of the interview items was similar to the procedure used for the questionnaires except that the questions have been planned to suit an interview technique as well as focusing on elements of the concerns of the staff of LRCs.

It was intended in the selection of the interview items to cover elements that could help answer the research questions. In addition to the earlier explanation about the selection of items for the questionnaires, the research questions again played an important role in identifying the issues to be raised in the interviews' questions. Therefore before identifying

the elements of the interview's research questions (in chapter one) issues requiring investigation have been exploited and sorted out into topics.

The literature review also guided the selection of the interviews' elements. Moreover references on interview technique were seriously considered. These presented directions on how to arrange proper construction of interviews.

As already explained in the questionnaires section, attending a course on educational research methods and regular meetings for research students at the Department of Education to discuss students' research represented a significant opportunity for me to gain knowledge of research methods, and how to select and draw interview structures.

The interviews were prepared in a way that could indicate the collection of essential information relating to the thoughts of the staff of the LRCs in the Colleges of Education in Oman. In addition the questions used for interviewing the staff of LRCs/Libraries in Canada were selected from the questions used for the interviews' of the staff of LRCs in Oman. This allowed the comparison of collected data in particular subjects for both surveyed areas.

4.6.2.2. The Interview Construction

The interviews have been prepared in a semi-structured style. The questions were generally formed to be open-ended supported with some elements to encourage and guide interviewees to enrich their responses. Copies of the interviews used in this study are attached in the Appendices four and five.

The interviewee's were divided into four types; Head/Assistant Head of the LRCs, librarians, computer specialists/technicians and media specialists/technicians. This separation minimized confusion or mistakes for interviewer.

There were general aspects included in all interviews. These aspects are:
Information about interviewees such as their Colleges, job title, gender, qualifications, age, nationality etc.

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The interviews of the Head/Assistant Head of the LRCs was concerned with all aspects investigated in the interviews, because they deal with all matters in the LRCs. The interviews for librarians, computer technicians and media technicians have included only aspects that concern each group section, for example librarians have been asked about library matters such as stock etc.

There were general aspects dedicated for all types of interviewees these aspects are; equipment and materials, staff, users, services and accessibility. Furthermore all types of interviews were ended with questions linked to co-ordination and collaboration between the LRCs in the Colleges of Education. In addition there are questions encouraging the interviewees to provide suggestions for the improvement of the LRCs. Finally there is an open-ended question left to the interviewees to add any issues they think have not been covered or discussed in the interviews.

As illustrated earlier (in chapter one), currently the Ministry Of Higher Education in Oman (MOHE) is trying to benefit from the Canadian experience in the learning resource centre domain as well as the LRCs being managed by expatriates from Canada.

The questions used in the interviews in the Canadian universities were selected from the questions used for the LRCs staff in Oman. This allowed the exploration of the similarities and differences between the Canadian and the Omani experiences in order to investigate the effectiveness of the LRCs in Oman and increase the benefit from the Canadian experience. It was also meant to explore whether there is a Canadian model for LRCs which can be exported to Oman. The questions utilised in the interviews in Canada concentrated on description of the learning resource centre and/or libraries, services, classification and catalogue systems and evaluation of the LRCs/libraries quality of work in Canada.

As already explained in the questionnaires section the research questions represented the foundation upon which the questionnaires were constructed. The interview structure was also created in order to answer the research questions. Consequently the features included in the interviews were selected to gain the required data from the staff of LRCs which could reveal their thoughts of the LRCs as well as identifying the requirements for development of the effectiveness of the LRCs in the Colleges of Education.

4.6.2.3 Piloting the Interviews

Piloting the interviews also went through a similar procedure to that used for the questionnaires. However interviews also were translated into Arabic, before being piloted. An Arabic language specialist was requested to revise the interviews. This was followed with some changes in both the Arabic and the English versions because the translation required a slight adjustment to be consistent with the new Arabic language structure.

The interview structure for the LRCs staff was tested with five employees. (1 Head of an LRC, 2 assistant heads, 1 computer technician and 1 librarian). I could not interview any of the media lab technicians because I conducted the pilot survey during a summer course time while none of them was available. However the questions for the Head/Assistant Head of LRCs cover all of the questions used in other sections.

From testing the interview questions I realised that there were a few questions requiring clarification to suit the interviewees understanding, and there was a need to add a few questions to cover some other important issues which had been omitted. I also realised that I should separate the interview questions for the staff in each specialist group taking into account their specialist areas and interests. These specialist groups were classified into, Head/Assistant Head, librarians, computer technicians/specialists, and media technicians/specialists.

4.7 Observation

The observation in the survey is important for the enhancement of the data especially to uncover information that has not been covered in the questionnaires and interviews. The observation in this study was intended to explore any unexpected issues related to the study and enhance the data collected by other instruments such as questionnaires and interviews. However the observation did not represent a major part of this research. As was discussed earlier, this study relied to a great extent on the results collected through questionnaires for students and academics plus interviews for the staff of LRCs.

4.7.1 Observation in Educational Research

Observation is one approach to data gathering. Researchers as observers watch places and people in their natural settings (Holloway, 1997). The observation method can gain information about groups or individuals which would be unfeasible to explore by other methods (Bell, 1993).

Although sometimes observation can be difficult and complex, it is considered an adaptable way of collecting information. Observation suits the collection of quantitative and qualitative data as well as being employed for different studies. It is significant to choose an observation method in which the researcher will observe and record those facts which are suitable for his/her study (Simpson and Tuson, 1995).

Observation in qualitative research is generally recorded in great detail. While in a quantitative study the focus of observation goes into particular features, sometimes in an observation in a quantitative study the researcher counts the situations or events in order to conclude the overall frequency (Leedy and Ormrod, 2001).

There are two main types of observations — participant and non-participant (Bell, 1993). Participant Observation enables the researcher to observe what really happens rather than how people describe the event (Howe and Lewis, 1993). Thus participant observation is not simply observing the situation, but also involves listening to the people under study (Holloway, 1997). The ranges of participant observation vary from open to closed settings. Open settings are much reachable such as street view and reception places. Closed settings are more difficult to reach such as accessing management meetings and clinics etc., (Holloway, 1997). The non-participant observer exists when the researcher is not involved in the activities of the subject under study and records the events in regular way (Cohen and Manion, 1995).

The observation technique has several advantages. Flexibility represents a main advantage of carrying out an observation technique. The observer easily can shift the concentration immediately when any new event appears (Leedy and Ormrod, 2001). Simpson and Tuson suggested the following advantages in using observation.

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- Observation gives the researcher direct access to social interactions such as events and the interaction of the focus of the topic.
- Observation can give permanent and systematic records of social interaction. These can be in notes, detailed records, rating scales, or videotape etc.
- Observation can enhance and complement data gathered by other methods.
- Observation techniques have various characteristics. They can be performed in many ways such as simply watching, regularly looking for particular aspects etc. It can overlook different types of data for example unnecessary data. It can require different research skills, such as simply looking and sophisticated negotiation. Moreover observation can be applied in different contexts such as classrooms, social areas etc. In addition observation can be used to identify a range of kinds of research questions for example how often something happens or how do people interact etc (Simpson and Tuson, 1995).

Although the observation technique has a range of advantages there are several weaknesses. Leedy and Ormrod demonstrated some of the common weakness in the observation research method. These are:

- Researcher attendance may alter people's behavior.
- Recording events could be a problem.
- Written notes are quite often insufficient to achieve rich data of what is being observed.
- To some extent noise may make tape recorded conversation only partly audible.
- Video camera records only the incidents happening in specific directions.
- The presence of tape recorder and video camera may reflect negatively on participants' comfort (Leedy and Ormrod, 2001).

In addition to the observation's disadvantages it has a high demand on time, effort and resources. Susceptibility to observer bias also represents a main weakness. This happens either because the observer records what he/she thought happened rather than what actually took place, or because the observer did not pay the required attention to main events (Simpson and Tuson, 1995).

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In the event of conducting an observation the following issues should be taken into consideration.

- Before starting the observation the researcher needs to identify the methods that could suit the research and practise using them.
- When the observer begins the observation he/she should be introduced to the people where the observation will take place (Leedy and Ormrod, 2001).
- There is room for misunderstanding between observer and the group he/she needs to observe. Therefore observer should be aware of this and make sure the procedure is clear.
- In overt participant observation the participants are aware that they are under observation and this may influence their performance (Howe and Lewis, 1993).
- During the observation the observer needs to show that he/she is relatively quiet and friendly, so that may create trust in the sample being observed (Leedy and Ormrod, 2001).
- For the interpretation of the collected data it is important that the observer consults the people who are involved in the activities under observation and recognises their interpretation of the events taking place (Howe and Lewis, 1993). Moreover in the event of taking field notes it is worth dividing each page into two columns. The left column can be used for recording the observation and the right column can be used for the preliminary interpretations (Leedy and Ormrod, 2001).

Furthermore Bell (1993, p.119-120) suggested the following observation checklist. .

1. *“Decide exactly what you need to know.*
2. *Consider why you need this information.*
3. *Is observation the best way of obtaining the information you need?*
4. *Decide which aspects you need to investigate.*
5. *Request permission.*
6. *Devise a suitable grid, checklist or chart.*
7. *Consider what you will do with the information.*
8. *Pilot your method and revise if necessary.*
9. *Prepare carefully before the observation.*
10. *Discuss where you will sit with whoever is in charge and with people who are to be observed.*
11. *Remember that no grid, however sophisticated, will tell the full story.*
12. *Analyse and interpret the data.*
13. *Don't forget to thank the people who have allowed you to observe. ”*

4.7.2 Development of Observation in the Study

This part of observation covers the items to be observed, constructing the observation and piloting the observation.

4.7.2.1 Selection of the Observation Items

It was intended when selecting the observation items to enhance the data gathered from students and academics questionnaires and the interviews with the staff of LRCs. This is through investigating aspects related to the elements included in the previous two techniques (questionnaires and interviews).

It was thought that observation of the LRCs would extend the understanding of the responses to the questionnaires and interviews. Moreover it was planned to observe any further issues raised in the LRCs particularly those which have not been covered by questionnaires and interviews.

In addition, as mentioned earlier, attending a course in research methods and joining meetings with research students were of great value for me to identify the elements for the observation for this study.

4.7.2.2 The Observation Construction

The observation has been constructed in a checklist style in scaled categories supported by several open-ended questions. A copy of the observation is in the Appendix six.

The observation construction has been prepared in one type for all six LRCs, because the LRCs consist of one model. However there was one question concerned with the equality of use of the services between different genders which was used only with mixed Colleges. The aspects covered are related to the LRCs staff interaction with users, users behaviour and activities in the LRCs, building of the LRCs, and its related aspects such as space, accessibility lighting etc. Moreover the observation also covered general notes concerned with use of materials, support from staff of LRCs, organisation, instructions and signs and services such as photocopying and microteaching facilities.

In addition the end of the observation was left open for any further issues raised and any unpredicted issues or matters which could be utilised for the study.

4.7.2.3 Piloting the Observation

Piloting the observation took a different procedure than that used for the questionnaires and interviews. This is because the observation was constructed only in the English language, therefore it did not require any translation.

Before piloting the observation in Oman the observation was tested by one of the academics' staff at the Department of Education and the researcher. This took place at the Library of Glasgow University in order to explore how it could be applied in the LRCs in Oman and practice the observation activity.

Then piloting the observation was conducted in two LRCs of the Colleges of Education in Oman. This was done during my visits to two Colleges for piloting the other research instruments (questionnaires and interviews).

After piloting the observation's construction some aspects were added and some changes were made. These changes were done in order to prepare the construction of the observation in away that enables acquiring the required information and facilitates taking notes and recording events.

4.8 Survey Protocol

As was explained earlier, this study was conducted in six Colleges of Education in Oman. These Colleges are located in different regions of Oman: Nizwa College, in Al Dakhliyah (the Interior Region), Sohar and Rustaq Colleges in Al-Batinah Region, Ibri College in Al-Dhahira Region, Sur College in Ash Sharqiyah (the Eastern Region) and Salalah College in Dhofar (the Southern Region). (Map of Oman, p.7). Completion of the survey in the six Colleges of Education at the MOHE in Oman took four weeks.

Permission to conduct the study in the Colleges was sought from the Directorate General of the Colleges of Education. The Directorate General of the Colleges of Education wrote to

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the Deans of the Colleges of Education informing them about my study and requesting their cooperation, to distribute questionnaires to students and academics, facilitate my visits to the LRCs, and allow interviews with members of staff at the LRCs. The letter from the Directorate General of the Colleges of Education was sent to the Colleges before conducting the survey (The letter in Appendix one).

At the time of my first visit to each College I introduced myself to the Dean, explained my study to them then asked for their help to facilitate my task in their Colleges.

Before my visits to the Colleges, the Deans forwarded the letter received from the Directorate General of the Colleges of Education to the faculty members and the staff of LRCs in their Colleges. Therefore when I started visiting the Colleges (in March 2001) to conduct the research (Questionnaire, interview and observation) I found the sample of the study were already aware of the background and ready to cooperate.

The three techniques (Questionnaire, interview and observation) were used during my visits to each College. I started the survey in the Colleges as follows: Salalah College, Nizwa College, Ibri College, Sur College, Sohar College and Rustaq College. I visited each College at least twice. At the first visit to each College I started with the distribution of questionnaires, arrangement of times with the staff of LRCs for interviews and conducted observation of the LRCs when possible. In the following visit to each College I interviewed the staff of LRCs, conducted the observation, if not done in the first visit, and collected the returned questionnaires.

4.9 Distribution and Return of the Questionnaires

The questionnaires were attached to the letter from the MOHE and a covering letter from me explaining the purpose of the questionnaire for the research. The covering letter also illustrated that the results and recommendations of the questionnaire would contribute to improving the effectiveness of the LRCs and the help and participation of the sample would be very much appreciated.

As already explained in this Chapter, questionnaires were distributed to 1200 students and 300 academics. The Deans' offices distributed the academics questionnaires through faculties. Since I was an Assistant Head of an LRC for two years before starting this study I knew many of the members of LRCs. Accordingly I got their help in distributing the students' questionnaires.

The respondents were requested to complete the enclosed questionnaires and send them to the Dean's secretary. Some Colleges sent me the remaining answered questionnaires, which I did not manage to collect during my visits to the Colleges, through the Directorate General of the Colleges of Education at MOHE. However the level of response to the questionnaire reached 436, representing 36% of the sampled population, for students and 140, representing 47% of the sampled population, for academics.

4.10 Conducting the Interview

The interviews in the Colleges of Education in Oman covered one Head/Assistant Head of an LRC one librarian one computer technician and one media lab technician in each LRC. This total of 24 members of staff interviewed represents 100% of the sampled population. This sample is 28% of the total population of 87 LRC staff as described in this chapter. Piloting the interviews with the staff of two Colleges gave me experience of conducting the interviews. I arranged with the heads of LRCs in each College to interview a member of staff from each section (library, computer labs, and media lab) as well as the head of LRC himself or herself.

The interviews took place in a hall or an office in the LRCs away from clients and other LRC's staff members to avoid noise and interruptions. Before each interview I explained some background to my study and the purpose of the interview and assured the interviewee that what he/she said would be confidential and would be used only for the purpose of the research and the anonymity of the interviewee would be protected.

Each interview with a Head or Assistant Head of an LRC took between one and a half and two hours. The interviews with other members of LRCs ranged between 45 minutes and one hour. This is because the interviews of Heads/Assistant Heads included all aspects of

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the LRCs, while the interviews of other staff were more focussed on the aspects concerned with each section with some more general questions as detailed in the interview construction.

Permission to use a tape recorder was requested from interviewees with the alternative option of writing their responses in notes. This was to give the interviewees some comfort. The recorder was used with six interviewees and 18 interviewees preferred me to write their answers in notes. It was easier for me to use the tape recorder to concentrate on the process of the interviews and interact more with the interviewees. Using the tape recorder also allowed me to encourage interviewees to explain more about certain issues and probe when necessary. However the choice of those who preferred not to be recorded did not disturb me, because I wanted to give them an opportunity to feel comfortable and secure, so they could talk frankly with more confidence.

Furthermore I made contact with a Canadian doctor who had been an assistant dean in one of the six Colleges of education in Oman. He arranged for me to visit the LRCs/Libraries in six Canadian Universities in three cities; Halifax, Toronto and Montreal. The six Canadian Universities are mentioned in detail in the interviews chapter (chapter six).

In July 2001, I managed to conduct interviews with nine people working in the Canadian LRCs/Libraries using eight main questions from the interviews with the staff of LRCs in Oman. Before meeting the interviewees I sent them a copy of the questions I was going to use and an outline of the purpose of my study. The interviews with the Canadian staff were conducted in a similar way to that used with the Omanis except that all of the Canadian interviewees' responses were written rather than recorded, because the interviews included only eight questions and took approximately between 30 to 40 minutes each. In addition during my visit to the six Canadian Universities I managed to take some notes, which I have added to the data collected from Canada some interviewees provided additional literature related to my interest.

At the end of each interview I thanked all interviewees for offering me their time and cooperating with me to complete the study.

4.11 Conducting the Observation

The observation of the six LRCs in the Colleges of Education was undertaken during my visits to the Colleges. Before starting the observation I prepared my checklist and papers in a way that facilitated recording the data. As mentioned earlier I introduced myself to the staff of LRC in each College and asked for their permission to conduct the observation as part of my study activities. To avoid or at least to reduce any influence on the behaviour of the staff of LRCs, I did not stay for a long time in one place and moved frequently between LRCs' sections. According to Cohen and Manion (1995) I played the role of a non-participant observer. This is because I was not involved in the activities under study in the LRCs and recorded the observed data and events in a systematic way. I recorded the data at the time of the observation.

The construction used for the observation was in a checklist style with some open-ended questions. As explained previously, in piloting the observation, the construction of the observation was prepared in away that enabled obtaining the required information and facilitated taking notes and recording events.

Moreover working an Assistant Head of an LRC made me familiar with the LRC's building and made it easy for me to obtain the data required. I spent two hours of observation in each LRC. This covered marking the checklist aspects and collecting data about the interaction of staff of LRCs with users and users behaviour and activities in each section of an LRC (library, computer labs, and media lab). In addition the observation activities allowed me to collect data about the most frequently used materials and equipment as already explained in the observation chapter.

At the end of each observation I thanked the members of LRCs I met during my survey for allowing me to conduct the observation in their LRCs as well as for their cooperation.

4.12 Analysis

4.12.1 Reliability and Validity

Reliability is an essential condition for validity and both reliability and validity are significant for research (Hessler, 1999). The achievement of validity in research relies to a great extent on the achievement of reliability. When we have more valid and reliable measurement techniques appropriate conclusions become more feasible (Leedy and Ormrod, 2001).

4.12.1.1 Reliability

Reliability is the extent to which a researcher would obtain the same results when he/she repeated the research procedures a number of times (Hessler, 1999). Moreover reliability concerns conducting the research procedures with consistency in similar conditions to check that similar results can be reached on all occasions (Rudestam and Newton 1992 and Bell, 1993).

The researcher can check reliability by using the following four techniques:

- Repeat the item; this is through repeating the research technique with the same respondent in a different location and hoping that this person is unaware that he/she has already responded to this research. If the results gained are same as those gained earlier this shows that the method is reliable.
- Test-retest; repeating the test some time after the first. If different results are obtained the researcher will need to decide between two possibilities, whether the assessment is unreliable, or whether the respondent's thoughts have changed. The researcher here may face the difficulty of deciding between those possibilities, changes in respondents' view or unreliability of the tool.
- The split-half technique; here the researcher is required to prepare double the number of items he/she really needs. Then the items in the test are divided into two equal halves and the results compared. This will illustrate whether the method reveals consistency.
- Test theory; this depends on statistics for estimating the reliability. In this theory the research should expect errors to be random not systematic (Hessler, 1999). In addition to this, statistical test were developed to provide alternative valid tests which a researcher may use to make a decision regarding any hypothesis (Siegel and Castellan, 1988).

However these methods are not always feasible or necessary and there are disadvantages and difficulties related to them. Accordingly the researcher should think carefully before deciding to apply such tests. Seeking reliability comes at the stage of question phrasing and piloting the mechanism (Bell, 1993). Furthermore measuring the reliability of tests is not easy for several methodological reasons, but all the methods involve conducting correlations. When a high positive correlation is gained the test is considered reliable (Clegg, 1999).

A researcher can enhance the reliability of a measurement instrument through: First, the use of a consistent style. Second, the application of specific criteria to guide the type of judgement the investigator formulates. And third, research assistants who are using the technique should be well trained in order to attain similar results (Leedy and Ormrod, 2001).

4.12.1.2 Validity

Validity is the extent to which the instrument being used really measures the feature or dimension the researcher intends to measure (Walsh & Betz, 1995). Validity is considered an essential aspect of research that provides the truth and authenticity together with reliability (Holloway, 1997). Validity can be assessed only when there is a clear understanding of what has to be assessed (Hessler, 1999). Thus a valid test is the test that assesses what it is expected to assess and not something different (Clegg, 1999).

Two aspects are required to consider the validity of a research study. Firstly, the study should have satisfactory controls which assure that the conclusion is really justified by the data gathered. Secondly, the researcher should be able to use what he/she has monitored in the research situation to formulate generalisations about the world beyond that particular situation. These two aspects are relatively linked to the internal validity and external validity respectively (Leedy and Ormrod, 2001).

Internal validity is considered to be the most significant characteristic of validity. Internal validity can be achieved when the researcher is able to show that there is evidence to

support the statements and explanations provided. The study can then be presented for public assessment (Holloway, 1997).

External validity refers to the extent to which the investigator generalises the results of the study to the population sample (Martinez-Pons, 1997 and Cohen and Manion, 1995).

External validity – the ability to generalise from the study is considered more difficult to achieve compared with internal validity (Holloway, 1997). However the external validity of a research can be enhanced by: A real-life setting, through conducting a research in natural situations rather than laboratories; Choosing a representative sample of the population from which a researcher intends to draw conclusions. Replication in a different context, this happens when similar studies are conducted in different contexts and reach similar conclusions (Leedy and Ormrod, 2001).

Therefore, the researcher should seek both internal validity and external validity when designing research. The conclusions should be valid and significant only to the degree that they are justified according to the data gathered as well as being applicable further than the particular research circumstances (Leedy and Ormrod, 2001).

Using only one method of collecting data may bias or alter the researcher's perspective of the study. Therefore, in order to make the researcher confident of the data gathered, he/she needs to use different methods. Thus the confidence in the study can be inferred when similar results are achieved from different methods (Cohen and Manion, 1995).

Triangulation represents an alternative to validation which indicates the researcher's attempt to ensure an in-depth consideration of the phenomenon under study (Al Naibi, 2002). Triangulation is considered to be a procedure investigating the same issue or phenomenon from different points of view. It is assumed that triangulation can increase validity and overcome the biases in a single view study (Holloway, 1997). Thus triangulation (multi-method approach) is described as the use of two or more techniques of data gathering (Cohen and Manion, 1995).

To enhance the authenticity of this study the previous aspects of reliability and validity related to this study were taken into consideration. Moreover the main factor for the

achievement of the credibility of this study relied to a great extent on triangulation. This is in order to collect data via different methods and substitute any shortages that may appear in the data from any one particular method as well as to examine the results from different point of views. Accordingly I have used the following methods: Questionnaires with academics and students, interviews with the staff of LRCs (Heads, librarians and technicians), observation of the LRCs and visits to LRCs/libraries in six Canadian Universities. This is because the MOHE in Oman intended to establish the LRCs according to a Canadian model as already explained. In addition the investigation has covered all of the six LRCs in the Colleges of Education. Documentary analysis was also utilised in this study. Piloting of the research techniques was applied to increase the reliability and validity of the investigation as already explained in piloting section of this chapter.

Furthermore there were factors which ought to enhance the reliability and validity of this study. These factors were: working for four years on the research, including two years as an Assistant Head of one of the LRCs investigated. This opportunity gave me essential experience and an awareness of the area of the study.

4.12.2 Data Analysis

Raw data obtained from questionnaires, interviews and checklists, etc. require analysis understanding and recording. Huge separate pieces of interesting information mean nothing to an investigator or reader unless they are sorted into categories. Therefore in the analysis of data, the researcher is required to recode and record the data before starting the analysis process (Bell, 1993).

Data analysis in qualitative research depends upon classifying the data by description then filtering it towards conclusions. Open-ended responses usually are written in sentences therefore it is more difficult to transfer them into numbers or codes. In the case of open-ended responses the researcher can sort each answer on an index card then classify them into categories according to the developing themes (Hessler, 1999). In quantitative results data can usually be divided into a sequence of different statements. These statements expose the key findings. Although the text usually represents the major focus, the findings may also be presented in, tables and figures (Rudestam and Newton, 1992).

Initially data analysis starts at the beginning of data gathering. Holloway recommends the following steps for data analysis.

- (1) Ordering and organising the collected materials.*
- (2) Re-reading the data.*
- (3) Breaking the material into manageable sections.*
- (4) Identifying and highlighting meaningful phrases.*
- (5) Building, comparing and contrasting categories.*
- (6) Looking for consistent patterns of meanings.*
- (7) Searching for relationships and grouping categories together.*
- (8) Recording and describing patterns, themes and typologies.*
- (9) Interpreting and searching for meaning.” (Holloway, 1997, p.44).*

In addition it is quite common for the researcher to begin with the description of the sample. Moreover it could be more useful if the researcher organises the answers in away that enables him/her to answer the research questions (Rudestam and Newton, 1992).

4.12.2.1 Analysis of Questionnaire

After collecting the questionnaires from the Colleges they were coded then entered into the SPSS software package (The Statistical Package for Social Science). Afterwards the data was ready for analysis.

In the analysis of students’ and academics’ responses to the quantitative items, the valid percentage was calculated from their total responses (436 students and 140 academics). Questions were grouped with responses to relevant questions gathered in tables and illustrated. The questionnaires are shown in the Appendices two and three.

The following categories in the tables were used to express students and academics’ satisfaction with the LRCs:

- Excellent -Very good - Good - Fair - Poor - Not applicable

In the analysis of data only the first five categories were used while not applicable was omitted, because only the valid percentage of responses was counted. The figures for satisfaction have been given for the questions by describing their data in general then concluding with a total average which reflects the overall level of satisfaction for all the questions in the table. These figures give indicators to the effectiveness of the LRCs regarding the points addressed in the tables.

The questionnaires measured the level of satisfaction of students and academics with the services of the LRCs in a number of aspects as detailed below. Respondents were asked to rate their responses on a range of 1-5 from excellent to poor, where poor equals 1 and excellent equals 5 plus a not applicable box (see Appendices two and three).

The satisfaction percentage was used to measure the total satisfaction for the whole sample.

The satisfaction percentage was calculated as follows:

$$\text{Satisfaction percentage} = \frac{(\text{total scores of students/academics' response})}{5 \times (\text{the number of students/academics' responses})} \times 100$$

E.g. if the responses for students/academics were as follow:

10 respondents choose excellent (each excellent here equals 5)

5 respondents choose v-good (each very good here equals 4)

6 respondents choose good (each good here equals 3)

3 respondents choose fair (each fair here equals 2)

4 respondents choose poor (each poor here equals 1)

Total scores of respondents' response = $10 \times 5 + 5 \times 4 + 6 \times 3 + 3 \times 2 + 4 \times 1 = 98$

$$\text{Satisfaction percentage} = \frac{98}{5 \times 28} \times 100 = 70\%$$

The previous 5 categories of satisfaction were grouped into 3 categories for the analysis of data in order to display the satisfaction within three levels; high level of satisfaction (HLOS: $\geq 70\%$), acceptable level of satisfaction (ALOS: $\geq 50\%$ - 69%) and not satisfactory (NS: $\leq 49\%$) as illustrated in table 4.4.

The three categories are shown in the table below:

Satisfaction Level	Satisfaction Percentage
High level of satisfaction (HLOS)	$\geq 70\%$
Acceptable level of satisfaction (ALOS)	$\geq 50\%$ - 69%
Not satisfactory (NS)	$\leq 49\%$

Table 4.4 Categories of Satisfaction

Table 4.5 demonstrates how the 5 categories were grouped into 3 categories.

Not satisfactory		Acceptable level of satisfaction	High level of satisfaction	
Poor 1	Fair 2	Good 3	V-Good 4	Excellent 5
		2.5 (50%)	3.5 (70%)	

Table 4.5 Satisfaction Level Classification Scheme

Examples:

Example. A- if 10 respondents answers were divided between good and v-good
5 respondents chose good and 5 respondents chose v-good

$$\frac{(5 \times 3) + (5 \times 4)}{5 \times 10} \times 100 =$$

$$\frac{15 + 20}{50} \times 100 = \frac{35}{50} \times 100 = 70\% = \text{HLOS}$$

Example. B- if 10 respondents answers were divided between fair and good
5 respondents chose fair and 5 respondents chose good

$$\frac{(5 \times 2) + (5 \times 3)}{5 \times 10} \times 100 =$$

$$\frac{10 + 15}{50} \times 100 = \frac{25}{50} \times 100 = 50\% = \text{ALOS}$$

Whilst it is acknowledge that this is a simplistic way of describing the data it does allow for simple and straightforward comparison between various sets of data.

Both types of respondents, students and academics, were given an opportunity to express their own qualitative data regarding the LRCs. This was achieved by asking them open-ended questions at the end of the questionnaires to allow them to include their own ideas and suggestions.

The responses have been grouped into items or issues in tables. The findings showed that some data had been mentioned by many respondents while some data was included by a very limited number. Consequently in the analysis of students' and academics' responses

to such qualitative items in the questionnaires only the sample of consistent answers which reached by 10% or more of respondents were considered and analysed. Where the respondents' answers and questions did not reach a consistent 10% agreement they have not been analysed.

4.12.2.2 Analysis of Interview

The analysis of the data from interviews went through a number of steps: organisation, analysis and summary. The data from the interviews was ordered by the questions used in the interviews of the Heads/Assistant Heads, because their questions covered all aspects investigated with the other members of staff. The data collected, whether written or taped, was sorted under their related questions.

Then the findings were classified into relevant ideas. After that the data was broken down into themes and grouped under the respondents jobs or the sections of LRCs according to the purpose of each question. When the question seeks data according to the LRCs sections the data was grouped under the sections of the LRCs (library, computer labs and media lab) e.g. (*Q 26. Are there any materials which can't be borrowed?*). When the questions are related to the attitudes of staff of LRCs the data is grouped into respondents' type of jobs e.g. (*Q.10. How do the LRC staff and the academics liaise?*). Finally in order to obtain the required data that could answer the research questions, the findings were summarised and drawn to a conclusion.

In addition the data gathered from Canada has been listed under each question for all of the six Canadian LRCs/libraries. Moreover the information taken from notes and handouts has been added to their related data amongst the text from interviews. However the analysis of the data from the interviews with the Canadian staff was carried out in a similar way to that used with the data from Oman.

4.12.2.3 Analysis of Observation

As illustrated in the construction of observation the observation was prepared in a checklist in scaled categories associated with some open-ended questions. Since the observation was conducted by myself, the data collected was fairly relevant. This also enabled me to list and arrange the data easily.

The data collected by the observation of the six Colleges of Education were listed under each question or item. Then the analysis was done through describing the most common findings related to each aspect or item followed by indications of the least common aspects. Where there is little variation between the six Colleges in the aspects under study I dealt with the data as one unit in each section of an LRC. While, when there is a noticeable variation between the LRCs, the data was sorted out into categories or groups of findings. Additionally at the end of the analysis of each aspect an overall indication has been concluded when suitable.

4.13 Limitations of the Study.

Limitations in research usually refer to the constraints where the researcher has no control in the study. For instance the researcher may be limited to only a narrow division of the total population he/she wants to investigate or the researcher may be limited to the instruments required to employ in the study (Rudestam and Newton, 1992).

It is common that each study has limitations and can never be expected to be ideal. The limitation of this study could be illustrated in the following: Firstly there was no single study investigating the effectiveness of the LRCs in the Colleges of Education in Oman. This is according to the information from the library at Sultan Qaboos University, where all copies of Omani academic theses and dissertations are placed in Oman. As well as according to my knowledge from the investigation done during the study. Consequently this prevented me from utilising any background studies as well as restricting me from conducting a study that could follow previous findings. Performing a comparative study with previous studies was not possible.

Secondly it would be very useful if the study covered current Omani school teachers in order to compare the influence of the LRCs on their skills in teaching and learning. In addition to the comparison between the graduates of the Colleges of Education before and after the introduction of the LRCs. However this would have required permission from the Ministry of Education in Oman, development of the research mechanisms and aims as well as additional time for conducting and analyzing the findings and so was outside the scope of this study.

Thirdly one of the limitations of this study was that, I did not find an obvious Canadian model for an LRC. Therefore a direct comparison between the Canadian and the Omani LRCs seemed to be inappropriate. Thus in this study I avoided using a direct comprehensive comparison between the Canadian and the Omani Experiences in LRCs and rather I intended to learn from the Canadian experience in this field in order to improve the effectiveness of the LRCs in the Colleges of Education in Oman. Moreover it was not possible to make direct comparison with LRCs elsewhere. Cost-effectiveness measures for LRCs do not seem to have been adopted by Omani LRCs, and any devised by a researcher may not be acceptable, or possible to apply.

Fourthly benchmark data was not gathered, e.g. cost of LRCs per student-hour using them, and it would probably not be valid to apply them to comparing LRCs with different geographical and demographic situations, especially between different cultures and stages of economic development.

CHAPTER FIVE

Part One

5.1 Results From Questionnaire Responses (Students’).

The students’ questionnaire intended to measure their level of satisfaction with the services of the LRCs. As illustrated in chapter four, in the analysis of students’ responses the valid percentage was considered from the total students’ responses (436 students). Questions were sorted with responses to related questions gathered in tables and demonstrated. The questionnaires are shown in Appendix two. These figures indicate the effectiveness of the LRCs concerning the points addressed in the tables.

5.1.1 Collection

Students were asked about their satisfaction with the collection in the Library at the Learning Resource Centres (LRCs). The questions are listed below:

- Question 7.1 *The availability of subject specialist books?*
 Question 7.2 *The availability of textbooks?*
 Question 7.3 *Usefulness of references and reserved books?*
 Question 7.4 *Books for loan are up-to-date?*
 Question 7.5 *Availability of journals on the shelves?*
 Question 7.6 *The short loan collection meets your need?*

The students’ responses to the above questions expressing their satisfaction percentages and their satisfaction levels regarding the library collections are illustrated in the following table:

Table 5.1.1.

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.1	8.50	20.50	32.00	27.60	9.20	1.8	58	ALOS
7.2	8.40	23.30	33.20	23.10	9.60	2.2	60	ALOS
7.3	10.50	26.20	29.00	24.30	6.80	3.3	62	ALOS
7.4	7.00	15.90	28.50	28.70	16.80	3	53	ALOS
7.5	5.00	11.80	18.90	29.70	25.50	9.2	47	NS
7.6	12.10	22.70	28.80	18.00	13.90	4.5	60	ALOS
Total Average	8.58	20.00	28.40	25.20	13.60	3.5	57	ALOS

Table 5.1.1 Students’ satisfaction with the library collection.

Table (5.1.1) shows that, for question (7.1: *availability of subject specialist books?*) the number of students who selected the answer *Poor* was about 10% while the majority of the students 32%, 20.5% and 8.5% chose *Good*, *Very good* and *Excellent* respectively. Therefore, the satisfaction percentage for this question among students was 58%, which is an acceptable level of satisfaction. All other questions show similar level of satisfaction, except question (7.5: *Availability of journals on the shelves?*). The satisfaction percentage for this question was found to be 47%, which is the lowest percentage of all the questions. This percentage indicates the students were dissatisfied with availability of journals. This may also be observed by the higher percentage of students, over 25%, who selected the answer *Poor* compared with their answers to the other questions, ranging between 9% to 17%. The table also shows that question (7.3: *Usefulness of references and reserved books?*) gained the highest satisfaction level among the students with a value 62%. This can be attributed to the fact that this question has the highest percentage of students who selected the choice *Good* and *Very good*.

The general outcome from table (5.1.1) was found by calculating the total average percentage for each column. The results are shown in table (5.1.1). The results indicate the average satisfaction percentage was 57%, which indicates that students overall satisfaction level with the library collection was acceptable, also the answer *Good* for each question gained the highest average percentage of the answers.

5.1.2 Borrowing

Students' satisfaction with the borrowing services in the LRCs was investigated through the following four questions:

Question 7.7 *Number of items you can borrow?*

Question 7.8 *Lending period sufficiency?*

Question 7.9 *The procedure for borrowing materials?*

Question 7.10 *The time waiting in the queue for Borrowing?*

Students' answers to the above questions are listed in table 5.1.2.

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.7	16.20	22.20	27.10	20.10	13.20	1.20	62	ALOS
7.8	17.10	20.60	21.50	23.00	16.40	1.40	60	ALOS
7.9	20.00	23.50	25.80	15.50	10.10	5.20	66	ALOS
7.10	11.80	19.30	18.60	17.20	32.30	0.90	52	ALOS
Total Average	16.20	21.40	23.25	18.90	18.00	2.10	60	ALOS

Table 5.1.2 Students' satisfaction levels and percentage with borrowing.

The table shows that the lowest value of satisfaction percentage equals 52%. This was found in students' responses to 'Q7.10: *The time waiting in the queue for Borrowing?*'. It is noticeable in table (5.1.2) that this service had the lowest percentage of students who chose the *Excellent* category (11.80%) and the highest percentage of those marking the *Poor* (32.30%) category. This was compared with the other questions in the table. The satisfaction percentage has increased to be 62% and 60% for 'Q7.7 and Q.7.8 relating to number of items students can borrow and lending period sufficiency. While the highest value of the satisfaction percentages was 66% which was the rating for question 'Q7.9 *The procedure for borrowing materials?*'. According to this value, the students were more satisfied with the procedure for borrowing materials as it had the highest percentage of students choosing *Excellent* (20%) and the lowest percentage of students who chose *Poor* (10.10%) compared with the other questions as illustrated in the table (5.1.2).

Students' satisfaction percentages with lending services generally indicate an acceptable level of satisfaction, as the average percentage of the four questions is equal to 60%.

5.1.3 Organisation

Students' satisfaction levels and percentage with the organisation were examined by the following two questions:

Question 7.11 *Catalogue ease of use?*

Question 7.12 *Organisation and display of materials?*

Students' responses are shown in the following table 5.1.3.

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.11	12.00	17.10	21.30	21.80	15.30	12.50	57	ALOS
7.12	11.10	20.20	26.20	22.77	14.60	5.10	58	ALOS
Total Average	11.50	18.65	23.75	22.25	14.95	8.80	58	ALOS

Table 5.1.3 Students' satisfaction levels and percentage with organisation.

It can be seen from the table (5.1.3) that there was only a very small difference in students' satisfaction with both questions Q.7.11 and Q.7.12 regarding use of catalogue and organisation of materials, as their satisfaction percentages are 57% and 58%. There was also little variation between students' responses to the categories *Excellent*, *Fair* and *Poor*. On the whole the total average of students' satisfaction was about 58% which is considered an acceptable level of satisfaction.

5.1.4 Computing Facilities

Computer facilities were classified into nine subjects. The questions used for examining computer facilities are listed below:

Question 7.13 *Availability of computing facilities?*

Question 7.14 *Up-to-date computing facilities?*

Question 7.15 *Mouse (navigating with mouse)?*

Question 7.16 *Headphone?*

Question 7.17 *Computer printing?*

Question 7.18 *Access to the Internet?*

Question 7.19 *Internet instruction for new users?*

Question 7.20 *Instruction on how to set-up your own email account?*

Question 7.21 *Help with computers?*

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.13	10.70	20.20	21.90	26.50	19.50	1.20	55	ALOS
7.14	10.00	22.10	22.80	21.40	20.50	3.00	56	ALOS
7.15	16.90	22.20	24.80	21.50	11.90	2.60	62	ALOS
7.16	7.50	11.90	25.40	23.50	26.10	5.60	50	ALOS
7.17	9.50	16.70	22.30	26.20	23.40	1.90	52	ALOS
7.18	9.00	11.70	23.70	18.20	34.90	2.50	48	NS
7.19	8.30	9.00	18.90	26.80	30.90	6.00	47	NS
7.20	5.60	8.40	16.70	23.70	36.70	9.00	43	NS
7.21	9.30	26.00	29.36	24.30	5.70	5.50	58	ALOS
Total Average	9.64	16.46	22.86	23.56	23.28	4.14	52	ALOS

Table 5.1.4 Students' satisfaction levels and percentage with the computer facilities.

Students responses were gathered and presented in table (5.1.4) in the form of percentages. The students rating for each choice in answering any of the nine questions show some clear similarities and some major differences in their percentage. There is a small variation under the choice *Fair* as can be seen from the values of the students percentage listed in the table. Most of the scores were between 18% and 26%. The lower percentage was awarded to the facilities on '*Access to the Internet*' and the highest value was found to be the '*Availability of computing facilities*'. The percentage of students who preferred *Good* in responding to questions 7.13-7.18 show little variation as the percentage remained very similar between 21.9 and 25.4% this percentage become 29% when students chose *Good* for the '*Help with computers*' but for other facilities presented by Q.7. 19 and Q.7. 20, the percentage of students choosing *Good* dropped to between 16.7% and 18.9. However, the average number of students choosing *Good* is 22.86%, which is slightly less than that of the choice *Fair*. This total average dropped even further to 16.46% in choosing *Very good* and *Excellent* was rated the lowest percentage at 9.64%. This clearly indicates the computer facilities did not meet the requirements of students. This fact is shown from the values of the satisfaction percentages listed in table (5.1.4). The value of the satisfaction percentage was less than 50% for three of the nine computer facilities included in the questionnaires, which means that students were not satisfied with these facilities. The values shown with the

other facilities were slightly higher between 50% and 62%. This indicates that the students were at an acceptable level of satisfaction.

In considering all the percentages of the satisfactions, the total average value was measured at 52% which represents an acceptable level of satisfaction among students with computing facilities.

5.1.5 Study Materials

How wide is the range of study materials and how up-to-date was examined by two questions. These questions were;

Question 7.22 *Range of study materials?*

Question 7.23 *Up-to-date study materials?*

The above questions have multiple choice answers, as for previous questions. The students responses are shown in table 5.1.5.

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.22	9.30	26.00	32.00	29.30	5.70	5.30	62	ALOS
7.23	9.30	27.10	33.20	29.40	6.50	3.50	62	ALOS
Total Average	9.30	26.55	32.6	29.35	6.10	4.40	62	ALOS

Table 5.1.5 Students satisfaction levels and percentage with the study materials.

The table clearly shows that there was a high correlation between the answers of the students to both questions. The percentage of students who answered *Excellent* to Q7.22: *Range of study materials?* was 9.30% (an identical percentage to the answer to Q7.23). Also students' answers were very close in choosing *Good*, *Fair* and *Poor*. As a result, the satisfaction percentage of students for both questions was found to be equal at 62%. This value means the students were at an acceptable level of satisfaction as indicated from the calculation of the total average in table 5.1.5.

5.1.6 Audio-Visual and Micro-teaching Facilities

Students satisfaction with these facilities were examined by one question each. The questions were;

Question 7.24 *Audio-Visual facilities?*

Question 7.25 *Micro-Teaching facilities?*

Students responses to the above questions are shown in table 5.1.6.

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.24	6.80	20.70	27.30	24.90	13.50	6.80	56	ALOS
7.25	5	13.10	21.10	19.50	22.10	19.20	50	ALOS
Total Average	5.9	16.9	24.2	22.2	17.8	13	53	ALOS

Table 5.1.6 Students' satisfaction levels and percentage with the audio-visual and micro-teaching facilities.

The table shows that the students were happier with the Audio-Visual facilities than the Micro-Teaching facilities. The latter had a higher percentage of students (22%) who chose *Poor* and over 19% chose *not applicable*. On the other hand, more students chose *Excellent*, *Very good* and *Good* in their answer to Q7.24: '*The Audio-Visual facilities?*'. Therefore, the satisfaction percentage for this question was 56% which is 6% higher than that found for Q7.25: '*Micro-Teaching facilities?*'.

However both results indicate that students' level of satisfaction was acceptable. This is noticeable in the total average value (53%) as shown in table (5.1.6).

5.1.7 CD-ROM Service

The service was examined by one question. This question and the table listing the responses of the students are shown below;

Question 7.26 *CD-ROM service?*

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.26	3.10	8.80	17.10	24.50	29.90	16.60	43	NS

Table 5.1.7 Students' satisfaction levels and percentage with the CD-ROM service.

Students' answers indicated that, the majority of the students were not happy with the service. As about 30% of them selected *Poor* and about 17% considered the service not applicable. The lowest percentage of student were 3.1% and 8.8% who chose *Excellent* and *Very good* respectively. From calculating the satisfaction percentage, the value was found to be 43% indicating that students were not satisfied with the CD-ROM service.

5.1.8 Photocopiers

These facilities were researched by one question. The question and the students' answers are shown below;

Question 7.27 Photocopiers?

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.27	10.90	17.70	22.30	27.90	18.80	2.10	55	ALOS

Table 5.1.8 Students' satisfaction levels and percentage with the photocopiers.

The overall satisfaction level was shown to be acceptable at 55%, as detailed in the previous table.

5.1.9 Staff

The students' satisfaction with the staff in the LRCs was examined by three questions. The questions and students answers are presented below:

Question 7.28 Helpfulness of staff?

Question 7.29 Knowledge and skills of staff?

Question 7.30 Staff support to improve learning progress?

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.28	23.00	23.00	28.10	17.70	7.00	0.90	68	ALOS
7.29	17.50	27.60	30.40	17.20	3.80	3.50	68	ALOS
7.30	11.70	25.40	27.90	18.10	10.10	6.80	62	ALOS
Total Average	17.40	25.33	28.80	17.60	6.93	3.73	66	ALOS

Table 5.1.9 Students' satisfaction levels and percentage with the staff.

The answers of students in the above table clearly show that they were generally satisfied with the staff helpfulness, knowledge and skills as illustrated by the total average value of the satisfaction percentages which equals 66%. However, the students were more satisfied with the staff helpfulness and knowledge as the value of the satisfaction percentage for each of these questions “Q7.28: *Helpfulness of staff?*” and “Q7.29: *Knowledge of staff?*” was 68% which is higher than that found with ‘Q.30: *Staff supports to improve learning progress*’.

5.1.10 Signs and Instructions

The students’ level of satisfaction with signs and instruction have been examined by three questions. These questions are:

Question 7.31 *Clarity of signs and instructions?*

Question 7.32 *Usefulness of information sheets?*

Question 7.33 *Notice board?*

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.31	10.10	26.20	25.90	20.30	6.40	11.10	63	ALOS
7.32	8.50	17.00	24.10	21.70	6.60	22.00	60	ALOS
7.33	20.00	29.10	25.40	18.60	4.40	2.30	69	ALOS
Total average	12.80	24.10	25.13	20.20	5.80	1.80	64	ALOS

Table 5.1.10 Students satisfaction levels and percentage with the signs and instructions.

The results are summarised in table (5.1.10). It can be seen from the table that the notice board has a higher number of students who chosen *Excellent* and *Good* and a lower number of students who went for *poor*. This concludes that the notice board was more useful accordingly it has a higher percentage of satisfaction (69%) compared with the other two questions. The question regarding ‘*Clarity of signs and instructions?*’ has an overall percentage of 63% while “*Usefulness of information sheets?*” has the lowest value (60%). The total average of these three satisfaction percentages was 64% as shown in table (5.1.10). Thus, the overall satisfaction level of students with the signs and instructions was in the acceptable level of satisfaction.

5.1.11 New Acquisitions Information

Students were asked about how well they were being informed about new books and materials the question and the students' responses are included below:

Question 7.34 *Advertising about new books and materials?*

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.34	11.10	12.5	14.6	22.10	30.10	9.60	49	NS

Table 5.1.11 Students' satisfaction levels and percentage with advertising about new books and materials.

Table (5.1.11) shows that the students did not find this service acceptable as shown by the satisfaction percentage, which is only 49%. In comparing the student responses in selecting one of the choices, *Poor* was the choice of the highest percentage of students (30.1%), the next highest percentage was 22.1% who rated the service *Fair*. This clearly indicate that over 50% of respondents were not satisfied with '*Advertising about new books and materials?*'. Consequently, the value of the satisfaction percentage was found to be equal to 49% representing an unsatisfactory level of service.

5.1.12 Space

The availability of space in the three sections (Multi-Media, Media labs and Library) in the LRCs were investigated by the three questions shown below:

Question 7.35 *Availability of spaces in the Multi-Media laboratory?*

Question 7.36 *Availability of study places in the Media laboratory?*

Question 7.37 *Availability of study places in the Library?*

The students, answers to the above questions are listed in table (5.1.12).

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.35	4.00	9.80	19.90	25.90	28.00	12.00	45	NS
7.36	5.10	10.30	17.90	26.10	28.20	12.40	46	NS
7.37	18.50	22.00	25.20	23.10	10.00	1.20	63	ALOS

Table 5.1.12 Students' satisfaction levels and percentage with space.

It can be seen from table (5.1.12), that the students were not satisfied with the spaces in the multi-media and media laboratories as the value of the satisfaction percentage was less than 50%. This dissatisfaction can be attributed to the higher percentage of students who chose *Poor* (approx 28%) and about 26% who selected *Fair*. On the other hand, “Q7.37: *Availability of study places in the Library?*” awarded a higher value of satisfaction percentage (63%). So, students considered this an acceptable level of satisfaction. This also can be seen from the higher percentages of students, 18.50%, 22.00% and 25.20% who chosen *Excellent*, *Very good* and *Good* respectively compared with that rated for other questions.

5.1.13 Study Places

The level of students’ satisfaction and percentage with the places of study were examined by the following two questions:

Question 7.38 Facilities for private study?

Question 7.39 Facilities for group study?

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.38	11.10	14.90	22.90	21.50	22.20	7.30	54	ALOS
7.39	7.10	12.90	22.80	25.40	23.10	8.70	50	ALOS
Total Average	9.10	13.90	22.85	21.45	22.65	8.00	52	ALOS

Table 5.1.13 Students satisfaction levels and percentage with study places.

The results illustrated in table (5.1.13) revealed that, the facilities for private study had a higher number of students who were satisfied compared with facilities for group study. The satisfaction percentage for the private study facilities was found to be 54% which is 4 points higher than that for facilities for group study. Both values indicate that students’ level of satisfaction was acceptable. This also can be concluded from the total average value at 52% as shown in table (5.1.13).

5.1.14 Noise

The students' satisfaction with the noise level was researched by one question:

Question 7.40 *Noise level?*

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.40	11.2	12.8	18.4	26.3	28.4	3	50	ALOS

Table 5.1.14 Students' satisfaction levels and percentage with the noise level.

Students were asked about their satisfaction with the level of noise in the LRCs, their responses are shown in table (5.1.14). The table shows the students' satisfaction with the noise level was at the minimal level of satisfaction as the value of satisfaction percentage was found to be 50%.

5.1.15 Opening Hours

Students were asked to answer one question on the opening hours as shown below:

Question 7.41 *Opening hours?*

Their answers were tabulated in table 5.1.15.

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.41	24.2	25.9	18.2	19.3	11	1.4	67	ALOS

Table 5.1.15 Students satisfaction levels and percentage with opening hours.

It can be seen from the table that 24.2%, 25.9% and 18.2% of the students chosen the answers *Excellent*, *Very good* and *Good*. This would indicate that nearly 70% of students were happy with the opening hours. Therefore, the satisfaction percentage was found to be 67% which, according to the criterion scale, means that students found the opening hours to be acceptable.

5.1.16. Environment

The study of the LRCs environment was investigated by asking the students about the ventilation, air condition and lighting. These matters were presented to students in the following two questions:

Question 7.42 *Environment ventilation/ Air conditioning?*

Question 7.43 *Lighting?*

Students were found to be highly satisfied with the LRCs environment as indicated from their answers to both questions. The answers including the satisfaction percentages are shown in table 5.1.16.

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.42	49.20	24.00	16.30	4.00	5.60	0.90	82	HLOS
7.43	54.70	23.50	12.80	5.60	3.00	0.50	84	HLOS
Total Average	51.95	23.75	14.55	4.80	4.30	0.70	83	HLOS

Table 5.1.16 Students satisfaction levels and percentage with environment.

The table shows there was a minimal fluctuation in the students' answers to both questions. The analysis shown that about 49% and 55% of the students rated 'Q7.42: *Environment ventilation/Air conditioning?*' and "Q7.43: *Lighting?*" as *Excellent* and nearly 24% chose *Very good* in their answers to both questions. So the value of the satisfaction percentages for students to both questions was around 83%. This was found from calculating the total average of the percentages listed in table (5.1.16). As a result the students were highly satisfied with the environment at the LRCs.

5.1.17. Building

The students' satisfaction level with the LRCs building was examined by asking the students about the location, accessibility and general appearance of the building. These questions were:

Question 7.44 *Location of the Centre?*

Question 7.45 *Accessibility of the Centre?*

Question 7.46 *General appearance of the Centre?*

Questions	Number of students in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.44	51.90	25.80	17.00	4.20	1.20	1.20	85	HLOS
7.45	49.80	28.40	16.50	3.50	1.60	0.20	84	HLOS
7.46	35.00	27.00	23.00	10.50	3.70	0.70	76	HLOS
Total Average	45.56	27.06	18.83	29.16	2.16	0.70	82	HLOS

Table 5.1.17 Students satisfaction levels and percentage with LRCs building.

Students responses to the questions are listed in table (5.1.17). It can be seen from the table that, the *Excellent* was category selected by the highest percentage of students in all questions. A similar percentage of students 51.9% and 49.80% chose *Excellent* in answering “Q7.44: *Location of the centre?*” and “Q7.45: *Accessibility of the centre?*” while “Q7.46: *General appearance of the centre?*” obtained 35%. The percentage of students who chose *Very good* for the three questions were found to be very close. Their percentages ranged between 25.8% to 28.4%. The percentage selecting *Good* in answering Q7.44 and Q7.45 dropped to about 17% of students but this increased to 23% in Q7.46. The students overall satisfaction level with the LRCs building was found to be highly satisfied as indicated from the average value of the satisfaction percentage at 82%.

5.1.18 Time Spent Using the LRCs Sections

The facilities were classified into three categories; Library, Multi-media laboratory and Media laboratory. These were presented to the students in a form of questions. The questions were:

Question 8.1 *How often do you use the library?*

Question 8.2 *How often do use the Multi-Media laboratory?*

Question 8.3 *How often do you use the Media laboratory?*

Students were offered multiple-choice answers consisting of six choices. These choices are shown in table 5.1.18.

Questions	Students number in percentage					
	Every day	2-3 times a week	Once a week	2-3 times a month	Never	Other
8.1	57.20	28.90	5.30	3.20	0.20	5.10
8.2	7.10	18.70	15.10	14.70	34.30	10.23
8.3	3.10	10.20	12.10	15.00	51.30	8.30
Total Average	22.46	19.26	10.83	10.96	28.60	7.86

Table 5.1.18 Students' answers regarding their usage of LRCs sections.

The table is clearly showing that the library was visited more often by students than the laboratories. This was due to the higher percentage of students who used the library every day and 2-3 times a week. These percentages were 57% and about 29% respectively. But the percentages dropped sharply in the student's answers to the use of Multi-Media and Media laboratories. The percentage of students using the Multi-Media laboratory every day dropped to 7.10% while that of the Media laboratory decreased to 3.10%. Similarly, the

percentage of students who chose 2-3 times a week declined from about 29% for the Library to about 19% for the Multi-Media laboratory and then to 10.20% for the Media laboratory. The table also show that the percentage of students who never visited any of the facilities sharply increased from 0.2% for the Library to 34.30% for the Multi-Media laboratory and 51.30% for the Media laboratory. This proved that the popularity of using the Library is much greater than the Multi-Media and the Media laboratories.

5.1.19 Usage of LRCs Facilities

The facilities were classified into 18 types displayed in table 5.1.19. The students' percentages for using the various facilities in their LRCs are shown in the following table 5.1.19.

Questions	Students in percentage (%)
Borrowing books (Q.9.1)	97.9
Copying (Q.9.11)	86.4
CD-ROMs (Q.9.7)	80.5
Scanner (Q.9.10)	76.0
Reading in the Centre (Q.9.2)	74.5
Doing researches (Q.9.4)	66.7
Tape recorder cassettes (Q.9.9)	60.2
Reading News papers/Magazines (Q.9.3)	48.0
Internet (Q.9.12)	47.9
Socialising (Q.9.17)	47.4
E-mail (Q.9.13)	40.7
Overhead Projector (OHP) (Q.9.15)	26.7
Personal uses (Q.9.14)	26.0
Learning packages (Q.9.6)	22.8
Typing Essays with computer (Q.9.5)	13.1
Printing (Q.9.8)	11.3
Others (Q.9.18)	6.5
Satellite (Q.9.16)	1.4

Table 5.1.19 Purpose of using the LRCs facilities.

Students were asked about facilities or purposes for which they use the LRCs, their responses are shown in table (5.1.19), students' responses were arranged from the facility used most to the least used facility.

Borrowing books represented the main purpose for students (97.9%) using the LRCs as shown in table (5.1.19). Also copying (86.4%) and CD-ROM (80.5%) services were frequently used by students. 76% of responses indicated that the scanner service was one of the facilities which students come to use in the Centres. Students' responses show that 70.6% of students come to the LRCs for the purpose of reading and doing research. Reading magazines and newspapers was also referred to by 48% of students as a purpose of coming to the LRCs. Tape recorder cassettes were indicated by 60.2% of responses as a facility they come to use in the Centres. An average of 44.3% of respondents indicated Internet and E-mail services as factors which make them use the LRCs. Socialising was shown to be an important aspect of the LRC being indicated by 47.4% of respondents as a reason for using the Centre. Also personal use was chosen by 26% of respondents. Overhead Projector (OHP) was one of the aids students can use in their studying activities, this was indicated as important by 26.7% of respondents using the LRC.

Less than quarter of respondents (22.8%) considered learning packages as a purpose for using the LRCs. Typing essays with the computer and printing service was presented as a purpose by an average of 12.2% of respondents. The satellite facility was the purpose which was least chosen by students. Only 1.4% of respondents rated this as a purpose for which they would use the LRC. 6.5% of respondents (28 students) indicated that they use the LRCs for purposes or facilities other than those included in the questionnaire and illustrated in table (5.1.19). 5 of those 28 students said they come to the LRCs to rest or to have a break.

It can be seen from the above, that there is a wide variation in the use of facilities in the LRCs. While traditional uses such as borrowing books are used by a very high percentage of students others such as use of satellite and printing are less well used.

5.1.20 Assessment of Training Courses

Students' responses to the available courses were grouped in three categories (Appendix two, Q.10) *Good*, *Average* and *Not useful*. The other choice *I didn't need* and *Not available* were omitted because only the valid percentages of responses were counted.

The questionnaires measured students' consideration of the usefulness of courses provided at the LRCs in a number of aspects by asking them to rate their views on a range between one and three, where three is *Good* and one is *Not useful*.

Students rating and satisfaction level with the training courses at the LRCs is shown in table (5.1.20). The training courses which were mentioned in the study are listed below:

Question 10.1 *Induction courses on the services in the Centre in general?*

Question 10.2 *Induction courses on how to use the library?*

Question 10.3 *Training courses on how to use the Multi-Media laboratory?*

Question 10.4 *Training courses on how to use the Media laboratory?*

Question 10.5 *Training courses on computer word processing?*

Question 10.6 *Training courses on learning packages?*

Question 10.7 *Training courses on CD-ROMs?*

Question 10.8 *Training courses on the Internet?*

Question 10.9 *Training courses on E-mail?*

Question 10.10 *Video (learning programmes)?*

Question 10.11 *Others please specify*

Questions	Students number in percentage					Satisfaction Percentage	Satisfaction level
	Good	Average	Not useful	I don't need	Not available		
10.1	32.50	30.60	4.50	10.60	21.60	80	HLOS
10.2	30.50	30.30	6.00	12.9	20.00	79	HLOS
10.3	17.30	30.20	6.30	12.20	34.10	73	HLOS
10.4	22.00	34.10	6.30	11.80	25.80	75	HLOS
10.5	40.30	29.30	3.60	5.00	21.80	83	HLOS
10.6	11.90	16.50	6.60	18.00	47.10	72	HLOS
10.7	14.30	18.40	5.30	11.40	50.60	75	HLOS
10.8	29.20	29.40	5.40	6.40	29.60	79	HLOS
10.9	20.80	19.30	4.80	12.90	42.20	79	HLOS

10.10	17.70	26.60	5.70	16.50	33.30	75	HLOS
Total Average	23.62	26.47	.509	11.77	32.61	77	HLOS

Table 5.1.20 Students rating their satisfaction level with the training courses at the LRCs.

The study found that students were at a high level of satisfaction with all training courses as indicated from the values of the satisfaction percentages listed in table (5.1.20). The percentages ranged between 72% to 83%. The highest percent was rated to ‘*Q10.5: Training courses on computer word processing?*’. This course obtained the highest percentage of students about 70% who chosen *Good* and *Average*, and the lowest percentage was 3.6% of students who selected *Not useful*. The next course in the highest category was “*Q10.1: Induction course on the services in the centre in general*”. Over 63% of students chose *Good* and *Average*. Also this course has the next lowest percentage 4.5% of students who chosen *Not useful*. Other training courses mentioned by Q10.2, Q10.8 and Q10.9 shown in table (5.1.20) were rewarded with a satisfaction percentage equal to 79%. This percentage placed the courses in third place in the level of satisfaction. Next to these courses were three courses represented by Q10.4, Q10.7 and Q10.10 with a satisfaction percentage equal to 75%. The courses on the use of the Multi-Media laboratory Q10.3, and the learning packages (Q10.6) were found to be the lowest level of satisfaction with values range between 72% and 73%. The total average of students’ satisfaction with the courses provided in the LRCs was 77% which is considered a high level of satisfaction.

5.1.21 The Effectiveness of the Learning Methods

The questions used to investigate the effectiveness of the learning methods are detailed below:

Question 11.1 *Class and group discussion in classroom?*

Question 11.2 *Working by yourself in the Centre?*

Question 11.3 *Working by yourself at home?*

Question 11.4 *Listening to lectures?*

Question 11.5 *Personal reading of text and study materials?*

Question 11.6 *Using CD-ROMs?*

Question 11.7 *Using other computer based learning packages?*

Students were asked to answer the above questions by selecting one of four choices. These choices and the students' percentages are shown in table (5.1.21). The students' responses were measured by calculating the percentages of effective learning. This was measured by giving a mark for each choice. The marking was 1, 2, and 3, indicating *Not at all effective*, *Effective* and *Very effective* respectively.

Questions	Students number in percentage				Percentage of effective learning
	Very effective	Effective	Not at all effective	Not applicable	
11.1	55.20	34.10	5.00	5.70	84
11.2	38.50	48.60	7.70	5.20	77
11.3	47.00	39.50	9.90	3.50	79
11.4	51.50	41.60	3.80	3.10	83
11.5	43.30	42.50	6.50	7.80	80
11.6	18.10	39.20	8.20	34.20	72
11.7	70.80	21.50	6.20	1.50	89

Table 5.1.21 Effectiveness of the learning methods.

The responses are listed in table (5.1.21). The table clearly shows that the percentage of students who chose *Very effective* ranges between 70.8% for 'Q11.7: *Using other computer based learning packages?*' and 18.10% for 'Q11.6: *Using CD-ROM's?*'. As a result, the percentage value of the effective learning also dropped from 89% to 72%. This clearly indicates that the method of *using other computer based learning packages* was the most popular one among students. The next popular method was 'Q11.1: *Class and group discussion in classroom?*' for which the percentage value of effective learning is equal to 84%. The popularity varies between the other questions except that 'Q11.5: *Personal reading of text and study materials?*' and 'Q11.3: *Working by yourself at home?*' were found to have similar popularity as the percentage values in both methods is between 79-80% which indicates no significant difference between them.

5.1.22 Variation of Usage Level of the LRC

This case study was meant to explore how effectively students were using the LRCs. As a way of measuring their response, criteria consisting of four categories were used. These categories are shown in table 5.1.22.

Question. No. 12	Students number in percentage			
	Increasing	Decreasing	No Change	Other
Students' usage of the LRCs	42.90	15.30	36.40	5.10

Table 5.1.22 Variation of usage level of the LRCs.

Students were asked about their usage of the LRCs to explore any possible changes in their level of usage, (Q.12 Appendix two) their responses are shown in table (5.1.22).

The biggest group of respondents (42.9%) declared that their usage of the LRCs is increasing. On the contrary only 15.3% of respondents admitted that their usage of the LRCs is decreasing. Whereas 36.4% of students stated that there was no change in their level of usage of the LRCs. In addition 5.1% of respondents (22 students) chose other. 11 students out of those 22 described choosing other because their use varied according to their needs. They mentioned that their studying needs affect their usage of the LRCs.

5.1.23 Students' General Satisfaction With the LRC

Students were asked about their general satisfaction with the LRCs. They were presented with five categories for the question Q.13 (Appendix two). The students response are summarised in table 5.1.23.

Question	Number of students in percentage					Criterion	
	Very satisfied	Satisfied	Fair	Poor	Very dissatisfied	Satisfaction Percentage	Satisfaction Level
Q.13	7.00	43.40	31.90	10.00	7.50	66	ALOS

Table 5.1.23 Students' general satisfaction with the LRC.

The table shows that over 43% of the students were generally satisfied with the LRCs. About 32% percent of students selected *Fair*, 10% chose *Poor* and 7.5% were *very dissatisfied*. The lowest percentage of students' responses (7%) was found rating their satisfaction as *Very satisfied*.

The satisfaction percentage was calculated in the same way as that shown in section (4.12.2.1). The value was found to be 66% indicating that the general level of satisfaction of students was at an acceptable level.

5.1.24 Students Written Answers

The students were also offered an opportunity to provide qualitative data regarding the effectiveness of the LRCs. Open questions were included at the end of the questionnaires to allow them to convey their own opinions and suggestions. The students' answers extracted a range of opinions and suggestions which demonstrated some consistency. As noted at the beginning of this chapter 436 students responded to the questionnaires. Many students did not respond to all of the qualitative questions. Responses which were noted by at least 10% of respondents were analysed, those which did not reach this threshold were not analysed. The open questions and responses derived were as follows: —

5.1.24.1 *What do you like most about the Learning Resource Centre?*

The students' responses to what they liked most about the LRC included a variety of different opinions, however those which satisfied the 10% threshold were.

Computer Service

Students considered computer services to be the most important element in the LRCs. Computer services were valued by 177 (40 %) of the respondents to the questionnaires. Students attributed their satisfaction with computer service to the following: Availability of the computer service for research was suggested as valuable for students' study especially since the labs are open in the evening as well as during the day. Provision of a free Internet facility in the multi-media lab has been indicated as important by 54 students of those 177 students who suggested the computer service. Students were impressed because of the huge amount of information they can get from the Internet. Moreover, availability of printers also was considered a valuable facility for them.

LRCs Staff

The LRCs' staff were stated to be the second most popular aspect of the LRC with students. This was highlighted by 88 (20 %) of the students responding to the questionnaire. The students appreciated the collaboration, response, and knowledge of the LRC staff. Some students in mixed Colleges went further expressing their satisfaction with the LRC staff because of their consideration in dealing with students from both genders.

Collection

The collections at the LRCs were suggested to be the third most popular element. 80 (18%) students responding to the questionnaire were satisfied with the collection at the LRCs. Availability of resources such as references and the variety of textbooks in all subjects attracted the respondents' satisfaction. Some of those students (7 students) also were satisfied with the availability of daily newspapers and magazines.

Organisation

Organisation was the fourth element that students most liked in the LRCs. That was stated by 61 (14%) of respondents to the questionnaire. They attributed that to the organisation and display of books, and the instructions, which make it easy for them to meet their needs. In addition some other students also were happy with the arrangements for accessing the LRC.

Borrowing system

The borrowing system was the final element that achieved 10 % of respondents' agreement. 44 students (10%) of respondents expressed their satisfaction with the borrowing system in the LRCs. This was due to the students' satisfaction with the flexibility in the borrowing system and allowing them to borrow some textbooks for the whole semester. Moreover some respondents were impressed by the use of the computer in organising the circulation of books.

5.1.24.2 What do you like least about the Learning Resource Centre?

The students' responses to what they liked least about the LRC also varied and pointed out different thoughts. The students' answers are shown below.

Computer Service

Although 177 (40%) students specified computer service to be their most popular element in the LRCs it was described as the least popular aspect by 188 (43%) respondents. Their most common reasons are the number of computers which do not match the number of students, which as a result limits the users opportunities to use computers. One of the

students answers to the question (Q. 15. *What do you like least about the Learning Resource Centre?*) was:

“The long time waiting to get a chance to use a computer because of the large number of users”

Moreover the number of printers in computer labs are very limited, particularly coloured printers, and the number of computers linked to printers are limited too. Students also indicate inadequate maintenance of the equipment in the computer labs, because sometimes it takes so long to repair printers and headphones. Students also complained that classes being run in the computer labs limit their usage of labs for self-learning. Some students thought that the programmes installed on computers are not adequate. Some respondents also considered the computers to be old and slow. Accordingly 77 (41%) students of those 188 who were dissatisfied with the computer services considered the Internet service to be unsatisfactory, because of its slow speed.

Collection

Despite the collections being the third most popular element according to the students' responses it is considered the second least popular service for 160 (37%) respondents. Students stated that the number of books is insufficient especially in specialised subjects such as computing, physics and books about Oman. References also are considered to be limited, and old. Some of the students' comments were:

“We do not find our requirements to improve our knowledge about our subjects”

“We do not find the books academics recommend for us”

Moreover some students stated that there are no materials for basic education which they teach in schools. [Some students are specialising to teach in what are called basic education schools, which are considered modern compared with the ordinary schools]. Some students in Sur College also mentioned that books usually are dusty. Moreover 9 of those 160 students indicated the shortage of periodicals newspapers and magazines in the LRCs.

Noise Level

65 (15%) of respondents considered the noise level to be one of the features they are least satisfied with in the LRCs. They attributed their opinions to the following few reasons;

some students breaking the rules of the LRC using the LRC as a place for meeting, using study groups' activities for talking which causes noise in the Centre. The following comment by one of the students illustrates some students' thoughtlessness:

“Some of the students who come to the LRC think they are in a local market”

Borrowing System

The borrowing service was stated by 60 (14%) students responding to the questionnaire as one of the elements they liked least. Students' answers included several reasons, which cause their inconvenience and dissatisfaction with the borrowing system. The short period of borrowing and the limited number of items students can borrow at a time represented the main factors for their dissatisfaction. Moreover when copies are limited students are required to borrow in groups. One of the students commented saying:

“We have to wait until we can form a group of five students to borrow some books and it is difficult to work with some students because of the distance between us”

Some respondents also included some other reasons for their inconvenience such as, mistakes from the staff in entering borrowers' details, or staff not treating students fairly and equally. The restrictions on borrowing CD-ROMs and some references are also considered to cause difficulties in the borrowing services.

LRCs Staff

LRCs' staff are described by 54 (12%) students as the least popular elements. Those students expressed their need to see more attention, encouragement, and support from the staff. Some of the respondents attributed the reason for their answers to the shortage of staff in the LRCs compared with the number of students. Some respondents also described the LRCs staff to lack knowledge as well as show impatience especially when they are asked for support quite often. Moreover some students think that the staff do not facilitate lending them materials, one of the student's comments was:

“Some of the staff keep the equipment and services as if they own them and they do not offer them to users in a suitable way.”

Some respondents from the mixed gender Colleges believed that LRCs staff are not dealing with students equally in lending them materials and it is more likely that they show

preference to female students compared with male students. In addition some female students expressed their need of female staff in the LRCs to serve them instead of having only male members of staff.

A female student in Salalah College said:

“We want to see female members in the LRC to feel comfortable”

Another Female student from Sur College Said:

“We need female staff to serve female students”

Organisation of Books

Organisation of books was one of the features which did not reach the students satisfaction. Respondents' dissatisfaction with the organisation of books in particular was reported by 51 (11%) students. They mentioned that users return books directly to shelves therefore it is common to find books on the wrong shelves amongst other subjects. Respondents referred this disorganisation as due to the incomplete classification and cataloguing of materials.

5.1.24.3 *What facilities would you like to see in the Learning Resource Centre?*

The students emphasised the importance of improving the following three facilities in the LRCs.

Computer Service

The respondents expressed the importance of improving various features related to the computer services in the LRCs. These suggestions have been highlighted by 185 (42%) students from those who answered the questionnaires. Students mentioned that they need more computer labs to match the number of students in the Colleges. They also think that holding teaching classes by academics in the multi-media lab (self-access lab) constrains students' usage of the computer service. There were many students who mentioned that when they do not have classes and need to use the multi-media lab it is quite often too busy with teaching classes. Some students reported the lack of availability of instructions on using the E-mail and Internet facility. Students also included the limited number of printers in the computer labs as well as their connection to only a few computers. Therefore they are keen to see an increase in the number of printers and their connection to computers.

Students added that they want to see a better provision of paper for printing. In addition respondents considered the computers to be very slow.

Collection

142 (32%) respondents suggested the need for improvement of the collections at the LRCs. Those students stated the need for developing references and specialists books particularly, computing books, scientific books and references about Oman such as history and geography. Students also recommended the acquisition of the most current edition of references and textbooks for research purposes. In addition some respondents showed an interest in an increased provision of newspapers, magazines and periodicals.

Space

Extending the size of the LRCs and provision of study places were suggested by 46 (11%) students. They support their suggestions with the need for more space to suit the number of users especially since there are teaching classes being organised in the LRCs labs. Therefore students recognised the need for more labs (multi-media lab and media lab). It was suggested that the recommended labs should be divided to labs for teaching and labs for self-learning. 20 of those (46) students illustrated the need for places for study groups because of the shortage of spaces in the LRCs.

5.1.24.4 *What changes (if any) would you like made in the Learning Resource Centre?*

The students suggested some changes to enhance the LRCs facilities. The students' most common suggestions are demonstrated in the following.

Computer Service

Students re-emphasised the necessity of developing computer services as already has been pointed out in their answers to Q.61. This suggestion was included by 55 (13%) respondents. In this part again students suggested the need to upgrade the current computers as well as increasing the number of computer labs. Moreover female students from mixed Colleges suggested the designation of labs for male students and labs for female students. Respondents have also suggested increasing the number of printers as well as providing colour printers. Some respondents illustrated that computers and printers

take a long time to be repaired, which as a result limits the students' usage because of the large number of users of computer labs.

Space

Extension of the size of the LRC was suggested as necessary by 48 students (11%) of respondents. Students hoped to see more space added into the LRCs through increasing the number of labs (multi-media lab and media lab). Students justified their suggestions basically by the teaching classes being organised in the multi-media lab which restrict use of the only self-access lab for users. They also clarified that the media lab is not big enough for teaching and self-working. Hence they suggested another media lab for teaching and keeping the current media lab for training and production of materials. Students recommended increasing the number of carrels and removing reading tables farther from the circulation desk in order to create more silence for readers as well as to facilitate the movement of users.

5.1.24.5 Please add any comments you have about the Learning Resource Centre that haven't been included in the questionnaires.

Few respondents added comments or suggestions to what they have already included in their answers to the previous open questions. Therefore none of their answers reached 10% of the respondents to the questionnaires. The highest percentage with consistency in their comments and suggestions to this question was suggested only by 9 (2%) of respondents which was for an increasing in the number of LRC staff. Students also included some other comments and suggestions which have already been covered in their previous answers such as improving the borrowing services and collection. Because of the low numbers none of the students' comments or suggestions to this question were included.

CHAPTER FIVE

Part Two

5.2 Results From Questionnaire Responses (Academics’).

The academics’ questionnaire planned to assess their level of satisfaction with the services of the LRCs. As already explained in chapter four that in the analysis of academics’ answers the valid percentage was counted. From the total academics responses (140 academics). Questions were grouped with responses to related aspects. The questionnaires are shown in Appendix three.

5.2.1 Collection

The study of the collection was examined by four questions. These questions were believed to be most suitable to test the academic satisfaction with the collection in the library at the LRCs. The questions are listed below.

Question 7.1: *The availability of subject specialist books?*

Question 7.2: *Usefulness of reference and reserved books?*

Question 7.3: *Stock of books is up-to-date?*

Question 7.4: *Availability of journals on the shelves?*

The results of academics answers are summarised in table 5.2.1, in which the number of academics are shown as a percentage.

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.1	11.40	25.00	30.70	23.60	9.30	0	61	ALOS
7.2	7.60	32.60	28.00	22.00	7.60	2.3	62	ALOS
7.3	5.10	23.20	30.40	32.60	8.70	0	57	ALOS
7.4	1.40	5.80	12.30	34.10	32.60	13.8	39	NS
Total Average	6.30	21.65	25.35	22.58	14.55	4.02	55	ALOS

Table 5.2.1 Academics’ satisfaction levels and percentage with the library collection.

The table shows that the majority of the academics staff did give a positive answer to the question (7.1: *The availability of subject specialist books?*). As the results indicated the higher percentage of the academics, which is about 31%, selected *Good* while 25% chose *Very good* and 11.4% preferred *Excellent*. Therefore, the availability of subject specialist books was found to be at an acceptable level of satisfaction. This was found

from the satisfactory percentage for this question, which is 61%, shown in the table (5.2.1). Similar observations can be made for the question (7.2) but the satisfaction percentage is about 1% higher than that observed for question (7.1). Moreover academics responses to question (7.3) *Stock of books* pointed to 57% expressing an acceptable level of satisfaction. Different results were found for the question (7.4) where academic found to be dissatisfied with “*Availability of journals on the shelves*”. This dissatisfaction is clearly indicated by the value of satisfaction percentage which is 39% as listed in table (5.2.1). Academics responses to this question (7.4) marked *Fair* and *Poor* by over 34% and 32% respectively.

The answers to these four questions illustrate that academics availability of subject specialist books, references and stock of books were at an acceptable level of satisfaction. While journals were at not satisfactory for academics. However the academics total average satisfaction percentage with collection was calculated 55% referring to an acceptable level.

5.2.2 Borrowing

The academics satisfaction with the borrowing services in the LRCs was examined by the following three questions:

Question 7.5 *Number of items you can borrow?*

Question 7.6 *Lending period sufficiency?*

Question 7.7 *The procedure for borrowing materials?*

The answers to the above questions are presented in table 5.2.2.

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.5	45.00	29.30	15.70	7.90	0.70	1.40	82	HLOS
7.6	57.10	20.00	15.00	5.70	0.70	1.40	86	HLOS
7.7	52.90	23.90	18.10	3.60	0.00	1.40	86	HLOS
Total Average	51.66	24.40	16.26	5.73	0.46	1.40	85	HLOS

Table 5.2.2 Academics' satisfaction levels and percentage with borrowing.

It is clear from the table (5.2.2) that the higher percentage of the academics answers ranged between 45% to 57% at the *Excellent* category in each question. This percentage reduced to 20% and 29% selecting *Very good* and there was a similar drop in

academics choosing the *Good* category. The questions regarding lending period sufficiency and the procedure for borrowing materials were found to have similar values of satisfaction (86%) which is slightly higher than that found with Q7.5:” *Number of items you can borrow?*” which is equal to 82%. However, the overall outcome of studying the academics satisfaction with borrowing was estimated by calculating the overall average. This indicated a high level of satisfaction, as the value of the satisfaction percentage was 85%.

5.2.3 Opening Hours and Timetabling and Booking

Academics were asked about their satisfaction with the opening hours and timetabling and booking in the LRCs, the questions and the academics responses are shown in the following.

Question 7.8 *Opening hours?*

Question 7.9 *Timetabling and booking?*

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.8	48.60	36.40	12.10	2.90	0.00	0.00	86	HLOS
7.9	18.40	27.90	23.50	11.00	5.10	14.00	70	HLOS
Total Average	33.50	32.15	17.80	6.95	2.55	7.00	78	HLOS

Table 5.2.3 Academics’ satisfaction levels and percentage with opening hours and timetabling and booking.

It is obvious from the table that, the academics were more satisfied with the opening hours than the timetabling and booking. This is indicated by the higher percentage of academics who selected *Excellent* and *Very good*. As a result, the calculated values of satisfaction percentage for Q.7.8:”*Opening hours?*” was found to be equal to 86% compared with 70% for Q.7.9: “*Timetabling and booking?*”. Some academics do not teach in the LRCs which makes them never use booking classes system therefore 14% of them marked *Not applicable*. According to the definition of satisfaction level, both questions obtained a high level of satisfaction.

5.2.4 Organisation

Academics’ satisfaction levels and percentage with the organisation were examined by the following two questions:

Question 7.10 *Catalogue ease of use?*

Question 7.11 *Organisation and display of materials?*

The academics responses are listed in table 5.2.4.

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.10	5.20	20.00	19.30	17.80	16.30	21.50	55	ALOS
7.11	12.20	32.40	27.30	18.70	7.90	1.40	65	ALOS
Total Average	8.70	26.20	23.30	18.25	12.10	11.45	60	ALOS

Table 5.2.4 Academics' satisfaction levels and percentage with the organisation.

The academics were clearly less satisfied with Q.7.10: “*Catalogue ease of use?*” as it had a much lower percentage of academics who chose *Excellent*, *Very good* and *Good* while for Q.7.11: “*Organisation and display of materials?*” a higher percentage of academics selected *Excellent*, *Very good* and *Good*. Therefore, the latter obtained better values of satisfaction percentage equal to 65% compared with 55% for the Q.7.10. In general the organisation obtained an overall satisfaction percentage equal to 60% indicating an acceptable level of satisfaction.

5.2.5 Computer Facilities

The computer facilities were examined depending upon the way in which these facilities were provided to the academic staff. Such facilities focused on the availability of computers, up to date technology, support, access to the World Wide Web and printing. Six questions explored these computer facilities as listed below:

Question 7.12 *Availability of computing facilities?*

Question 7.13 *Up-to-date computing facilities?*

Question 7.14 *Help with computers?*

Question 7.15 *Access to the Internet?*

Question 7.16 *Internet instruction for new users?*

Question 7.17 *Computer printing?*

The answers to the above questions are summarised in table 5.2.5.

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.12	23.70	32.40	18.00	13.70	7.90	4.30	71	HLOS
7.13	18.70	35.20	18.00	16.50	7.20	4.30	69	ALOS
7.14	23.00	28.10	24.50	13.70	5.00	5.80	71	HLOS
7.15	18.70	18.00	23.00	19.40	15.10	5.80	61	ALOS
7.16	10.10	26.10	24.60	11.60	13.80	13.80	62	ALOS
7.17	11.40	25.70	27.90	13.60	12.10	9.30	62	ALOS
Total Average	17.60	27.58	22.66	14.75	10.18	7.21	66	ALOS

Table 5.2.5 Academics' satisfaction levels and percentage with computer facilities.

As can be seen from the table, the availability of computers and support (*in Q.7.12 and Q.7.14*) obtained a satisfaction percentage of 71% which is high compared with the other facilities. In these two facilities 23% of the academics rated them as *Excellent*. This percentage dropped to about 19% for the update and Internet access presented by Q.7.13 and Q.7.15 and even lower to 10% for Internet instruction shown by Q.7.16. There was less decline in academics percentage in choosing *Very good*. The only facility which had a large drop in satisfaction percentage was that of the access to the Internet. Therefore, the total average of the academics percentage was found to be 27.58% for *Very good* compared with that of *Excellent* which is equal to 17.6%. The total average of academics who selected *Good* was about 23% which is close to the average of the *Very good* category. The satisfaction percentage listed in table (5.2.5) indicates that the availability of computer facilities and help with computer gained the highest level of satisfaction. The rest of the facilities had a value less than 70% which indicates that the academics were at an acceptable level of satisfaction. In general the computer facilities were found to be at an acceptable level of satisfaction as the total average value of the satisfaction percentage was rated at 66%.

5.2.6 Study materials

The study materials within the LRCs were examined by asking the academics the following three questions.

Question 7.18 *Range of study materials?*

Question 7.19 *Acquisition of requested materials?*

Question 7.20 *Up-to-date study materials?*

Academics responses to these three questions are listed below in table 5.2.6.

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.18	13.70	33.60	23.70	15.30	7.60	6.10	67	ALOS
7.19	9.60	27.20	23.50	16.20	9.60	14.00	63	ALOS
7.20	10.30	36.80	23.50	14.70	8.10	6.60	66	ALOS
Total Average	11.20	32.53	23.56	15.40	8.43	8.90	65	ALOS

Table 5.2.6 Academics' satisfaction levels and percentage with the study materials.

The table shows that the *Excellent* category in (Q.7.18) gained the highest percentage 13.7% of academics marked *Excellent as their response*. Also the *Poor* category in (Q.7.18) had the lowest percentage 7.6% of academics opted for *Poor*. That was slightly higher than the satisfaction with the other two questions (Q7.19. and Q7.20) where the academics satisfaction lays between 63% and 66%. The table demonstrates that the average percentage of the academics who chose *Good* was above 23%, which was similar for each question. This percentage is the second highest after that for the *Very good* category (about 33%). The academics total average of satisfaction with the study materials within the LRCs was 65% demonstrating an acceptable level of satisfaction.

5.2.7 Audio-visual and Micro-teaching Facilities

Academics were asked about their satisfaction with the audio-visual and microteaching facilities in the LRCs. They were presented with the two questions shown below;

Question 7.21 *Audio-visual facilities?*

Question 7.22 *Micro-teaching facilities?*

Academics responses in answering the above questions are listed in table 5.2.7.

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.21	12.30	34.80	32.60	9.40	7.20	3.60	67	ALOS
7.22	9.00	18.80	27.10	15.00	8.30	21.80	61	ALOS
Total Average	10.65	26.8	29.85	12.20	7.75	12.70	64	ALOS

Table 5.2.7 Academics' satisfaction levels and percentage with Audio-visual and Micro-teaching facilities.

The table shows audio-visual facilities satisfied the academics more than micro-teaching facilities. The percentages of academics who selected *Excellent*, *Very good* and *Good* for audio-visual were much higher than those shown for the micro-teaching facilities. This can be seen from the value of the satisfaction percentage. The value for audio-visual facilities was 67% compared with that found for the micro-teaching facilities which was equal to 61%. The high percentage (21.8%) of respondents who marked *Not Applicable* to micro-teaching facilities is noticeable. That is because there are only some academics who are in charge of the practicum teaching activities. The overall conclusion was that the satisfaction of academics with these facilities was found to be at an acceptable level.

5.2.8 CD-ROM service

Academics were asked about their satisfaction with the CD-ROM service by presenting them with one question. The question and the table listing the responses of the academics are shown below:

Question 7.23 *CD-ROM service?*

Question	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.23	6.60	20.40	27.00	21.90	6.60	17.50	60	ALOS

Table 5.2.8 Academics' satisfaction levels and percentage with CD-ROM service.

The table illustrates that about 70% of respondents' answers range between *Very good* and *Fair*. While the *Excellent* and *Poor* categories each had only 6.6% of the responses. Overall the satisfaction percentage was calculated to be 60% which suggests that academics were at an acceptable level of satisfaction.

5.2.9 Staff

The Academics satisfaction with the LRC staff was investigated by four questions. The questions and academics responses are presented below:

Question 7.24 *Helpfulness of staff?*

Question 7.25 *Knowledge and skills of staff?*

Question 7.26 *Level of support from the technicians in teaching class with academics?*

Question 7.27 *The Centre staff liaison with academics?*

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.24	44.90	34.10	18.10	2.20	0.00	0.70	85	HLOS
7.25	24.30	41.40	27.10	5.70	0.00	1.40	77	HLOS
7.26	19.40	33.10	26.60	7.90	1.40	11.50	74	HLOS
7.27	27.30	30.20	23.70	11.50	2.20	5.00	75	HLOS
Total Average	28.97	34.70	23.87	6.82	0.90	4.65	78	HLOS

Table 5.2.9 Academics' satisfaction levels and percentage with the staff.

Table (5.2.9) demonstrates the academics answers to the above questions. It can be seen in the table that *Q.7.24. "Helpfulness of staff?"* was rewarded with the highest percentage of academics who selected *Excellent*. This percentage was nearly 45% compared with that of the other questions which ranged between 19% and 27%. The helpfulness of staff was also acknowledged with the second highest percentage of academics who opted for *Very good* (34%) after the "knowledge and skill of staff", which was rated *Very Good* by 41% of respondents. Therefore, the "helpfulness of staff" highly satisfied the academics as indicated by the high value of the satisfaction percentage which equalled 85%. The "knowledge and skill of staff" was second in satisfying the academics with a satisfaction percentage equal to 77%. The other two questions (*Q.7.26* and *Q.7.27*) show a similar value of satisfaction but with a lower percentage. The total average of the results in table (5.2.9) illustrates that nearly 64% of the total average of the academics responses went to *Excellent* and *very good*. While the total average of *Poor* category was less than 1% of the respondents. The average value of the academics satisfaction percentages was found to be equal to 78%. This value indicates that in general the academics were highly satisfied with the LRC staff.

5.2.10 Signs and Instructions

Signs and instructions were considered as guidance to the users of the LRCs. The academics level of satisfaction with signs and instructions have been examined by the two questions shown below:

Question 7.28 *Clarity of signs and instructions?*

Question 7.29 *Notice board?*

Academics responses to the previous questions are illustrated in table 5.2.10.

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.28	17.30	30.90	30.20	11.50	4.30	5.80	70	HLOS
7.29	15.90	31.20	27.50	15.20	5.10	5.10	68	ALOS
Total Average	16.60	31.05	28.85	13.35	4.70	5.45	69	ALOS

Table 5.2.10 Academics' satisfaction levels and percentage with signs and instructions.

The table shows that the academics seem to have similar opinions in responding to both questions. This is clearly indicated from the percentages of academics who selected the *Excellent*, *Very good*, *Good* and *Poor* categories in answering both questions. Thus the values of satisfaction percentages for both questions related to signs and instructions and notice board were between 68% and 70%. As a result the total average of academics satisfaction with these subjects was 69% which is considered to be an acceptable level of satisfaction.

5.2.11 New Acquisitions Information

One question was used to explore how the academics were informed about new materials such as books. The question and academics responses are shown below.

Question 7.30 *Getting informed about new books and new materials?*

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.30	10.10	32.40	18.00	23.70	11.50	4.30	61	ALOS

Table 5.2.11 Academics' satisfaction levels and percentage with the advertisements.

Table 5.2.11 displays that the academics overall satisfaction level with the advertisements was acceptable as the satisfaction percentage was found to be equal to 61%.

5.2.12 Space

Academics were asked about their satisfaction with the availability of working and studying areas in the LRCs. The question and the answers are shown below in table 5.2.12.

Question 7.31 *Availability of spaces in the Centre?*

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.31	13.70	22.30	25.20	20.10	14.40	4.30	60	ALOS

Table 5.2.12 Academics' satisfaction levels and percentage with the space.

The percentage of academics who selected *Excellent* was about 14% which was much less than that awarded to *Very good* and *Good*. In general the academics were at an acceptable level of satisfaction as the value of satisfaction percentage was calculated to be 60%.

5.2.13 Study places

Academics satisfaction and percentage with the stud places in the LRCs were explored by the following two questions:

Question 7.32 *Facilities for private study?*

Question 7.33 *Facilities for group study?*

Academics responses are illustrated in table 5.2.13.

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.32	12.40	20.40	32.80	16.10	11.70	6.60	61	ALOS
7.33	9.40	21.70	30.40	21.00	12.30	5.10	59	ALOS
Total Average	10.90	21.05	31.60	18.55	12.00	5.85	60	ALOS

Table 5.2.13 Academics' satisfaction levels and percentage with the study places.

It can be seen from the table that both types of study places were not provided to a high level of satisfaction. This was indicated from the values of the satisfaction percentages listed in the table. Both values were around 60%, which means that the academics were at an acceptable level of satisfaction with the study places.

5.2.14 Environment

The academics were also asked about their satisfactions with the noise level, the ventilation system/air-conditioning and lightening. These subjects were explored in the three questions shown below:

Question 7.34 *Noise level?*

Question 7.35 *Ventilation/air conditioning?*

Question 7.36 *Lighting?*

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.34	5.30	18.90	16.00	32.60	24.20	3.00	49	NS
7.35	58.30	25.20	12.90	1.40	2.20	0.00	87	HLOS
7.36	61.40	25.00	10.00	2.10	0.70	0.70	89	HLOS

Table 5.2.14 Academics' satisfaction levels and percentage with the environment.

The academics' responses shown in table (5.2.14) clearly indicate that the noise level was the worst element in the environment study. The satisfaction percentage with the noise level was found to be 49%. This suggests that the academics were not satisfied with the noise level. This percentage was almost doubled with “ventilation/air conditioning” and “lighting” given a satisfaction percentage equal to 87% with the “ventilation and air conditioning” and 89% with “lightening”. In conclusion academics were not satisfied with noise level at the LRCs, but highly satisfied with “ventilation/air conditioning” and “lighting”.

5.2.15 Building

The Academics' satisfaction level with the LRC buildings was examined by asking the academics about their satisfaction with the location, accessibility and general appearance of the building. The questions were presented as follows:

Question 7.37 *Location of the Centre?*

Question 7.38 *accessibility of the Centre?*

Question 7.39 *general appearance of the Centre?*

The answers of the academics to the above questions are summarised in table 5.2.15.

Questions	Number of academic in percentage						Criterion	
	Excellent	Very good	Good	Fair	Poor	Not Applicable	Satisfaction Percentage	Satisfaction Level
7.37	60.00	29.30	10.00	0.70	0.00	0.00	90	HLOS
7.38	60.70	28.60	10.00	0.70	0.00	0.00	90	HLOS
7.39	52.90	34.30	9.30	1.40	1.40	0.70	87	HLOS
Total Average	57.86	30.73	9.76	0.93	0.46	0.23	89	HLOS

Table 5.2.15 Satisfaction of academics with the LRCs building.

The table shows that the number of academics who selected *Excellent* for each question was the highest compared with the other choices. The questions were marked by 53% to 61% of academics who selected *Excellent*. Next to this percentage was that of the academics who selected *Very good* rated between 29% and 34%. This clearly indicates that the academics were highly satisfied with the building. As a result the satisfaction percentage was found to be within the range of 87% to 90%. This gives a total average equal to 89% clearly showing that the academics were highly satisfied with the LRC buildings.

5.2.16 Time Spent Using the LRCs Sections

The academics were asked about the time they spend using the LRCs' facilities. The question and the academics responses are shown in the following:

Question 8 *How often do you use the Learning Resource Centre?*

Question	Academics number in percentage (%)					
	Every day	2-3 times a week	Once a week	2-3 times a month	Never	Other
8	30.4	43.5	13	11.6	.7	.7

Table 5.2.16 Academics answers regarding their usage of LRCs.

Academics responses are reported in table 5.2.16. The table shows five types of answers which defines how often the academics visited the LRCs. It is clearly seen from the table that over 43% of the academics visited the Centres 2-3 times a week while 30.40% visited the Centre every day. This percentage dropped to between 11% and 13% of academics who visited the Centre 2-3 times a month and once a week respectively. The percentage dropped much further to less than 1% of academics who never visited the Centre. Due to the higher percentage of academics who visited the Centre more regularly, it may be concluded that the centre had good facilities to attract academics to make regular visits.

5.2.17 Involvement of Academics in Teaching in the LRCs

This question explores the percentage of the sample of academics who give classes in the LRCs and how often they do this (Question 9. Appendix three).

5.2.17.1 Giving classes in the LRCs

The question and the academics answers are shown in table 5.2.17.

Question	Subject	Academics in %	
		Yes	No
9.1	<i>Do you give classes in the Centre?</i>	35	65

Table 5.2.17 Academics answers regarding giving classes in the LRCs.

The table shows that the answer to the question was one of two choices, either *Yes* or *No*. The percentage of academics who were not involved in teaching classes in the LRCs were 65%. Only 35% of academics were involved in teaching classes in the LRCs. Academics who answered with *Yes*, were further asked to mark the number of hours from the choices provided in the question. The question and the academics responses are included below:

5.2.17.2 Number of hours

Question 9.2 *If yes please tick the appropriate box*

Question	Academics number in percentage (%)				
	Less than one hour per week	1-2 hours per week	2-3 hours per a week	3-4 hours per a week	More than 4 hours per a week
9.2	0.00	45.80	6.30	14.60	33.30

Table 5.2.18 Academics answers regarding number of hours they give in the LRCs.

As seen from the table, the academics had to select one answer from five. Over 45% of the academics were teaching 1-2 hours a week. The percentage dropped to 33.30% with those academics who were giving more than 4 hours a week. The percentage dropped much further to 14.60% and 6.30% of those academics who taught 3-4 and 2-3 a week respectively. From this it can be concluded that the majority of academics were not actively involved in teaching in the LRCs.

5.2.18 Difficulties in Borrowing Materials and Equipment

Academics were asked whether they face difficulties or obstacles in borrowing materials or equipment from the LRCs. The question and academics responses are shown in table (5.2.19). The academics were presented with a question having two answers. The academics had to select one as shown in the table. Over 91% (128) of respondents selected *No* to the question shown in the table, while over 8% (12 respondents) selected *Yes*. The results indicate that the academics were quite satisfied

with the borrowing system for materials and equipment. This reflects the answers given earlier (p.120) where academics were indicating a high level of satisfaction with the borrowing system.

Question	Subject	Academics in %	
		Yes	No
10	<i>Are there any difficulties or obstacles in borrowing materials or equipment from the Centres? If yes please give examples:.....</i>	8.60	91.40

Table 5.2.19 Difficulties or obstacles in borrowing materials or equipment.

As earlier explained academics who answered *Yes* were asked to give examples. Those academics who had experienced difficulties in borrowing materials commented or gave examples to expand their answers. Some respondents mentioned some difficulties in borrowing materials and equipment, but there was no consistency in their examples. Therefore only the common difficulties or obstacles have been considered. Academics comments and examples on their answers are summarised in the following: Shortage of equipment and materials was considered one of the main obstacles in borrowing. For instance 3 out of 12 respondents described a shortage of overhead projectors (OHPs) and a limited number of materials and copies of some books and references was remarked upon by 3 academics. In addition 2 other academics anticipated the difficulty in the allocation of some equipment for the use of some departments such as mathematics and computer studies which prevents the other departments from using them.

5.2.19 Usage of LRCs Facilities

These facilities were classified into fifteen types illustrated in table 5.2.20. The academics' percentages for using the various facilities in their LRCs are shown in the following table 5.2.20.

Question number			Academics in percentage (%)
11.1	Borrowing books	(Q.11.1)	95
11.2	Internet	(Q. 11. 7)	70.7
11.3	Doing research	(Q. 11.2)	56.4
11.4	E-mail	(Q.11.4)	54.3
11.5	Printing	(Q.11.5)	52.9
11.6	Overhead Projector (OHP)	(Q.11.3)	40.7
11.7	CD-ROMs	(Q.11.8)	35.7

11.8	Personal uses	(Q.11.13)	34.3
11.9	Video (Learning Programmes)	(Q.11.12)	27.1
11.10	Scanner	(Q.11.6)	27.1
11.11	Tape recorder cassettes	(Q.11.10)	21.4
11.12	Learning packages	(Q.11.9)	14.3
11.13	Socialising	(Q.11.14)	11.4
11.14	Others	(Q.11.15)	8.6
11.15	Satellite	(Q.11.11)	0.70

Table 5.2.20 Purpose of using the LRCs facilities.

Academics were asked about facilities or purposes for which they use the LRCs, their responses are shown in table (5.2.20), academics' responses were arranged from the facility used most to the least used facility. As seen from the table, the percentages were listed opposite the type of facility. Borrowing books was marked by 95% of academics as representing their main purpose of using the LRCs. There was a large drop to the next most common purpose which was use of the Internet at 70.7%. The table showing the drop continues to a base of only 0.70% for the satellite facility. The percentage of academics who use the LRCs for research purposes, E-mail and printing service was over 50%. The Overhead Projector (OHP) in the Centres was marked by 40.7% of respondents as a device they use. 35.7% of academics indicated that the CD-ROM service was one of the services they have been using in the LRC. 34.3% of respondents acknowledge that they use the LRCs for personal purposes. Other more important facilities, such as video learning programmes, tape recorder cassettes and learning packages were chosen by 27.1%, 21.4% and 14.3% of respondents respectively who show interest in using them. 27.1% of respondents stated that the scanner facility was one of their purposes for using the LRCs. 11.4% of respondents said that socialising in the LRC was one of the purposes of coming to the LRCs. Satellite was marked by 0.7% only (1 respondent) as a facility they use in the LRCs. 8.6 % of respondents (12 academics) mentioned that they use the LRCs for purposes or facilities other than those included in the questionnaire and illustrated in table (5.2.20). 5 of those 12 academics mentioned that they come to the LRC for photocopying purposes. Teaching activities were described by 4 academics (who also marked other responses) as a purpose of attending the LRCs. From the above, we could infer that there is variation in the use of facilities in the LRCs. Borrowing books, and use of the Internet service were the most popular purposes for academics. While other services such as

satellite and learning packages represent the least popular services that academics attend the LRCs for.

5.2.20 Unused Relevant Materials and Equipment at the LRCs

There may be a number of materials and/or equipment at the Centre which were not being used by the academics for specific reasons. This section is to focus on identifying such materials or equipment and to find out the reasons for their lack of use.

Academics were asked a question related to the above purpose. The question and the answers are shown in table (5.2.21). The table clearly shows that 89% of academics did not identify any such unused materials or equipments. However, 11% of academics reported differently and they were asked to give examples.

Question	Subject	Academics in %	
		Yes	No
12	<i>Do you know if there are any materials or equipment in the Centre which are relevant to your topic, but you don't use? If yes please give examples and explain why don't you use them?</i>	11	89

Table 5.2.21 Materials or equipment in the Centre which are relevant to academics topics, but they do not use.

There were 11 comments from respondents about materials or equipment in the Centre which are relevant to academics subjects, but which they do not use. Respondents stated that CD-ROMs contain materials relevant to their topics but they do not use these. This was indicated by 6 respondents. The ability of students in English language was considered to be a main reason for academics not using some English materials in teaching. Some scientific kits and books in English are not used because the English level of materials is often intermediate and most students are at an elementary level.

5.2.21 Assessment of Training Courses

This section investigated the usefulness of the courses provided at the LRCs to the academics. Academics' opinions of the available courses were grouped in three categories (Appendix. three Q.13) *Good*, *Average* and *Not useful*. The other choices *I didn't need* and *Not available* were omitted because only the valid percentages of responses were counted. The questionnaires measured academics' consideration of the usefulness of courses provided at the LRCs in a number of aspects by asking them to rate their opinions on a range between 1 and 3, where 1 is *Not useful* and 3 is *Good*.

Academics rating and satisfaction level with the training courses at the LRCs are shown in table 5.2.22.

The training courses which were mentioned in the study are listed below:

Question Q.13.1: *Induction course on the services in the Centre in general?*

Question Q.13.2: *Induction course on how to use the library?*

Question Q.13.3: *Training course on how to use the Multi-Media laboratory?*

Question Q.13.4: *Training course on how to use the Media laboratory?*

Question Q.13.5: *Training course on computer (word processing)?*

Question Q.13.6: *Training course on learning packages?*

Question Q.13.7: *Training course on CD-ROMs?*

Question Q.13.8: *Training course on the Internet?*

Question Q.13.9: *Training course on E-mail?*

Question Q.13.10: *Video (learning programmes)?*

Question 13.11: *Others please specify*

Question No.	Academics number in %					Satisfaction Percentage	Satisfaction Level
	Good	Average	Not useful	I don't need	Not available		
13.1	44.00	20.90	0.00	15.70	19.40	89	HLOS
13.2	39.10	22.60	1.50	20.30	16.50	87	HLOS
13.3	26.70	22.90	4.60	24.40	21.40	80	HLOS
13.4	31.10	24.20	2.30	19.70	22.70	83	HLOS
13.5	40.30	24.60	3.00	17.20	14.90	85	HLOS
13.6	17.30	22.80	4.70	27.60	27.60	76	HLOS
13.7	26.60	24.20	1.60	23.40	24.20	83	HLOS
13.8	42.40	19.70	0.80	18.90	18.20	89	HLOS
13.9	36.90	20.00	1.50	21.60	20.00	87	HLOS
1310	30.90	22.80	0.80	26.80	17.90	85	HLOS
Total Average	33.53	22.47	2.80	21.56	20.28	84	HLOS

Table 5.2.22 Academics rating their satisfaction level with the training courses at the LRCs.

It can be seen from the table that the academics showed high levels of satisfaction with all of the training courses listed above. There was a small variation in their satisfaction percentage with each course. The variation depends on the total percentage of academics who classified a training course as *Good* and *Average*. The training courses described by Q13.1: "*Induction course on the services in the Centre in general*" and

Q13.8: "Training course on the Internet" obtained the highest satisfaction percentage (89% each) as the average of 43.20% of academics selected *Good*. The second highest satisfaction percentages were for *Q.13.2: "Induction course on how to use the library"* and *Q.13.9: "Training course on E-mail"*. *Q.13.6: "Training course on learning packages"* had the lowest satisfaction percentage (76%), shown in table (5.2.22). The percentage of academics who selected *Good* in this course was 17.30% which is the lowest of the courses. However the academics satisfaction for the other questions was from 80% and above for all of the courses provided in the LRCs. The total average of academics satisfaction with the courses provided in the LRCs was 84% which is considered a high level of satisfaction.

5.2.22 Incentives/Encouragement

The staff were asked about what incentives or encouragement they receive from the LRCs or the Colleges to enhance their motivation to improve the teaching and learning process. The question and answers are shown in table 5.2.23.

Question	Subject	Academics in %	
		Yes	No
14	<i>Are there any incentives or encouragement from the Centre or the College which enhance your motivation to improve your teaching and learning process? If yes please give examples:.....</i>	46.9	53.1

Table 5.2.23 Academics responses to availability of incentives or encouragement, which enhance the teaching and learning process.

The table clearly shows that 53% of academics did not think they were encouraged by the Centres. While 46.9% of respondents (60 academics) indicated that there were incentives or encouragement from the Centres or the Colleges which enhance academics motivation to improve the teaching and learning process. Some of those who answered yes gave examples or explanations clarifying their answers. The biggest group of those who responded yes (19 respondents, "32%") suggested the courses provided in the LRCs to be the greatest incentive encouraging them to improve the teaching and learning process. The courses they mentioned included courses on the computer, Internet and audio-visual aids. They added that sometimes academics could ask for courses to be offered in the LRCs. Staff support and treatment at the LRCs was considered to be the next most important factor as an incentive encouraging academics to enhance and improve the educational process, this was declared by 12 respondents (20% of those answering yes). Availability of up-to date educational technology

materials and books was stated by 10 respondents (17%) to be an incentive enhancing their motivation in learning and teaching.

5.2.23 Academics General Satisfaction With the LRCs

The general satisfaction covers all of the facilities and services provided by the Centre. Academics were asked about how satisfied they were with the Centres in general. The question presented to the academics and the answer to the question are shown in the following:

Question Q.15: *General level of satisfaction with the LRCs?*

Question	Number of academic in percentage					Criterion	
	Very satisfied	Satisfied	Fair	Poor	Very dissatisfied	Satisfaction Percentage	Satisfaction Level
15	23.40	53.30	17.50	2.90	2.90	78	HLOS

Table 5.2.24 Academics' general satisfaction with the LRCs.

As can be seen from the table the answer to the question has five choices from which to select. The majority of academics (over 53%) were *satisfied* while 23.40% were *very satisfied*. Those who selected *Poor* and *Very dissatisfied* were less than 6% of respondents. In general, the calculated satisfaction percentage was found to be equal to 78% which indicates that the academics were highly satisfied with the LRCs.

5.2.24 Academics Written Answers

The academics have been given an opportunity to include their own qualitative data regarding the effectiveness of the LRCs. They were asked open questions at the end of the questionnaires to allow them to express their own views and suggestions. The academics answers brought out various opinions and suggestions which showed no consistency. Many academics did not respond to all of the qualitative questions. The sample of consistent answers which reached 10% or more were considered and analysed. Moreover the academics responses to the final question did not reach a consistent 10% agreement therefore they have not been analysed. The questions and answers extracted are included in the following.

5.2.24.1 *What do you like most about the Learning Resource Centre?*

The academics answers to what they liked most about the LRC varied and included many different opinions. Once again the 10% threshold rule was applied to the opinions received.

LRCs Staff

The LRC staff were considered to be the element most popular with academics. This was suggested by 64 (46 %) of the academics responded to the questionnaire. The academics greatly appreciated the treatment, collaboration and support they get from the LRC staff. There were only two of those 64 academics who indicated to the satisfactory level of knowledge and abilities of the staff.

Computer service

Computer services were considered by the academics to be the second most popular element in the LRCs. Computer services were mentioned by 45 (32 %) of the respondents. Academics specified the following computer services as valuable; availability and number of computers, multi-media service, and the availability of the Internet service.

Collection

The collections at the LRCs were considered the third most popular element. 26 respondents (19%) appreciated the collection at the LRCs. Those academics expressed their satisfaction with the availability of resources such as references and textbooks. Also they were satisfied that the collection materials are kept up-to-date.

5.2.24.2 *What do you like least about the Learning Resource Centre?*

The academics answers to what they liked least about the LRC also varied and indicated different thoughts. The academics answers are included below.

Collection

Interestingly, the collections were the least popular element according to the academics, despite the fact that it is also the third most popular area. 52 of the academics (37% of respondents) expressed their dissatisfaction with the collection in their LRCs. 27 of those 52 academics emphasised the insufficiency of references, textbooks, and specialised books, especially for research. A lack of English books at the Centres was also cited as a weakness of the Centres. One of the academics commented:

“There is a lack of English academic books. While 95% of materials are in Arabic and there are many copies of the same text.”

A group consisting of 10 of those 52 academics suggested that there is a shortage of journals and periodicals in the Centres. In addition some academics considered the collection is not up-dated often enough.

Internet service

The Internet service was the second element that respondents least liked about the LRCs. 25 of the academics (18 %) considered the Internet service to be poor. They attributed that to the slow speed of the Internet and the small number of computers to meet the needs of the large number of users. A few of those academics suggested there should be an allocation of Internet places for academics only.

Organisation

Organisation of books, was the third element that academics least liked in the LRCs. That was according to 21 (15%) of the academics who responded. They attributed that to the poor classification system in the LRCs and the students' carelessness in using the collection.

5.2.24.3 What facilities would you like to see in the Learning Resource Centre?

The academics stated that the following facilities were their top priority in the LRCs.

The Collection of References and Books

Increasing the collection at the LRCs has been suggested by 46 academics (33% of respondents) as a service requiring development. The academics recommended improving the collection at the LRCs through the provision of more references and books. In addition they emphasised the necessity of purchasing the most recently published references and books to match the requirements of the curriculum.

Periodicals and journals

Academics emphasised the importance of providing periodicals and journals in the LRCs. This suggestion was stated by 36 of the respondents (26%). The academics expressed their interest in the provision of modern Arabic and English periodicals and journals especially in scientific fields.

Improving the Internet Service

The academics indicated the importance of the Internet service. 19 of the academics (14%) pointed to the need to improve the Internet service for them. Some of those academics suggested the allocation of a place with Internet service only for academics. Increasing the number of computers was suggested as one method of improving the Internet service. In addition some of the academics also suggested upgrading the Internet service because it was considered very slow in the LRCs in Oman.

Training Courses

15 of the respondents (11% of the academics) expressed a need for the provision of training courses in the LRCs. The courses identified were; computer courses, Internet courses and workshops on the use of equipment and educational aids.

Organisation

Organisation of books was considered unsatisfactory by 14 of the academics (10%). They attributed that to the poor classification and cataloguing system in the LRCs. Academics also stated their need to see a better organisation of books on shelves.

5.2.24.4 *What changes (if any) would you like made in the Learning Resource Centre?*

The academics suggested some changes to improve the LRCs. Their most common suggestions are included in the following.

Space

The answers of 18 academics (13% of respondents) stated the need for more space in the LRCs. Their suggestions for extending the space available in the LRCs buildings are included in the following:

- Moving the Computer lab to the first floor (upstairs).
- Using all of the LRCs' building for the LRCs without using any of their halls for lectures.
- Extending the space for studying tables.
- Separating the library sections from each other.
- Hall for periodicals magazines, dissertations and theses.
- Provision of study areas for group-study.
- Extending the media lab space and equipment.
- Provision of a listening lab for the English unit or more time set aside for it.

- Extending the size of the LRC building.

Some of the previous suggestions were suggested by only a few academics.

Organisation

Again in the answers to this question academics emphasised the necessity for the improvement of organisation at the Centres. 16 academics (11% of respondents) expressed their dissatisfaction with the organisation of books at the libraries of the LRCs. Half of those 16 academics attributed that to the poor catalogue system. They also added that books and references need daily organisation to avoid mixing up the books.

5.2.24.5 Please add any comments you have about the Learning Resource Centre that haven't been included in the questionnaires.

There were only 36 academics (26%) who responded to this question and none of their answers reached 10% of the respondents sample. Moreover the comments and suggestions added have already been included in their answers to the previous questions such as; space, collection and LRCs staff. Therefore none of the academics comments or suggestions to this question were included.

There were contradictions in the academics responses to the questions 16 and 17. For instance, Internet access was among the computer services rated as second most popular and also second least popular. Collection was also third most popular in the responses to the question 16 but very unpopular in the academics responses to the question 17. These contradictions will be discussed in the following chapters.

CHAPTER FIVE

Part Three

5.3 Comparison of Responses

5.3.1 Comparison of Students and Academics Responses Regarding their Satisfaction with the LRCs.

A number of variables may influence the responses received, for example whether respondents are students or academics and the type of gender (male and female).

The Chi-square test in the SPSS package was used to analyse the results in particular those questions which were common to both the academics and students questionnaires. The data revealed that at a 5% confidence level we can accept the null hypothesis that there are no differences in the satisfaction level between academics and students on the following areas: —

- The availability of subject specialist books
- Usefulness of reference and reserved books
 - Books for loan are up-to date
 - Catalogue ease of use
 - Range of study materials
 - Up-to date study materials
 - Notice board
 - Noise level
 - Environment: Ventilation/Air-conditioning
 - Lighting

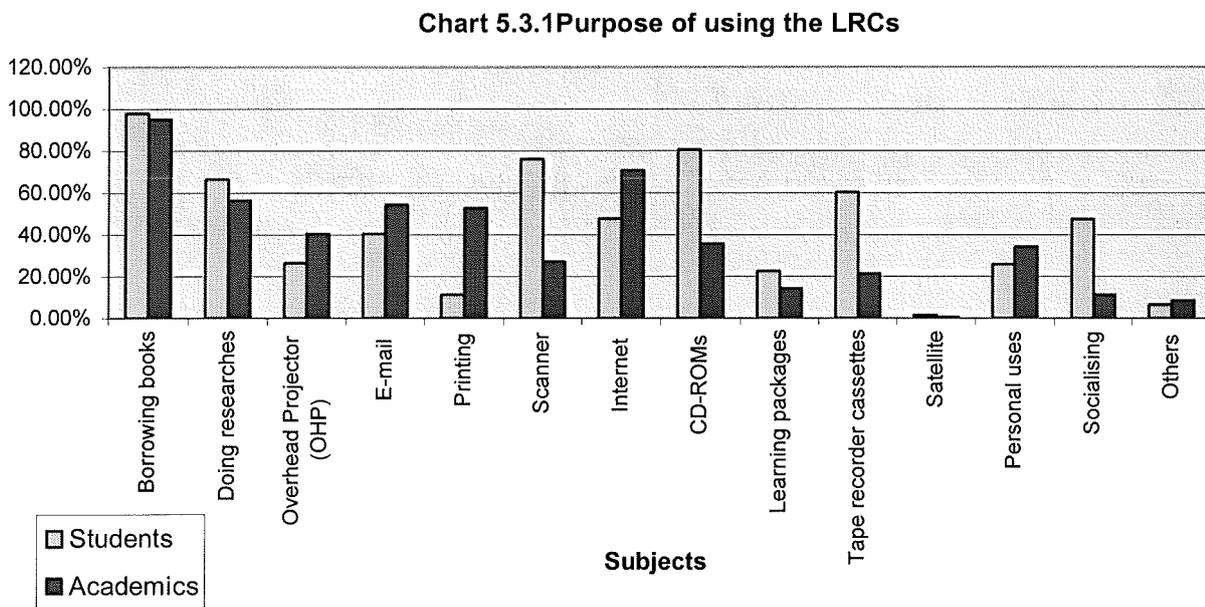
On all other issues there were statistically significant difference ($p \geq 0.05\%$) between academics and students satisfaction levels.

A similar test has been carried out on students and academics responses towards their consideration of usefulness of the courses provided in the LRCs. Accordingly academics views were not statistically different ($p \geq 0.05$) with students in “induction course on the services in the Centre in general”.

While on all other courses there were statistically significant differences ($p \geq 0.05\%$) between academics and students views.

5.3.2 Purpose of Using the LRCs Facilities.

Students and academics responses regarding their common purposes of using the LRCs are shown below:



Students and academics have been asked to identify the facilities or purposes for which they use the LRCs. Chart 5.3.1 illustrates the most common facilities and purposes users (students and academics) utilise the LRCs for, as well as showing the similarities and differences in their usage.

Chart 5.3.1 demonstrates that borrowing books represents the most common purpose of using the LRCs for both types of users academics and students. 95% of academics and nearly 98% of students referred to this as a main purpose of using the LRCs. Doing research was suggested to be the second most common purpose of using the LRCs for

respondents as it ranges between 56% to 67%. In addition the Internet facility was stated almost by 48% of students and 71% of academics as a facility they come to use in the LRCs.

The responses showed that students are using CD-ROMs, scanner and tape recorder cassettes more often than academics since students' usage of these services ranges between 60% and 81%. Whereas academics usage of the same facilities ranges between 21% and 36%. Students' responses (47%) also indicated that socialising represents one of the main purposes for them to attend the LRCs. While the socialising purpose was noted only by 11.4% of academics. On the other hand the responses indicated that academics usage of e-mail, printing and OHPs ranges between 40% and 54%. Therefore their usage of such facilities was relatively higher than students since students' usage of these facilities lies between 11% and 41%.

In addition personal use, learning packages, satellite and other purposes represent the least popular purposes of using the LRCs for both students and academics. The number of users who rated these facilities as an important purpose range between .7% and 34% making these the least commonly used facilities. In this area the students' comments contradict the previously experienced view.

Thus, the variation in the utilisation of facilities can be seen, whether that is between the facilities themselves or between academics and students as users. Therefore borrowing books and doing research in the LRCs were the most popular purposes for students and academics. The usage of some other facilities such as CD-ROMs, scanner, e-mail,

printing, and OHPs vary between students and academics. Moreover a number of purposes of using the LRCs such as personal use, learning packages, and satellite represent the lowest purpose for which students and academics attend the LRCs.

5.3.3 Gender Differences in the Effectiveness of the Learning Methods

To explore the differences in the effectiveness of the learning methods between students of different gender, students' responses to Q.11 (Appendix two) were sorted into two groups male and female, then the Chi-square test was applied. Students' overall results and their results according to gender showed no statistically significant difference ($p \geq 0.05$) in the following methods of learning:

- Class and group discussion in classroom.
- Students working by themselves at home.
- Personal reading of text and study materials.
- Using CD-ROMs.
- Using other computer based learning package.

The first of these particularly important and shows similar attitudes to learning situations regardless of gender.

CHAPTER SIX

Part One

6.1 Results of the Interviews of the Staff of LRCs in Oman

6.1.1 The Colleges of Education Surveyed

To explore the effectiveness of the LRCs a survey was conducted on the six Learning Resource Centres in The Colleges of Education in Oman. These comprise two Colleges for males only; Nizwa College of Education (1240 students), and Sohar College of Education (1386 students). Two Colleges for females only; Ibri College of Education (1840 students) and Rustaq College of Education (2054 students). Two mixed Colleges; Sur College of Education (1142 students) and Salalah College of Education (1046 students).

6.1.2 Personnel Interviewed

There were four employees interviewed in each College: Head/Assistant Head, librarian, computer specialist, and a media specialist. In total there were 24 employees covered by the survey, 14 males and 10 females. In detail the sample interviewed was five Heads of LRCs who were Canadians and one Omani Assistant Head (acting) of a LRC. Six librarians were interviewed. Their position within the organisation were as follows: four of them were 3rd specialists and two were 2nd specialists. Six computer specialists, four of them were 3rd computer specialists and two were 1st computer specialists. Also there were six media specialists included, one was 1st media specialist, four were 3rd media specialists and one was 4th media specialists. [1st specialist is higher than 2nd, 3rd and 4th specialists].

6.1.2.1 The Qualifications and Speciality of Those Interviewed

Heads/Assistant Heads:

Four LRC Heads have Masters degrees in specialities related to librarianship or educational technology. One LRC Head has a Master degree in education administration. One Assistant/Head of LRC has a Bachelor's degree in librarianship and educational technology.

Librarians:

Five out of six librarians have Bachelors degrees in librarianship and information or

librarianship and documents. One librarian has a Master in eastern linguistics and higher diploma in librarianship and documentary.

Computer Specialists/Technicians:

Five of the six computer specialists/technicians hold Bachelor degrees in computing science. One computer technician has a diploma in computing from a technical college.

Media Specialists/Technicians:

Media specialists/technicians have different qualifications. Two of the six media specialists sample have Bachelor qualifications in information system or librarianship and information. One media specialist has Bachelor in commerce and economic (specialised in information system). The other three media specialists qualification were as follow; Master in English language, Bachelor of education in Islamic studies and Diploma in educational resources and librarianship (2 years after secondary level).

6.1.2.2 Age Range

The ages of 13 of the 24 interviewed staff range between 24-29 years old. Two of them were between 30-35 years and three of them were between 41-45 years old. Also the ages of three of the interviewed LRC staff were from 46 or older. Three of the interviewed sample did not respond to this question.

6.1.2.3 Nationality

The sample interviewed have the following nationalities and numbers:

15 of the interviewees were from Oman. Five were Canadians and all of those Canadians were Heads of the LRCs. Three of the interviewed sample were from Egypt: two librarians and one Computer specialist. Also there was only one from Jordan who was a computer specialist.

6.1.3 Description of the Learning Resource Centre (LRC)

The questions and the answers of the interview instrument analysed in the following:

6.1.3.1 *Can you please tell me what does the LRC consist of (LRC sections)?*

The LRC Heads/Assistant Heads were asked about what the LRCs consist of. Their answers were exactly the same stating that, each of the six Omani LRCs consists of the

following three sections: Library, computer laboratories (two teaching laboratories and self-access Multi-Media laboratory), and media laboratory.

6.1.3.2 *What are the types of resources for each section?*

The LRCs Heads and Assistant Heads, librarians, computer specialists, and media specialists explained what types of resources their sections have. Their explanation made it clear that the six LRCs have similar types of resources, attributing that to the similar sections each LRC has as mentioned earlier. According to the answers the three sections library, computer laboratories and media laboratory, include the following types of resources:

Library Section Resources

Each Library has the following contents:

Traditional resources such as books and periodicals, divided into textbooks, general collection for research, reference books, magazines and newspapers.

Non-traditional such as CDs, videocassettes, tape cassettes and Internet service.

Periodicals do not come regularly to the libraries and there are no microfiche or microfilm services in the libraries.

Computer Section Resources

Each computer section in the LRCs has the following:

computers, servers, portable computer, Broxima or LCD: for data presentation (that can be connected to TV, video or video camera.), Internet access, multi-media lab offering an open service to LRC users, CD-ROMs Software, printers and scanners.

Media Section Resources

Each media section in the LRCs has the following:

Audio resources such as tape recorder; Audio-Video resources such as video cassettes, digital satellite; Materials such as packages (educational packages), transparencies, slides etc; Broxima or LCD: for data presentation, Over Head Projectors (OHPs); 8 computers; coloured printers; scanners; and portable microphone etc.

6.1.4 Equipment and Materials

A series of questions were asked about equipment and materials: (books, periodicals, technological materials etc.)

6.1.4.1 *Are they satisfactory, given the rapid development of educational technology?*

The LRCs staff members were asked whether the LRCs are satisfactory, given the rapid development of educational technology, their answers are explained below:

LRC Heads/Assistant Heads

The views of the Heads/Assistant Heads of the LRCs were divided into two groups. Three of the six LRC Heads thought that the equipment in the LRCs is satisfactory given the rapid development of educational technology, but they believe that there is still room for improvement. One of those three Heads said:

“I think the equipment is quite satisfactory. The computer will never be up-to-date we always will need a high speed and soon all of the colleges will need to replace their two labs because they were used for more than 3 years”.

The other three Head/Assistant Head thought that the equipment in their LRCs is not satisfactory given the rapid development of educational technology. Two of those supported their answers with some examples. One LRC Head said:

“Computers software such as Windows 95 are still used and we are not updating them for labs and curriculum”.

Another LRC Head expressed his/her dissatisfaction in the following:

“Our current labs were created in 1998 and now require updating as the computers are old. They are becoming an impediment to learning because of slow response times and incompatibility with new software”.

Although there was disagreement between the two groups of Heads/Assistant Heads about the adequacy of the equipment considering the rapid development of educational technology, all respondents indicated that they were keen to see a higher level of development of the equipment and material in the LRC.

Librarians

All of the six interviewees' librarians gave clear opinions regarding how satisfactory are materials and equipment at libraries. They all stated that the libraries at the LRCs were not

satisfactory given the rapid development of educational technology. They pointed out that resources are not continuously updated and they are old. One of the librarians commented:

“Most of the books are textbooks and there are not enough references for research. They do not match the development of educational technology, also periodicals don’t arrive regularly”.

Only one of the six librarians thought that the curriculum needs are being met, but he/she believed that they do not meet the needs of the rapidly changing subjects such as computing, because continuous development is required to meet the rapid educational changes.

Computer Specialists/Technicians

Computer specialists/technicians views were divided into two groups again as we saw in Head/assistant Heads answers. Three computer specialists/technicians thought that the computer laboratories equipment were not satisfactory given the rapid development of educational technology. Some of them commented saying:

“They are very slow because the computers’ processor speed is only 166MHz.”

“There are problems with the software we receive from The Ministry of Higher Education (MOHE), because some times they come in English or in Arabic then we need to adjust them to the programmes we have on the PCs”.

On the other hand the other three computer specialists thought that the equipment in the computer laboratories is satisfactory and meets the rapid development of educational technology.

Media Specialists/Technicians

Four out of the six media specialists thought that equipment and materials in the media labs were satisfactory given the rapid development of educational technology. One of those specialists’ reply was:

‘Yes media lab equipment and materials are satisfactory given the rapid development of educational technology because it helps students a lot in the educational process’.

One of the six media labs specialists suggested that media labs are at a medium level of development. While there was only one media specialist who believed that the media labs

equipment and materials were not satisfactory given the rapid development of educational technology this specialist explained his view in the following:

“The Media Specialists are usually not asked by the Ministry of Higher Education (MOHE) to contribute to the selection of aids and equipment while the MOHE asks the Head of LRCs to choose and it is likely that the Head is specialised only in one area such as librarianship or computer”.

In considering whether the LRCs equipment and materials were satisfactory given the rapid development of educational technology the interviewees' answers show that the LRCs Head/Assistant Heads and the computers specialists had similar views which almost were divided into two equal groups. One group expressed their dissatisfaction with the equipment and materials in meeting the demands of the development of educational technology. The other group consists of those who had an acceptable level of satisfaction with equipment and materials in the LRCs in meeting the rapid development of educational technology. However, this latter group believed that there is still room for improvement for updating equipment and materials in the LRCs.

We saw earlier that almost all of the interviewed librarians believed materials and equipment in the libraries of the LRCs were not satisfactory and require improvement. Most of the media specialists expressed their satisfaction with the media labs equipment and materials.

6.1.4.2 To what extent equipment and materials are sufficient?

LRC Heads/Assistant Heads

The interviewees' answers varied to this question. Some of them indicated sufficiency in books and materials and insufficiency in computers and some other equipment, while some of them pointed to sufficiency in computers and insufficiency in printed materials. This can be illustrated from the interviewees' explanations below. Three LRC Heads considered that there was sufficiency in books, this was at Nizwa, Sohar and Sur Colleges of Education. While three LRC Heads thought that the books they have were insufficient for students, this was at Ibri, Rustaq and Salalah Colleges of Education. For instance the LRC Head at Ibri College expressed the insufficiency of books and periodicals by saying:

“There are many copies but less titles, we have 60,000 books but only 4600 titles and there are no online journals or periodicals”.

Three of the six LRC Heads expressed the insufficiency in the ratio of student numbers to computers. This was at Nizwa, Rustaq, and Sur Colleges of Education.

The LRC Head at Rustaq College illustrated the insufficiency of equipment at their LRC in the following:

“Before exam times definitely there are not enough computers to use. This College has almost 2100 students and Salalah College, for example, has 1000 students and we have the same supply of computers”.

“Also we have 5 OHPs for 100 teachers and we have 5 new OHPs but they are too heavy for students to carry”.

Two of the six LRC Heads stated sufficiency of computers at their LRCs. This was at Sohar College and Salalah College. While the LRC Head at Ibri College did not give a clear idea towards the sufficiency of computers at the College.

Library Section

Four of the six librarian thought that library collection was insufficient. They attributed that to different reasons. Some of the reasons they mentioned were: the ratio of student numbers to the books and references, titles are insufficient for research purposes and reference books are insufficient and old etc. Although one librarian suggested that textbooks are sufficient and sometimes they exceed the students' need he/she thought that reference books are insufficient and old. There was only one librarian who thought that the collection is sufficient compared with the number of students.

Computer Laboratory Section

Four of six computer specialists thought that computers are reasonably sufficient for student needs. There were only two computer specialists who believed that computers are insufficient for students. One of those two suggested that:

“Computers are insufficient for the needs of students because they also need to use equipment for self-study purposes and not only for the lectures”.

Media Laboratory Section

Media specialists' answers were divided into three groups. Two media specialists suggested that media equipment and materials are sufficient compared with the students' use. Whereas two media specialists' thought that media labs equipment and materials are

insufficient compared with the number of students.

A media specialist in Ibri College said:

“We have more than 1800 students and if we want to make the service available for this number of students we should have more equipment to match the number of students”.

The third group also consists of two media specialists. Those two specialists thought that some equipment is insufficient while some is sufficient for the number of students.

One of the media specialists commented:

“Some equipment is insufficient such as OHPs, because there is big demand for them while there is some equipment which are not in use a lot from users”.

Interviewees' opinions of the sufficiency of LRCs contents were varied. The six LRC Heads experiences were divided equally between thinking of sufficiency and insufficiency of books, whereas most of them considered the provision of computers to be insufficient. On the contrary, computer specialists expressed more satisfaction with the sufficiency of computers compared with the LRC Heads. Regarding media equipment and materials, media specialists have a reasonable level of satisfaction towards the sufficiency of media labs equipment and materials. The least sufficient section was the library collection, since most of the interviewed librarians were unsatisfied with the library collections at their LRCs. Overall the interviewees' answers reflect that equipment and materials at the LRCs were not at the required level of sufficiency to meet the users needs.

6.1.5 Can you explain the procedures to purchase books, periodicals, materials and equipment?

The LRCs staff answers clarified that the purchasing of books, periodicals, materials and equipment were centrally performed through the Ministry of Higher Education (MOHE) and rarely some items were bought locally.

6.1.5.1 Purchase of Books

Generally lists of required books are prepared by each college electing to prepare one subject e.g. Salalah College takes science, Ibri College takes Islamic studies. The lists prepared by the Colleges are then shared with academics from the other Colleges and coordinated. Once this has been done the list is sent to the LRC staff who compare the list

with the stock in the library to ensure that, if stock is already available there is no duplication in the request. The final list is then sent to the MOHE who makes the final decision.

Despite all of those procedures there were still some problems with the system. Books arrive which are already available in the LRCs, sometimes LRCs receive books which cannot be identified as belonging to a specific subject, also some of the books don't arrive in time. One LRC Head commented:

“We still receive many books we already have and we do receive books we don't know for which of the curriculum subjects and some books come late during the term”.

6.1.5.2 Purchase of Periodicals:

Each LRC communicates with the academics in the local College and generates a list of periodicals need, then the list is forwarded to the Ministry Of Higher Education (MOHE). If it is a very long list the Ministry Of Higher Education crosses out titles according to cost. The MOHE takes the most popular and cheapest titles that every College asked for. For instance one of the LRC Heads gave an example on purchase of periodicals saying:

“Our College suggested about 20 periodicals. Only 4 were chosen by the MOHE and for some reason only one title arrived to us”.

6.1.5.3 Purchase of Equipment and Materials:

The MOHE asks employees within the LRC to generate specification for the equipment needed then the employees talk to each other and discuss the suggested materials, numbers and types. Then they as a committee bring them together in one list. The weakness in this system was that the MOHE concentrates only on the specification and the cost of the required equipment or materials. An LRC Head commented on this issue saying:

“The MOHE doesn't evaluate the brand, and the reliability or maintenance. They evaluate strictly only the specification and the price”.

Hence we saw that the procedure of purchasing of books, periodicals, materials and equipment were centrally executed by the Ministry of Higher Education (MOHE). Sometimes some small items could be purchased through the Administration Departments of the Colleges.

6.1.6 Are there any difficulties in the maintenance of the LRC contents?

If yes, can you describe these difficulties?

6.1.6.1 LRC Heads/Assistant Heads

The LRC Heads/Assistant Heads were asked whether there are difficulties in the maintenance of the LRC contents. Four of the six LRC Heads/Assistant Heads answered that there were no difficulties in the maintenance of materials or equipment. On the other hand the other two LRC Heads mentioned some issues which cause difficulties in the maintenance of equipment and materials. The main problems were obtaining spare parts. Sometimes LRCs staff cannot find the contracts so they do not know if equipment is still guaranteed or not. Also it takes a long time to get equipment repaired. LRCs staff sometimes take equipment to the companies in the capital, Muscat, to be repaired. Sometimes LRCs receive pirated (illegal) copies of books from the dealers and these copies usually are poor quality which needs binding quite often. However there are efforts for solving and stopping this phenomenon. Furthermore LRCs have no budget for the maintenance of their equipment and materials.

6.1.6.2 Library Section

Librarians interviewed almost all expressed their satisfaction with the maintenance of the contents of the libraries. Five out of six interviewees declared that there was no problem with the maintenance of libraries at the LRCs. One of the librarians answers:

“We send the books which need rebinding or repairing to the print shops then the Administration Department pays the cost”.

There was only one librarian who mentioned difficulty in the maintenance of library collection in the LRCs. He/she related the problem to the lack of good binding shops in the city of Sohar where the College exists.

6.1.6.3 Computer Laboratory Section

Through investigating the maintenance of computers at the LRCs, the results showed that four of the six interviewed computer specialists declared no problems with the maintenance of computers. Some of these LRCs have a system of regular maintenance for the computers. There were two computer specialists who complained of some difficulties with the maintenance of computers. These problems existed in two parts, firstly students lack

the experience to use computers properly which often causes problems, secondly the delay that comes from the companies who repair the equipment.

6.1.6.4. Media Laboratory Section

There was only one media specialist who suggested no difficulties in maintenance. This media specialist attributed his answer: The regular maintenance by the staff. The equipment is almost new because the LRC has been open less than four years (at the date of the interviews) also some equipment is still guaranteed.

Five out of six media specialists expressed difficulties in the maintenance of the contents of the media section. Two of the media specialists admitted that the staff of the media section does not have the experience yet to repair equipment, so they face difficulties in repairing the equipment and materials. Four media specialists illustrated that the most common problem in repairing equipment and materials was the time it takes. The delay in repairing equipment and materials has been referred to earlier. It is caused by the requirement that media specialists should contact the Ministry of Higher Education (MOHE) first, then the MOHE will contact the companies for any work. Sometimes there is nothing to force the supplier to keep providing the required spare parts and they might come late. The Administration Departments may also contribute to the delay by being late in taking action for repairing equipment and materials.

Most of the LRCs staff (especially Heads/Assistant, librarians and computer specialists) have been happy with the level of maintenance of the equipment and materials. While the majority of media specialists were not satisfied with the maintenance of the contents of the media labs. However the problems of maintenance exist in the media specialists' inadequate experience in repairing equipment and materials as well as students' limited knowledge in using computers. In addition the delay of repairing equipment and materials represents a main problem that LRCs staff encounter.

6.1.7. *What is the actual role of the following staff in the LRC?*

6.1.7.1 Librarians

Heads/Assistant Heads and librarians were asked about the role of librarians in the LRCs and both of them stated librarians' main role in the following:

- Circulation of works.
- Helping clients to meet their needs.
- Helping users to get their needs on the Internet.
- Helping students to facilitate their research work.
- Processing new books including classification and cataloguing.
- Storing and retrieval of bibliographic items.
- Shelving and organising the books.
- Informing the users about new materials.
- Coordination with departments regarding the books they need to order.
- Helping clients to use computers software such as CD-ROMs and searching some programmes for academics such as ERIC.

In addition in one of the College (Salalah College) LRCs the Head and his staff mentioned that librarians monitor and help students in using the Internet, because of the shortage of IT staff in the LRC.

6.1.7.2 Computer Specialists/Technicians

Heads/Assistant Heads and Computer Specialists included the following roles that Computer Specialists perform in the Colleges of Education.

- Assisting users when required.
- Helping students in using computer to do their research.
- Provision of computer courses for users (students, academics and employees at the Colleges).
- Helping academics in the Multi-Media lab in the practical part of their subjects.
- Supporting academics in their lectures when needed.
- Installing new software on computers.
- Observation of Internet usage.
- Maintaining the equipment and computers besides solving problems with the computers.
- Contacting companies to do the required maintenance.
- Running the Registration Department network.

In addition to the above mentioned roles one of the LRC Heads added that computer specialists also advise on the purchase of software.

6.1.7.3 Media Specialists/Technicians

The interviewees (LRC Heads and media specialists) stated the role of media specialists in the Colleges of Education as follows:

- Training users (students and faculty) on using technological equipment and materials.
- Providing and setting up educational aids for academics and students.
- Lending materials.
- Supporting the faculty members in practical work.
- Answering the clients enquiries regarding using the equipment and aids.
- Production of educational aids e.g. recording a subject from the satellite and production of tape cassettes.
- Recording the educational activities and events at the Colleges by video camera.
- Binding academics and students research papers.
- Maintenance of equipment.
- Supervising and organising equipment at the media lab.

6.1.8 How is the LRC provided with staff?

Provision of staff for the LRCs has been executed through the Ministry of Higher Education (MOHE) and the Ministry of Civil Service. The Heads of LRCs staff made it obvious that they do not participate in the recruitment of LRCs personnel and some of them described the procedure of recruitment as unproductive.

One of the LRC Heads commented saying:

“MOHE does not employ staff according to the number of students at the Colleges therefore some Colleges with fewer students can get more staff in the LRC. In Oman they employ people in their towns, so if no one wants to work here in our College they do not send us new people, so it is unequal”.

The above answers show that the provision of staff to LRCs is centralised at the Ministry of Higher Education and the Ministry of Civil Service and LRC Heads do not take part in the procedure. This creates a situation where LRC Heads consider that their needs are not always met.

6.1.9 Are there any long or short term plans for training staff?

If yes, can you describe them generally?

6.1.9.1 Heads/Assistant Heads

All of the six interviewed Heads/Assistance Heads declared that there are training plans for the LRCs personnel. These plans can be divided into three types. Training inside the Colleges of Education, training inside the country (Oman) and training outside the country.

Courses inside the Colleges of Education:

The courses inside the Colleges of Education usually concentrate on:

- Computer and Information Technology (IT) courses provided by the LRCs.
- English courses for the staff by the English units.

Courses inside the country:

- Some special training for the computer specialists by the MOHE.
- Computer workshops such as a workshop on the Library of Congress.

Courses outside the country:

These courses vary from short courses lasting a few months to postgraduate programmes as shown below:

- Plans from the MOHE to send some of the staff to do their Masters or PhDs.
- Courses to Australia for six months in librarianship.

Although all of the LRC Heads declared that there are short and long term plans for training the staff at LRCs one of the Heads believed that he/she knows nothing about them as shown below:

“There are short courses and long term plans by the MOHE but no coordination with the LRC about what the topics are or who goes”.

6.1.9.2 Librarians

The following training courses and plans for librarians were mentioned by all of the interviewed librarians except one who said that he/she has no idea about the training plans for librarians in the LRCs.

Courses inside the Colleges of Education:

Courses were provided on subjects such as: –

- Computer courses.
- English courses for the staff by the English units.
- Training on general work in the LRCs and not only in librarianship work.

Courses inside the country:

- Workshops in the MOHE or at Sultan Qaboos University (SQU) related to the organisation of information resources e.g. classification and cataloguing.

Courses outside the country:

- Plans from the MOHE to send some employees to do postgraduate studies particularly in UK, USA and Jordan etc.

6.1.9.3 Computer Specialists/Technicians

Computer Specialists/Technicians summarised the training courses and plans for them in the following:

Courses inside the Colleges of Education:

Short computer courses on subjects such as C++ and MCSE etc.

Courses inside the country:

The MOHE arranges courses for Omanis only on networks and new developments in the computing field.

Courses outside the country:

Postgraduate studies, overseas were available for staff.

6.1.9.4 Media Specialists/Technicians

The Interviewed media specialists/technicians described the training courses and plans for them as follows:

Courses inside the Colleges of Education:

- General training in the media labs from the experienced staff on work performance

and using and maintaining equipment.

- Internet courses by computer specialists.
- Short courses on topics such as photography and video recording with duration up to one week.

Courses inside the country:

- Workshops inside Oman on using the educational materials.
- Some courses inside the country e.g. a course on using digital cameras in Muscat for all of the media specialists in the six Colleges.
- Courses at the MOHE intend to qualify media specialists (short courses for a week)
- Workshops at Sultan Qaboos University (SQU).
- Attending some conferences inside the country.

Courses outside the country:

- Postgraduate studies.

Some media specialist commented on this by saying they have no idea or they haven't yet received any scholarship for postgraduate studies. One of the comments was:

"We hear about postgraduate plans at the MOHE but we haven't receive any opportunity yet".

In general the interviewees responses stated that there are long and short term plans and activities which vary from a week for short courses to years for postgraduate programmes for training LRCs staff. These training courses and activities are divided into three types inside the Educational Colleges, inside the country (Oman) and outside Oman.

6.1.10 *What is the LRC's experience of liaison with the Administration Department in the College?*

All six LRC Heads/Assistant Heads expressed their satisfaction with their liaison with the Administration Departments in the Colleges. All of the Heads/Assistant Heads indicated that they received support from the Administration Departments.

One of the Heads pointed out how positive the relationship with Administration is at his/her College as follows:

'The Administration Department helps the LRC to solve its entire problem especially since the LRC has no budget'.

Besides the LRCs Heads satisfaction with the Administration Departments one of them also indicated the delay that their Administration Department causes as a difficulty despite the collaboration they get from the Administration Department.

6.1.11 How do the LRC staff and the academics liaise?

6.1.11.1 Heads/Assistant Heads

Four out of the six sampled expressed a positive liaison or relationships with academics. One of the others expressed a negative view of his relationship with the academic staff, because academics create increased pressure on the LRC staff. The remaining answer, which was written, did not indicate whether relationships were positive or negative. Moreover one of the Heads said that there is a smooth relationship between the LRC and academics, but the academics want to use the LRC staff in their own way. Accordingly one of the LRC Heads explained how academics could have a misconception of the LRC staff when they don't get the service they want.

"There are 5 employees in the media lab and some academics criticised us saying that some of those staff are doing nothing, because 2 are experts and leaving next year, so the Omanis only watch sometimes and sometimes the experts watch the Omanis doing the job etc. The academics sometimes use this against the LRC, because they want their own media technicians. They don't want to be taught how to use the technology and they want the work to be done for them".

6.1.11.2 Librarians

In general there is a good relationship between librarians and academics. Four out of the six interviewed librarians expressed positive interaction between them and academics. One of those librarians with positive experience with academics responded:

"There is a very good relationship between the two sides especially in matters related to the students for example we do facilitate activities such as photocopying etc."

While one of the librarians described his/her experience as including both positive and negative aspects, he/she believed that although generally the relationship is smooth with academics sometimes they found that academics considered themselves superior to

librarians. This was shared by another librarian who had a negative experience with the academics. One of those librarians comment on this was:

“Sometimes the academics consider themselves superior to the librarians, so they may not come to the LRC for their departments needs etc, or they may not accept to discuss the students needs with the librarians.”

6.1.11.3 Computer Specialists/Technicians

There are almost no problems in the liaison between computer specialists and the academics. From the six interviewed computer specialists there was only one who pointed out that their liaison is good with only some of the academics and there are difficulties in dealing with some of them. According to the interviewed sample the satisfactory liaison between computer specialists and academics was based on a friendly manner.

Consequently when academics ask for help computer specialists offer support.

One of the computer specialists says:

“No problems in dealing with academics we collaborate with each other in a good atmosphere”.

6.1.11.4 Media Specialists/Technicians

Four out of the six interviewed media specialists expressed positive liaison between themselves and academics. The experience of one of the interviewed media specialists included both positive and negative experience. He/she mentioned that the relationship is friendly between them, but they ask the media specialists to do things which would not generally be considered good use of their time, such as asking them to record a lecture for two hours at the microteaching room. The remaining media specialist indicated that many of the academics look at the specialist as if they have less status which causes a difficulty in dealing with them.

On the whole the majority of the interviewed LRCs staff expressed that the liaison between them and the academics is friendly and satisfactory.

6.1.12 Who are the LRC users?

Students, academics and the staff at the Colleges represent the main clients for the six LRCs. Five LRCs provide services for some members of their local communities such as researchers, school teachers, and academics from private colleges. One of the Heads

mentioned that they still don't have a formal policy for community use, but they help those who bring letters with them asking for help.

6.1.13 Are there any materials or equipment that are not used by the users?

If yes, can you mention some examples?

6.1.13.1 Head/Assistant Heads

Five of the Heads/Assistant Heads stated that some materials or equipment existed which was not being used by clients. The Heads defined the following materials and equipment as surplus to the needs of users: some books because they are obsolete, some textbooks, some English materials, some equipment such as LCD projector (data show), DVD player, some of the software, digital cameras and some slide projectors.

The Heads/Assistant Heads of the LRCs suggested that the reasons for not using the previous materials may be attributed to the following:

There are too many copies of some textbooks which made them over students needs in some Colleges. Some books are obsolete because they are too old or from the old Colleges system (Two years system). Also some teachers do prefer a particular book for a specific programme and when students have a new teacher they may leave that book and use another book. The lack of English language skills represents a problem for students and academic staff in the use of English materials. Equipment such as LCD projector (data show), and some software, digital cameras were not used quite often by clients because they do not know how to use them. DVD programmes are not available in the Colleges yet. Slide projectors are not in use because they are old technology.

Equipment such as LCD projector (data show), some of the software, and digital cameras. were not used quite often by clients possibly because they do not know how to use them, or academics don't pay attention to that or maybe they do not know the benefit of utilising such equipment. Moreover one of the reasons could be that students rely on textbooks and academics do not encourage them enough to use all of the resources in the LRCs. One of the Heads commented on this saying:

"If the students see a book with their teacher they immediately ask for it, most of the students do that".

6.1.13.2 Librarians

Four of the six interviewed librarians thought that there are materials at the library not being used by clients. Three of those librarians concentrated particularly on English materials such as CD-ROMs, periodicals and most of the English books. Also one of the librarians stated that many copies of the big volumes take space which could be utilised for new materials and new titles.

Students and academics lack of knowledge of English language was considered as the main reason for users not using the English materials. Academics don't encourage their students to utilise some materials such as big volumes while they are included in the MOHE plans to be used as textbooks. Part of the reason is that students depend upon the book that the academic is using in his/her class, so they can score more in their exams. Moreover most of the academics in the Colleges learned to depend upon the particular book, because when they were learning additional materials were not available. As a result they do not pay enough attention to encouraging students to use all of the resources provided.

6.1.13.3 Computer Specialists

All of the interviewed computer specialists except one stated that all of the materials in the computer section in the LRCs are being used by users. This individual computer specialist indicated only some CD-ROM programmes as materials not being utilised by students.

As mentioned earlier almost all the materials in the computer section are being used by clients. The only reason for students not using some CDs in one of the Colleges as one computer specialist explained was that academics do not encourage their students to use the CDs in the LRC.

6.1.13.4 Media Specialists

Four of the surveyed media specialists stated that there are materials not being used by clients at their Colleges. Two of those four specialists indicated learning packages and materials such as video and tape recorder, new portable data show and DVD devices which are usually linked to a TV.

There were several reasons why users do not use some of the materials in the media lab. For instance, video and tape recorder were not being used because of the lack of learning programmes. Learning packages do not match the students' needs. In some cases academics do not know how to use some new equipment and many of them prefer following the traditional approaches such as using the blackboard. Users lack of knowledge of English language also was considered to be one of the factors for not using some materials. Also sometimes LRCs do not announce new equipment when it arrives in the Centres. As we saw earlier there were some materials not being utilised by LRCs clients. Also there were some similar factors for the LRCs sections and some different issues for some sections.

6.1.14 *Do users get any incentives or encouragement from the LRC or the College which enhance their motivation in using the LRC equipment?*

If yes, can you give some examples?

Four of the Six LRC Heads/Assistant Heads believed that there are facilities provided which represent incentives or encouragement for users which attract them to use the LRC services. These facilities were apparent in different ways in each college. Generally these facilities were those such as lending equipment out of the colleges, asking students to do research on the Internet, and asking them to hand type work, Internet club which consists of students. Academics also were encouraged to use educational technology through workshops. In addition to seminars and promotional activities showing the use of different CDs and different equipment in some Colleges. However these facilities show that users were being encouraged to utilise the services in the LRCs by both LRCs staff and Academics. One of the Colleges showed that users are using the services in the LRCs to a level which does not require the provision of incentives for them.

6.1.15 *Are the LRC materials of direct relevance to the curriculum so that they will be used often by academics and students?*

If yes, can you give some examples?

6.1.15.1 Heads/Assistant Heads

All six Heads/Assistant Heads believed that LRCs materials are of direct relevance to the curriculum. The Heads answers were supported with examples. They believed that the LRCs are fundamental to completing the curriculum therefore the students get the

information they need from resources and materials provided in the LRCs. They added that it is very clear in the MOHE plans that students should use the equipment, Internet, books etc. They also suggested that the services provided, such as microteaching facilities, references, textbooks and computers etc, are used extensively by students to meet their study requirements. The Heads indicated the significant circulation of textbooks and the use of media equipment as indicators of the clients' usage of LRCs materials to achieve the aims of the curriculum.

6.1.15.2 Librarians

The interviewed librarians suggested that the materials provided in the LRCs were of direct relevance to the curriculum. They identified textbooks and some CD-ROMs that contain subjects, which form part of curricular topics especially in educational specialisms. One of the librarians mentioned that some textbook titles have no relation with what is being taught. Librarians added that the MOHE plans direct and encourage students and academics to use the sources, and equipment provided in the LRCs. Accordingly the duty of the LRC staff is to facilitate and encourage clients to use the services provided.

6.1.15.3 Computer Specialists/Technicians

All of the computer specialists interviewed believed that there is a direct relevance between the curriculum that students learn and the equipment and software programmes that the LRCs contain. The materials and equipment in the LRCs are relevant to the subjects especially computing, educational technology and English language. Moreover in the Department of Computing and Mathematics there is a requirement of practical use on computers. Academic members also ask their students to use computers and the Internet to support the curriculum. As a result students will need to use the equipment and materials often to meet their study requirements.

6.1.15.4 Media Specialists/Technicians

Five of the interviewed media specialists stated that materials and equipment are relevant to the subjects. On the contrary there was one media specialist who was not sure of the relevance between materials and subjects. However the specialists indicated that some activities and subjects such as, the practicum teaching, educational technology and microteaching which require use of the provided materials. Practical activities are

enhanced by asking students to produce materials related to subjects they are studying. Thus the relevance between materials and the curriculum leads to the frequent use of materials by students in order to achieve the maximum benefit of the materials and equipment provided.

6.1.16 *Does the LRC provide the users with guidebook or instructions about using the services?*

If yes, can you please mention some examples?

The answer to this question was yes from all the interviewed Heads/Assistant Heads, but their methods were different. Three LRC Heads mentioned that they provide users with guidebooks or instructions about using the services. Also two LRCs offer sheets on the use of the equipment, Internet, and other services. One of the LRCs utilises the orientation week at the beginning of the academic year to provide users with folders, which cover the services available in the LRC, without any explanation of how to use them.

6.1.17 *How do users get information about new resources in the LRC?*

The method of informing users about new resources differs between the LRCs. Three LRCs inform academics through sending them lists about new materials they received. Two LRCs depend on the display of new materials (books, and equipment) in dedicated places or shelves for some time. There was only one LRC who was depending only on announcements about new materials on the notice board.

6.1.18 *What are the marketing activities about the services in the LRC?*

There was only one of the LRC Heads who announced that their LRC does not have any marketing activities, because he/she thought that clients know about the services from their classes or from coming to the LRC. One of the Heads, despite the fact that his/her LRC undertakes some marketing activities, agrees with this, saying:

“We don't really need to market ourselves, because people are coming for the reason that the LRC is a Centre for educational technology”.

The other Five LRC Heads explained that they have ways of marketing the services. These ways differ in each College. For instance two Colleges depend on workshops and orientation activities to advertise the services. Two other Colleges concentrate on informing academics through sending them notes telling them about the services especially

in the media lab or through inviting them to be aware of all of the new books and equipment in the LRCs. The remaining College advertises the services in the LRC around the College

6.1.19 *Can you list and describe the LRC services in general?*

Almost all of the Heads described similar services provided in the LRCs. Their answers included the following services:

- Provision of books, references and periodicals and IT equipment to learn how to teach.
- Circulation works.
- Shelving and re-shelving of books
- Co-ordination with departments regarding books and periodicals they need to order.
- Provision of all of the technical maintenance for the computers in the Colleges.
- Teach at workshops about the Internet and other programmes.
- Help the students and faculty to work on programmes.
- Support students and faculty in the educational process.
- Advice on the purchase of software.
- Set-up equipment such as the LCD data show, for users.
- Assist the Department of students' affairs in the Colleges.
- Document all of the events at the Colleges.
- Edit the video programmes (films) for the MOHE.
- Help in microteaching
- Provision of photocopiers.
- Promotion of learning in general.

6.1.20 *What are the courses / programmes the LRC offers for users?*

The Learning Resource Centres (LRCs) provide a variety of courses, most of these to improve clients' abilities and skills in using educational equipment and materials. The courses are provided to Omani Administrative staff, students, and academics.

The courses provided in the LRCs could be summarised as follows:

- Workshops, mostly in using computers (e.g. Windows operating system), and Internet.
- Course on using Software packages, Word, Excel, PowerPoint
- Courses on all of the media lab equipment.
- Orientation courses on all of the services provided in the LRC sections.

6.1.21 Are there any services for users with special needs?

If yes, can you please mention them?

The Heads/Assistant Heads stated that there are no special services for users with special needs. One of them commented saying:

“ Even there are no toilets for disabled”.

At present time no special provision is made for disabled users who may have special needs.

6.1.22 How does the LRC control the students` use of the Internet?

Heads/Assistant Heads and the computer specialists were both asked to explain the procedure they use to control students use of Internet. The methods and procedures they use were similar in all of the Colleges. Their procedures show that the LRCs rely to a great extent on Oman Telecommunications to control the use of Internet. The LRCs still use software to block undesirable sites. Since this was not reliable most of the LRCs ask their staff to monitor and observe students use from the main station (Proxy Server) in the multi-media labs. This allows the staff to find out who visited certain sites by checking the proxy server.

6.1.23 Are there any difficulties with students visiting undesirable sites (e.g. pornography sites) on the Internet, which conflict with the students` culture?

If yes, could you mention some examples?

Is there any penalty against such practices?

Heads/Assistant Heads

Three of the LRC Heads said that there were no difficulties with students visiting undesirable sites one College for male students and two Colleges for female students. The other three Heads mentioned that such difficulties happen sometimes but rarely for instance some of the LRC Heads described the experiences in their Colleges:

“Last year there were 3 cases, that students visited pornography sites”.

Another LRC experience;

“ Sometimes students visit certain sites which criticise the Government of Oman and talk about differences between sects”.

Penalty Against Such Practices?

Five of the Heads explained that they have penalties against such practices and there was only one Head (at a female College) who said they have no system for dealing with this issue, because this problem does not exist in their College. The other five LRCs have procedures for this problem. Two of the Heads said that the first time they warn the student, the second time they stop hem/her from using the Internet for a while, could be for a semester, by closing the student's account, on a third occasion the student would be sent to the Dean or a discipline committee. The other three LRCs stop the student's account for the Internet.

Computer Specialists/Technicians

The experience of the six computer specialists interviewed showed some differences from the Heads answers, because they were answering according to their own knowledge and experience.

However there were only two computer specialists who announced that there were such practices from students. Those two computer specialists stated that some students enter such sites by using different words in different ways. Students sometimes give their user names to others then they might visit these undesirable sites.

Penalty Against Such Practices?

The computer specialists indicated to the previous procedure as described by the Heads. Overall the interviewed LRC Heads and computer specialists did not show that there were big difficulties from the students' use of Internet. This could be attributed to the preparation the LRCs had done to prevent users from reaching undesirable sites, as well as the penalty procedures against those who try to view unsuitable subjects.

6.1.24 *What are the procedures with users who cause noise or break rules in the Centre?*

The LRCs procedures towards this issue begin with a verbal warning, then if the student repeats the problem the LRC staff may ask the student to leave the LRC or take the student's card to the Head of LRC. The Head of the LRC would then talk to the student

and could restrict the services available if the student repeated the problem. In some cases the student might be reported to the Dean of the College or to a discipline committee.

6.1.25 *Can you please explain the procedures / system of lending materials to users?*

The staff answers to the question regarding lending service were divided into the LRCs three sections (library, computer, and media) the answers are included in the following.

6.1.25.1 Library Section

The lending policy with books was as follows:

Students

Both Heads of LRCs and librarians' stated that they lend students books for two weeks. Five Colleges lend students between five and six items and there was only one of the females' Colleges (with more than 1800 student), which lends students only up to four items at a time. Moreover periodicals and reports are for reference only.

Academics

The Heads and librarians answers indicate that there was no specific policy applied in all of the LRCs regarding the number of items academics can borrow. The number academics can borrow differs from one College to another, some LRCs lend academics up to 12 items and some lend them up to 24 items at a time. One of the LRCs has no restrictions on the number of items lent to academics. Generally the LRCs lend academics books for a semester except for some books with limited copies.

Others

The Learning Resource Centres (LRCs) have no policy of lending books to users from outside the Colleges. However the LRCs usually collaborate with users from the Ministry of Education particularly Head teachers, teachers, and students from the local high school in addition to postgraduate students and researchers. The period of lending materials for users from outside the Colleges is normally for two weeks and in some cases for a semester.

The responses on lending computer- software materials in the libraries were as follows.

Students

The interviewees' answers showed that there was only one College which lends students from two to three CDs for up to a week for outside usage. The staff of two of the Colleges mentioned that computer specialists are in charge of computer-software materials.

Academics

The staff of two Colleges declared that computer-software materials in the libraries such as CDs are for use within the LRC only. One of the Colleges allows academics to borrow software materials for up to 10 days and another College lends CDs for overnight use only. As mentioned earlier two of the Colleges left such materials to computer specialists to lend them to users.

Others

Four of the Colleges stated that they allow users from the community to borrow software materials for inside use only. The remaining two Colleges did not answer this question, because the computer specialists in their LRCs are in charge of software materials.

6.1.25.2 Computer Section

The lending policy on computer-software with computer laboratories was as follows:

Students

The interviewed LRC Heads and computer specialists/technicians stated that four of the Colleges allow their students to borrow computer-software materials only inside the LRCs. The other two Colleges described how students could borrow software materials for outside as well. The LRCs usually lend students software materials for one day. Usually the staff take details about the borrower and the software he/she borrowed or they take the borrower's matriculation card (ID) until the materials are returned.

Academics

The LRCs have no unified system in lending computer-software materials to academics. Therefore almost half of the Colleges allow their academics to borrow software materials for outside usage and other Colleges allocated the software for inside usage only. Academics could borrow software materials for a period of up-to two weeks, except one of

the LRC staff said they could lend them for a semester. Academics are required to fill in forms when they need to borrow any materials from the LRCs.

Others

Computer- software materials basically are assigned for the Colleges' members' usage only. The investigation showed that some of the Colleges collaborate with users from the community outside the Colleges, allowing them to borrow such materials through the coordination between the LRCs Heads and the Administration Departments in the Colleges, especially when users bring letters from their establishments. Users from outside the Colleges are usually restricted to using software within the college only. The LRCs usually have forms that users have to sign when they need to borrow any materials.

The computer sections in the LRCs basically have only computers and software. Therefore the LRCs rarely lend computers or equipment from the computer sections. However the answers of the interviewed staff towards the lending of equipment in computer labs are included in the following.

The lending policy on computer equipment with computer laboratories was as follows

Students

The LRCs staff illustrated that computers could be lent for specific purposes in some Colleges and sometimes students could borrow a portable computer for one day. On the other hand some Colleges do not lend computers outside the LRCs.

Academics

There was only one LRC which stated that they could lend equipment to academics when there is a real need such as joining a workshop. In this case academics could borrow the equipment up-to a week. The other LRCs pointed out that computer labs equipment is for inside use only and they could be lent to academics or outside use only when there is permission from the Dean of the College.

Others

According to the answers of the interviewees LRCs do not generally lend computer section equipment to users from outside the Colleges of Education.

6.1.25.3 Media Section

The media section has both equipment and software. The policy on equipment is as follows.

Students

Interviewees stated that students are usually allowed to borrow equipment only inside the Colleges for a short time. Students usually borrow equipment such as OHPs for their lecturers, such equipment is for the delivery of lectures inside the Colleges this requires a letter from lecturers in some Colleges. Rarely students could borrow equipment for outside usage. When students apply for this kind of facility they require permission from the Head of the LRC and the Administration Department in the College.

There are similar procedures in the media labs for lending equipment to students. The common procedures are signing a registry with details about the student and the equipment he/she borrowed or leaving the student's ID with the staff until the equipment is returned.

Academics

Academics borrow equipment such as OHPs for their lecturers, inside the Colleges. Sometimes they need to borrow equipment outside their Colleges for practical training purposes. The LRCs usually have forms so academics need to sign when they want to borrow any equipment. As mentioned earlier it is quite often that students are sent by their lecturers, to bring equipment such as OHPs, so they can sign in behalf of them.

Others

The LRCs staff answers pointed that they do not have one policy for lending equipment to users from the community. However the staff of three LRCs declared that they collaborate with those who seek support when they bring letters from their establishments. This usually happens through the co-ordination of the Administration Departments and the LRCs in the Colleges. Two LRCs allow those from outside the Colleges to use equipment only inside the Centre. In addition the staff in one LRC stated that they do not lend equipment to users from outside the College. Users are required to sign forms when they borrow any materials.

The media policy on the lending of software materials is as follows.

Students

Computer-software materials generally belong to the computer section or the administrators (Heads/Assistant Heads) in the LRCs. There was only one LRC, which allowed students to borrow computer-software materials outside the LRC. There was another LRC which allows students to use such materials only inside the Centre. Students have to sign a form for borrowing any software or materials from the LRCs.

Academics

As mentioned previously the computer sections or the Administrative staff (Head/Assistant Head) in most of the LRCs are in charge of the computer software materials. The answers of the staff in the LRCs, which have some computer software in the media labs, differ from allowing academics to borrow software materials inside the LRC only, to allowing them to use such materials outside the LRC. Moreover academics also have to sign forms for borrowing any software materials.

Others

There was only one media lab member of staff who mentioned that their LRC collaborates with schools by lending them computer-software materials but that should come through the co-ordination between the Head of the LRC and a media specialist. The other media specialists mentioned that the administrators or computer specialists in their LRCs deal with this kind of service with users from outside the Colleges or they do not lend media labs' materials to users from outside the Colleges. Users from outside the Colleges are required to sign forms when they borrow any materials.

6.1.26 *What are the procedures and penalty followed with students who don't return books on time?*

6.1.26.1 Heads/Assistant Heads

The Heads/Assistant Heads of the LRCs explained that all of the LRCs have a fine system (200 pizas a day) [about 35 pence] for an item, but some LRCs are strict about the payment of fines whereas others may be more flexible. Moreover one of the LRCs staff added:

“If the student repeated that for many times he/she got a warning then could be stopped from borrowing and allowed only to read inside the LRC.”

6.1.27 Are there any materials which can't be borrowed?

If yes, can you give some examples?

Could you explain why they can't be borrowed?

6.1.27.1 Library Section

The LRC staff were asked to explain whether there are any materials which cannot be borrowed. Heads/Assistant Heads and librarians stated the following materials are not for borrowing outside the Centres: Reference books such as encyclopedias, atlases, dictionaries, statistical books, and periodicals. Some software materials also are for inside usage only as illustrated earlier in lending services. However these materials are made available for inside usage.

The staff illustrated the reasons for not lending the previous materials in LRCs libraries as follows:

There are limited copies of those materials which may be used frequently as references for certain information. They are in regular use and refer users to other materials which may be borrowed. Moreover the encyclopaedias consist of several parts and the LRCs try to avoid losing any part. Some of the materials are very expensive therefore the LRCs do not lend them to users to avoid any damage that could happen to them.

6.1.27.2 Computer Section

Most of the materials and equipment in the computer sections were defined by the Heads/Assistant Heads and computer specialists as not to be lent outside the Centres. These equipment and materials are; computers, printers, LCD data show and some software.

The reasons for not lending some equipment and materials in the computer sections outside the LRCs were that; these equipment are for inside use only also they are too heavy to be moved, to avoid any damage. The equipment usually takes so long to be repaired or to be replaced with new equipment. Also lending equipment may create a shortage for College use. Furthermore some LRCs indicated that software is not being lent for outside usage, because of the requirement of the licence to avoid copying.

6.1.27.3 Media Section

It was announced by the Heads/Assistant Heads and media specialists that the equipment and materials provided in the media labs are to support clients (students and academics) in the educational process and were dedicated for inside use only. Accordingly the LRCs staff suggested some equipment and materials in the media labs to be used only inside the LRCs or within the Colleges of Education: The materials and equipment mentioned are:

Scanners, printers, photocopiers, digital cameras, video cameras, computers, some software video, big maps, OHPs. Learning packages only academics can borrow them while students could use them only inside the LRCs.

The reasons mentioned by the staff for not lending some media section's equipment and materials outside the colleges were very similar to those reasons mentioned for computer section. In addition to the previous reasons for computer section contents the staff add that students do not have the knowledge of using some of these materials and equipment, spare parts are not available in some of the cities where the Colleges are located which makes it difficult for repairing and maintaining equipment.

6.1.28 *Does the LRC have the capability to offer a distance learning service?*

If yes, can you illustrate how that could be offered?

If no, could you mention the reasons for not developing this option?

Are there plans to do that in the Centre?

The above questions used with the Heads/Assistant Heads, computer specialists and media specialists, in order to find out the abilities of computer and media sections in providing a distance learning service.

All of the Heads/Assistant Heads, computer specialists and media specialists interviewed suggested that the LRCs are incapable of offering a distance learning service except for one LRC Head who indicated the availability of the Internet service which could offer part of this service.

6.1.28.1 The Reasons for not Developing a Distance Learning Service

The LRCs staff attributed not developing distance learning service to; the lack of qualified teachers and the need for more equipment which is difficult to provide at this time. For

example, P.C cameras which would allow video-conferencing are not available at present.

One of the Heads commented on this saying:

“The technical facility in the Colleges is too poor, you can’t even open hotmail, because it is too slow, there are too many users”

In addition there are no students studying in this manner at the Colleges of Education in Oman. The MOHE is not requesting provision of this service.

6.1.28.2 Future Plans for Distance Learning Service in the LRCs

The interviewed staff all agreed that, as far as they are aware, there are no plans yet for creating a distance learning service in the LRCs.

6.1.29 Are there any gender specific obstacles which prevent or limit students from using the services provided?

As explained earlier in (chapter four) the survey was conducted in six Colleges of Education in Oman. These comprise two Colleges for male students only, two Colleges for female students only and two mixed Colleges. Consequently the answers to this question differed between Colleges with one gender and Colleges with two genders. The Heads/Assistant Heads of Colleges with male students only and Colleges with female students only declared such problems do not exist in their Colleges except that one Head at a female College answered yes to this question saying:

“Ibri College (Female College) has 1862 students, Rustaq College (Female College) has around 2050 students, the MOHE sends the same amount of resources, equipment to each of the Colleges which makes females have less opportunity to get access to the services compared with male Colleges.”

The LRC Heads of the Colleges with mixed genders responses to this question also were different from each other. The LRC Head at Sur College explained that they allocate some carrels for male students and some for females and they have a photocopier for males and a photocopier for females therefore there was no problem for them. The Head of the LRC in Salalah College (With males and females) went further to illustrate gender difficulties in his College, which limit students from using the services provided. He believed that there is cultural sensitivity to mixing male and female students; he considers it as a big obstacle to provide a service to them together. He explained that there are classes in the LRC labs and there is a timetable for males and females. Male students can cause a problem when they

walk out of the classes during females' time in the LRC library, this causes embarrassment for females. Moreover the Head of this LRC added that their LRC opens until 8.p.m one evening dedicated to female students, and three evenings dedicated to male students.

6.1.30 Do each type of users (e.g. academics, students, males, females, others) benefit equally from the services in the Centre?

If no, can you explain in what respect do they not benefit equally and why?

There were no differences in the opportunities of using services in the LRCs section therefore the answers of the staff were gathered. As mentioned previously; four of the Colleges have only male or female students, which makes no difference in opportunities for students. The staff's answers in these four Colleges with single gender concentrated on the equal opportunities which have been provided and the benefit depends upon the user him/her self. The only thing which showed differences in opportunities was between the number of books which can be borrowed by academics over a longer period compared with students. There is also a greater flexibility for academics when they need to borrow materials or equipment. Regarding the two Colleges with both male and female students their staff illustrated the situation in their Colleges as follows.

The Head of the LRC in Sur College illustrated that there was no difference by explaining that the resources are available for everybody in the College and both of their male and female students come in the evening. Female students come from their hostel by bus in the evening and there is a lady supervisor who accompanies them. Also female students from the city (Sur) come together by taxi or they arrange that together. The LRC Head in Salalah College mentioned that the opportunity is almost the same but the cultural issues prevent them from benefiting equally. Therefore he suggests that female students allowed to keep their veils on are encouraged to use the services provided more. [Female students are being asked (by the Government) to take off their veils inside classes and the LRCs, which causes embarrassment for some of them].

Moreover students inside the campus at the Colleges have a better chance of utilising the services provided in the LRCs compared with students living outside the campus. However the services are provided equally for users and the benefit depends upon the abilities and the curiosity of the users themselves.

6.1.31 Organisation and Use of Space

It was intended in this survey to find out how well designed and prepared are the LRCs for study activities, hence the LRC Heads/Assistant Heads were asked to explain whether the LRC buildings have places designed and dedicated as study group areas or private study rooms. The questions used (Q.30, and Q31 in appendix four) were as follows:

6.1.31.1 *Is there a space in the LRC designated specially as study group area?*

If yes, where is it located?

How many students can it accommodate?

There were no places designed as study group areas in the LRC buildings, therefore the Heads/Assistant Heads announced that the LRCs have no places designated as study group areas. However two of the LRC Heads/Assistant Heads mentioned that they have some tables in the corners of their LRCs and some other tables in the libraries which could be used as study group places. The capacities of these places vary in these two LRCs between 3 - 10 and 16 - 20 students'.

6.1.31.2 *Are there any private study rooms for individual users?*

If yes, where are they placed?

How many places are there?

All of the interviewed LRC Heads/Assistant Heads declared that the LRCs building have no rooms for private study.

6.1.32 Classification System and Catalogue

The staff were asked to describe the classification and catalogue systems in the LRCs to find out what system is used in the LRCs and their usefulness for users.

6.1.32.1 *Which system of classification is applied in the Centre?*

How useful is it?

If there is no specific system yet, could you please explain why?

How much time do you think it will take to complete the classification of the library materials?

Four of the six LRCs use the initial Library of Congress (LC) classification system such as starting with headlines only for different subjects. Two Colleges do not have a particular

system yet, but have their own way of organising their collections. The LRCs are waiting for the introduction of a standardised classification system by the Ministry Of Higher Education (MOHE).

The LRC staff think that the system they have currently is to some extent useful for temporary use till they apply the Library of Congress classification system through MOHE.

The LRCs staff announced that they do not have a complete system yet, because they are waiting for the MOHE to introduce the Library of Congress system (LC system).

The staff expectations of completing the classification from the date of the survey (March and April 2001) range from six months to two years. In addition some employees in the LRCs mentioned that they have no clear idea when the system will be done.

6.1.32.2 *Could you describe the catalogue system in the library and whether it is useful and easy to use?*

Four LRCs have a simple automated catalogue system which meets most circulation purposes. This simple catalogue system has the details of materials, and users. Two of the Colleges are using a manual catalogue system, because they have not introduced an automated system yet. Again the LRCs are seeking guidance from MOHE on the application of an automated catalogue system.

6.1.33 *Is the Library automated?*

If no, when do you think it will be automated?

The interviewed staff stated that the LRCs are not automated except for the simple catalogue system, which has already been described for the circulation services in four LRCs. While two LRCs were not automated.

Needed Time to Automate the Library

The interviewees' responses to this question indicated that the library will be automated when the MOHE apply a new system for classification and catalogue as already explained in the part of the classification system. However the staff were not sure when this will be introduced.

6.1.34 Building

The LRC Heads/Assistant Heads were asked to express their satisfaction regarding the building elements in Q.35 (Appendix four). The six LRCs all have the same building design and size.

6.1.34.1 Can you talk about the building and how satisfied you are with the following?

Location of Sections and Offices in the LRC Building.

Four of the LRC Heads/Assistant considered their satisfaction with the location of sections and offices in the LRC building to be adequate. On the other hand two Heads wished that the labs were not in the hall of the LRC near the library, because when students walk into the labs for their classes or out of the labs they cause lots of noise. The Heads were satisfied with the offices.

Space

Four Heads/Assistant Heads were unsatisfied with the space in the LRCs. There were two Heads/Assistant Heads who thought the space in the LRCs is adequate. The four Heads referred their dissatisfaction with the space to the large number of students in the Colleges, the lack of study rooms and research rooms, lack of spaces for working on books, lack of offices for computer specialists/technicians.

Security

Three of the LRC Heads/Assistant Heads think security at LRCs is unsatisfactory. One of the Heads clarified that his dissatisfaction was because the back door of the Centre is locked which is not suitable in the case of fire. The other three Heads stated that the security in their Centres is adequate. One of the Heads said:

“Security is fine, maybe, because we have girls and they don’t have cars and they live in the campus.”

Fire Alarm System

Four LRC heads considered the fire alarm system to be working well, one of those Heads mentioned that students need to be trained how to respect such service because they press on it for no reason. There were only two Heads who believed that fire alarm system in their Colleges do not work properly one of them attributed that to the lack of maintenance.

Noise

Five Heads/Assistant Heads considered the noise level to be high or that it is considered a problem in the LRCs. The other LRC Head thought that the noise level is reasonable he/she referred that to the unavailability of places where students can rest and to students walk to the labs in the LRCs which as a result causes noise.

Ventilation/Air-conditioning

Generally five LRC Heads/Assistant Heads considered ventilation/air-conditioning satisfactory. There was only one of the LRC Heads who considered the air-conditioning system inadequate in the LRCs. His opinion was based on the need for the system to be adjusted everyday and inadequate maintenance.

Lighting

Lighting was considered inadequate by five Heads/Assistant Heads. There was only one Head who thought lighting is at an acceptable level.

Shelving

The majority of the Heads/Assistant Heads considered shelving to be at an adequate level. There were two Heads who wanted to see a better shelving provision. One of them would prefer wooden shelves. The remaining Head considered the shelving to be adequate but still believed that there is a lack of space between shelves.

Furniture

Half of the Heads considered the furniture to be of a good standard and the other half thought it is at an acceptable level. The second group indicated that the furniture had started to deteriorate and chairs in the labs are not of good quality.

Building Maintenance

Five of the interviewed Heads/Assistant Heads considered building maintenance to be good or adequate. There was only one Head who expressed his dissatisfaction with the maintenance of the building he illustrated his dissatisfaction with two points; firstly the ceiling is too high to do some works such as the need to change a light bulb for example, secondly the tiles are not adequately adhered to the floor.

The Building Generally

The interviewed Heads/Assistant Heads gave a positive overall impression of the building in general, particularly the appearance of the Centre from outside and the main hall. The interviewees wished that the library was not surrounded by labs because there are problems caused by the noise of students' movement all the time. They also would prefer to see more space for library duties. Finally one of the Heads added that the electricity in his/her Centre is not very good.

6.1.35 Does the LRC have storage?

If yes, where is it located? Is it big enough?

If no, is the LRC in need of storage? If yes, why?

All of the Interviewed Heads/Assistant Heads declared the LRCs have no storage space. Two of the Heads mentioned they utilised the space under the stairs of the building's exits to store some materials.

The Need for Storage

All of the Heads/Assistant Heads suggested that the LRCs need storage space. The interviewees mentioned reasons to reinforce the need for storage. The reasons mentioned were:

- The amount of materials and equipment keeps rising and the building is not getting bigger.
- To store extra things such as books, and equipment, especially new supplies when they arrive before using them.
- To keep boxes and damaged things or equipment when they are not in use.

In addition an LRC Head commented on the need for storage saying:

"There are books on shelves which should be moved out because, we are running out of space and they haven't been used for 2 years."

6.1.36 Further Advantages and Disadvantages Related to the Building

The Staff have been asked to add any advantages or disadvantages regarding the building, other than those discussed.

6.1.36.1 *Are there any advantages or disadvantages regarding the LRC building other than those you mentioned earlier?*

Some of the LRC Heads/Assistant Heads illustrated some more advantages and disadvantages related to the LRC building. Two of the Heads/Assistant Heads commented on some disadvantages of the building. The disadvantages they thought were: The back door (emergency door) allows students to come from upstairs to the ground floor (the library hall) which can give a chance to take books and this is against the security. Therefore the back door was locked which is against safety considerations. The LRC Head in Rustaq College said:

“We need more study space, we have so many students [more than 2000 students]”.

This LRC Head also demonstrated that the study carrels are too high (they may be 5 ft) and this gives a very close atmosphere. While students like to have an open atmosphere where they can work together quietly in a friendlier place. Moreover one of the LRC Heads believed that there is potential room for improvement within the present status in the LRCs. Two other LRC Heads stated some advantages of the buildings. The advantages they have were: that the LRC buildings have all of the latest technology which helps to prepare and equip the classes on the first floor for some departments. Also the LRC staff are convenient and this makes the building more dynamic. The windows at the top of the building bring some natural light. One of those two Heads considered the circulation desk and the floor to be nice or attractive.

6.1.37 *Is there any co-ordination or collaboration between the LRCs in the Colleges of Education?*

If yes, can you please specify?

6.1.37.1 Heads/Assistant Heads

All of the interviewed Heads/Assistant Heads mentioned that there is co-ordination and collaboration between the LRCs. The Heads mentioned that there is a committee of LRC Heads which meets regularly, every six weeks in Muscat at the MOHE, and discusses different issues such as collection development, new policies, information technology (IT) issues, software, Library of Congress system (LC) and training the LRC staff such as workshops in or out of the Colleges. During these meetings the Heads discuss orders to meet the requirements of the LRCs. The Heads of LRCs encourage the LRC staff to visit

the LRCs in other Colleges and meet LRC staff members to learn from each others experiences. This kind of visit almost happens between the LRCs in the Colleges who are not too far away from each other. For instance Nizwa and Rustaq Colleges collaborate in cataloguing.

6.1.37.2 Librarians

The answers from five of the librarians interviewed showed that there is a co-ordination and collaboration between the staff members in the LRC. On the other hand the librarian interviewed in Salalah College announced that they do not have this opportunity for co-ordination with other librarians in other Colleges and only their Head has co-ordination with other Heads. That might be due to the distance between the City of Salalah and the other cities where Colleges of Education are located (see the map of Oman, p.7). However the librarians who declared co-ordination and collaboration between their LRCs illustrated that the co-ordination and collaboration between them were through mutual visits between the LRCs members for consultations and co-ordination in matters connected to the temporary classification and cataloguing system in some Colleges. There are consultations by telephone between LRC members. Moreover one of the librarians added that there is an exchange of books for loan between the LRCs when needed.

6.1.37.3 Computer Specialists/Technicians

All the computer specialists interviewed declared that there is co-ordination and collaboration between computer specialists in the LRCs of the six Colleges. The main issues they co-ordinate and collaborate in were; visits between Omani computer staff members. For instance there is collaboration between Nizwa College and Rustaq College because they are close to each other. There are discussions by telephone to solve technical problems for the equipment, to exchange consultations on dealing with some of the new programmes, and to exchange programmes, and materials in some cases.

6.1.37.4 Media Specialists/Technicians

The media specialists' answers did not show any difference in the co-ordination and collaboration between them than that already mentioned for computer specialists. However the answers of the media specialists also included visits and consultations between media members in the LRCs. This is with the exception of the answer of the interviewed specialist

in Salalah College who mentioned that contact between them and other LRCs members is rare.

6.1.38 Co-ordination and Collaboration Between the LRCs and Other Institutions

The Heads/Assistant Heads were asked to illustrate any co-ordination and collaboration between the LRCs in the Colleges of Education and other institutions in the following question.

6.1.38.1 *Is there any co-ordination or collaboration between the LRCs in the Colleges of Education and other institutions such as Sultan Qaboos University and the Technical Colleges or other educational institutions?*

If yes, can you please specify?

If no, can you explain why?

All of the interviewed Heads/Assistant Heads declared that there is co-ordination or collaboration between the LRCs in the Colleges of Education and limited institutions such as Sultan Qaboos University (SQU) and Shariah and Law College in the MOHE. The Heads demonstrated that SQU provides support in the training of the staff of LRCs by setting up workshops to train them in computer and media facilities. The LRCs also try to benefit from the Library at SQU by looking at the library management system and network. The University was helping the LRCs in the Library of Congress classification system. Moreover there is a co-ordination between the Shariah and Law College in the MOHE and the LRCs through researching a library management system together. In addition an LRC Head indicated that there was no collaboration in interlibrary loan for example and there was not any collaboration with other institutions. This LRC Head considered that due to the lack of arrangements and communication.

6.1.39 *Does the Centre get feedback from users? If yes, how?*

The Heads/Assistant Heads' answers showed that there were a number of ways of receiving feed back from users in the LRCs. Verbal feedback, as direct comments from users represented the most common means. It was considered the most popular feed back method by four of the Heads. Questionnaires and Deans' comments were methods included in two of the Heads answers. One of the LRCs has a student committee. One of the librarians organises a focus group of students to represent the views of the LRC

services. In addition one of the LRC Heads mentioned that they get feedback from users through the students' affairs, suggestion box in the College.

6.1.40 *How is the quality of work in the Centre evaluated?*

Evaluation is considered important by three of those surveyed who stated that they assess the quality of the work of the LRC. Two Heads limit evaluation to considering the satisfaction of users with the service. Finally one Head declared that there is no specific method of evaluating the quality of work at the LRCs in the College of Education.

6.1.41 *Please describe successes of the LRC what is good and positive.*

There were only five Heads who commented on this question, because there was an Assistant Head who did not provide a response with his written answers to this question. The staff's support for users was considered the most positive element for those five Heads who commented. LRC staff have acquired skills in educational technology which is recognised as a major achievement for the LRCs. Most of the interviewees appreciated the good relationships between the LRC staff and between themselves and users. Moreover two of the Heads indicated the importance of the provision of modern educational aids in the LRCs which makes the learning and teaching more exciting.

6.1.42 *How many of the LRC objectives do you think have been met? Is it;*

- Excellent - Very good -Good - Medium - Poor

Generally Heads considered that their LRCs were achieving their objectives. One Head considered this to be excellent. Three Heads rated their success as very good, while the remaining two Heads stated that their LRCs were good at meeting their objectives.

6.1.43 *Do you have any suggestions which may contribute to improving the effectiveness of the LRC?*

As mentioned earlier in chapter four the sample interviewed consisted of 24 employees of the LRCs staff, six Heads/Assistant Heads, six librarians, six computer specialists/technicians and six media specialists/technicians. The interviewees have been given a chance to include suggestions which may contribute to the effectiveness of the LRCs. The most common suggestions by staff were analysed as follows:

6.1.43.1 Space

The issue of space represented the most common problem for the staff. Hence 12 of the sample (50%) complained about shortage of space in the LRCs. Comments included: The need for quiet reading areas, group study places, and storage for textbooks. Storage for textbooks requires large amounts of space, particularly when there can be up-to 150 copies of one book. Accordingly the LRCs staff suggested that, textbooks should be moved from the LRC building. It was suggested that the labs (computer and media labs) could be moved from the ground floor to the first floor. This would allow the halls of the ground floor to be utilised for the library purpose such as reading rooms, group study areas, and a place for audio-visual activities (for example; cassettes, TV and video). This would also free more space for library materials' and technical works. Moreover the library would be quieter if the labs moved to the first floors.

6.1.43.2 Staff

The second issue those interviewed concentrated on was matters related to the staff at the LRCs. This element was included by 11 members out of the 24 interviewees (46%). They identified the need for more members of staff at the LRCs in order to match the needs of users in the Colleges. They also focused on the importance of employing suitable people with a qualification related to education especially those who are serving Educational Colleges. Training for LRC staff was identified as a high priority by these staff in order to ensure that they are well qualified for the work they are doing. This priority reflects the fact that many media lab staff do not possess qualifications relevant to their jobs.

6.1.43.3 Collection Development

The library collection was seen as a very important element by users reflected in eight respondents (33%) suggesting that the collection should be developed with increased reference works and increased subscription to both printed and electronic periodicals.

6.1.43.4 Less Centralisation

Centralisation at the Ministry of Higher Education (MOHE) was considered an obstacle by seven interviewees (29%). They illustrated that the LRCs have no independent budgets and any purchasing of materials or equipment comes through the MOHE. This centralisation causes delay in making provision for any LRCs subject. This also limits the involvement

of the LRCs staff in the selection of materials. Therefore those LRCs staff members suggested decreasing the level of centralisation with the allocation of an independent budget for each LRC. This would allow the purchase of resources to meet their needs easily as well as the local identification of the most relevant materials for users. Some of the LRC staff members think that the MOHE occasionally purchases too many copies of some textbooks and some books which are irrelevant to the needs of the clients.

6.1.43.5 Structure For the Organisation of Work

Six interviewees (25 %) were keen to see more detail in the organisation of work from the MOHE. They stated that the handbook they have currently has not been approved yet by the MOHE, but they use it pending such approval.

6.1.43.6 Provision of Equipment

Provision of more equipment was considered as a main factor of enhancing the effectiveness of the LRCs by five members (21%) of the sample. They emphasised the need for purchasing more new equipment in order to enable the LRCs to offer an effective level of service to clients. Those five members stated that some equipment is old and some is insufficient for the number of users. Some of their suggestions were; improving the Internet access, because it is very slow, and provision of a CD re-writer for the LRCs.

6.1.43.7 Enhancement of Users Skills

Some of the interviewees indicated the importance of improving users skills, so they can utilise the services provided. Four respondents (17%) emphasised the importance of enhancing the skills of the academics to enable them to become qualified in technology. As a result when academics become more expert in using the educational technology materials and equipment they will receive a greater benefit from the service and so will encourage their students to make use of the resources to a greater extent. Consequently this will lead to enhancing the effectiveness of the LRCs.

6.1.44 *Is there anything else you want to say about the LRC that hasn't been discussed?*

There were only eight members of the 24 interviewees (33%) who added their comments to this question. Some of their comments are already included in their answers to the previous

questions. However the subjects they highlighted are included in the following.

6.1.44.1 Heads/Assistant Heads

An LRC Head suggested that the MOHE should decentralise the control of the LRCs.

He/she indicated a disadvantage attributed to centralisation saying:

“The MOHE should look again at the system of purchasing things and try to make it easier to get things done, because it is very centralised”.

Another LRC Head wanted to see more attention from the MOHE to the LRCs therefore he suggested:

“ The LRC is important and it should not be trashed.”

As already mentioned in the accessibility part of this chapter; the timetable is divided between male and female students in Salalah College, so female students get embarrassed to use the LRC when male students are there. Therefore the LRC Head in Salalah College suggested:

“Male and female students together should be analysed and discussed face to face to find out the reasons which prevents them from using the LRC resources in order to find suitable solution.”

6.1.44.2 Librarians

In addition to the previous suggestions one librarian expressed the view that librarians should have access to the Internet to work with students on the Internet and assist them to meet their needs. He/she stated that at present they do not have computers in the library hall in their LRC. The security gates have been described as ineffective by a librarian, because he/she stated that gates some times make sound for no reason even if there is nobody passing. The same librarian also added that; books arrive late to the Colleges even after they start the new academic year. Accordingly there is a requirement for a stricter procedure from the MOHE to ensure the arrival of books before the beginning of each academic year.

6.1.44.3. Computer Specialists/Technicians

A computer specialist indicated that computers are very slow to provide an Internet service. Therefore he/she emphasised the importance of developing the Internet network to be fast enough. Moreover the same specialist suggested making changes to the building of the

LRCs to increase the number of halls in the upper floor to provide reading rooms. The computer specialist here indicates the corners at the library ceiling to be made into rooms for reading. Another computer specialist believed that the LRC staff have duties beyond their energy/abilities which should be reconsidered. In addition this computer specialist also emphasised the necessity of creating an appropriate specification for Heads of LRCs before they are appointed to the post.

6.1.44.4. Media Specialists/Technicians

Qualifications of staff also was important to one of the media specialists therefore he/she noted that some of the media specialists' qualifications are irrelevant to the works they are performing. Another media specialist emphasised the need to extend the space in the media lab he/she indicated to the necessity of extending the media lab space to make it more effective, because the space is inadequate and the equipment is increasing significantly.

This specialist mentioned an example saying:

“Some times there is a need to show more than one thing for more than one group on TV or video unit and the media lab is only one hall. The number of students using the lab has doubled, because of the increasing number of students.”

The data extracted from interviewing the LRCs staff will be discussed and examined in the coming chapters.

CHAPTER SIX

Part Two

6.2 Results of the Interviews of the Staff of LRCs/Libraries in Canada

6.2.1 The Canadian Universities Surveyed

This survey was conducted with the staff from Learning Resource Centres (LRCs) /Libraries in six Canadian Universities; (1) Mount Saint Vincent University, (2) Dalhousie University, (3) Saint Mary's University, (4) University of Toronto, (5) York University and (6) McGill University.

6.2.2 Personnel Interviewed

The interview manner comprised of nine people working in Learning Resource Centres or Libraries at the six Universities described above. Of these seven interviewees were female and two were male.

6.2.3 The Purpose of the Survey

In this survey I investigated the Canadian experience of LRCs/Libraries. That is because the LRCs in the Colleges of Education in Oman are managed by Canadians in order to learn from the Canadian experience. Additionally, the Ministry Of Higher Education in Oman (MOHE) plans to benefit from the Canadian experience in LRCs. Accordingly in this survey, my main aim is to explore the similarities and differences between the Canadian and the Omani experiences in order to consider the effectiveness of LRCs in Oman and maximise the benefit of the Canadian experience. Moreover I intend to find out whether there is a Canadian model for LRCs which can be exported to Oman. Some of the data is collated below.

6.2.3.1 Description Of Learning Resource Centre (LRC)/Library

As may be expected, each of the six surveyed Universities has, at least, a library and computer service. The six Universities also have other sections such as Learning Resource Centre, audio-visual equipment, media service section. Sometimes the university integrates all this provision within the library while sometimes there are separate sections or only

some provision is joint. For example media services and computer labs could be integrated. All of the six Universities have Media services or Audio-visual services as an independent section or included in one of the other sections. Four Universities have a Curriculum Resource Centre or Collection. In the surveyed Universities I found only one section or Department which was called a Learning Resource Centre (LRC) and another one called The Education Resource Centre. Two Universities have Departments or sections called Information Technology or Computer and Technology and each of these is divided to computer labs and media services.

6.2.4 Staff

6.2.4.1 Liaison of LRC/Library Staff and Academics

Overall those interviewed declared positive relationships and liaison between the staff at Learning Resource Centres or Libraries and the faculty at their Universities.

6.2.5 Users

Five of the surveyed LRCs/Libraries provide services for students, academics and their local communities, While one Education Resource Centre served only the Faculty of Education, students and academics. Other users from the University or the local community can use the libraries at the University.

6.2.6 Services

6.2.6.1 General Services in the LRC/Library

Provision and circulation of materials, use of audio-visual equipment and interlibrary loan services are common services in all of the six Universities. Four of the Universities, which have Curriculum Resource Collection, support students and teachers in teaching and learning. The entire sample pointed out that they help clients to improve learning and teaching by supporting them and providing them with the required equipment and materials for their classes. They also train users on utilising the equipment provided. The six Universities vary in having study carrels, individual study rooms or rooms for study groups. In addition the LRCs/Libraries at the six Universities offer all of the ordinary services and materials such as printed and unprinted materials as well as audio-visual and computing facilities.

6.2.6.2 Distance Learning Service

All six Universities offer a Distance Learning service for their students. Some of these Universities have distance education programmes. This varies from delivering resources to students inside or outside Canada to on-line materials or online conferences.

6.2.7 Organisation

6.2.7.1 Classification System

Four Universities use the Library of Congress classification system. While two particularly in Toronto use the Dewey Classification system, because public libraries and schools in Toronto are using this system.

6.2.7.2 Catalogue System

All six Universities have an on-line catalogue system - Open Public Access Catalogue (OPAC).

6.2.8 Evaluation

The surveyed LRCs/Libraries have different methods of evaluating the quality of work. Some of these methods are: writing annual reports to their Universities, Committees, self-assessment from the directors or co-ordinators of LRCs/Libraries, surveys, discussions with clients and informal feed-back from users etc. Almost all of these LRCs/Libraries use several of these methods to evaluate their services and they don't follow just one method of evaluation to explore and improve the quality of service.

CHAPTER SIX

Part Three

6.3 What Oman Can Learn from the Canadian Experience?

6.3.1 What is the Canadian model?

As mentioned earlier in the Canadian section (chapter six - part two) the main aim of researching the Canadian experience of LRCs was to find out whether there is one Canadian model for an LRC. In addition it was intended to explore the similarities and differences between the Canadian and the Omani experiences. This is to enhance the effectiveness of the LRCs in Oman through utilising the benefits of the Canadian experience.

The survey of the six Canadian Universities revealed variations in terminology between the Universities. Only one used the term "Learning Resource Centre" while in another there was an Education Resource Centre. The other four Universities use different names such as Information Technology unit or Computer and Technology unit and each of these is further sub-divided into computer labs and media services. Four of the six Canadian Universities have a curriculum resource centre/collection to support students and teachers in teaching and learning. A curriculum resource centre/collection consists of curriculum materials that students can use for their practical activities such as presentations and classes.

Shortly, after the visit to Canada I had a meeting with the Development Advisor in the Centre for British Teachers Education Services & Partners (CFBT) in Oman. This Advisor recruits the Heads of the LRCs in Oman. I gave a brief introduction about my study and my visit to the Canadian Universities then asked her about the Canadian model for LRCs. She explained that "*There is no Canadian model for the LRCs except that the three sections; library, computers and media services are integrated.*" The Development Advisor added that the original concept of the LRCs in Oman was based on the model at York University in Toronto.

There are five libraries at York University of these the main one is Scott Library. It is dedicated for humanities and social science. In addition to the libraries there is an

“Education Resource Centre (ERC)” at the Faculty of Education. Also there is a separate Department called the Instructional Technology Centre which offers audio-visual services for anyone on campus.

The Education Resource Centre (ERC) belongs to the Faculty of Education and is separate from the Main Library. It is divided into two units — a library and a computer lab. The library contains a curriculum collection which comprises materials for practical activities in teaching. It also contains materials for audio-visual services. The computer lab is dedicated for class sessions and students’ self-learning.

However, by looking at the six LRCs/Libraries in Canadian Universities including York, I could not recognise a specific model for the Canadian LRCs/Libraries. Therefore, as already explained in chapter six-part two (in Description of LRC in Canada), the six Canadian Universities have a range of services including libraries, computer services, audio-visual equipment or media service section etc. Sometimes the University incorporates these sections in the library while sometimes each section is separate. Thus each University organises its LRC/Library in its own way to meet its own needs.

As mentioned previously the Colleges of Education in Oman were provided with LRCs based on the Canadian experience. It is clear from the Canadian experience that no single unique model of an LRC exists. It was therefore important to consider the developments in Canada in order to form the basis of a hypothetical model against which to test progress in Oman. This primarily considered the management structure and how this should be applied to the integration of services (library, computer labs and media labs) in the LRCs. The management structure is fundamental to the support which can be offered to students and academics to enable effective learning and teaching. However, the comparative study was considering primarily the management and organisational functions. The research findings reveal a tension between the two ideas (management driven and service based model) which need to be minimised in order to make the LRC model with its different sides (management and service) more coherent.

6.3.2 What Oman can Learn from the Canadian Experience with LRCs.

There are some services offered in the Canadian LRCs/libraries which are not provided in the Omani LRCs. These services include a curriculum resource collection, interlibrary loan services, rooms for individual and group study, and on-line services in addition to methods of evaluating the quality of work of LRCs. These services can be described as: —

Curriculum resource collection

The LRCs/Libraries in Canada have curriculum resource collection for students and teachers in schools. The collection covers all of the subjects. It usually contains video programmes, guidebooks for students from the Ministry of Education, picture books, audio-visual (cassettes and tape cassettes), some references and articles, and CD-ROMs and software packages.

Interlibrary loan services.

This can be done within the Colleges of Education themselves and with the Sultan Qaboos University (SQU) and other academic institutions.

Rooms for individual and group study

Overall the Canadian Universities have rooms for individual study and group discussions activities. According to the data collected from the survey in Oman the LRCs there currently lack this service.

On-line services

The Canadian Universities have an on-line catalogue system - Open Public Access Catalogue (OPAC). Although the current students at the Colleges of Education are full-time students, provision of an on-line service will help students to get better access to information from both on-campus and off-campus. This also would promote access to a distance learning service in the Colleges of Education, as is available in the Canadian Universities.

Evaluation

The surveyed Canadian LRCs/Libraries have a variety of methods of evaluating the quality of work such as annual reports, committees, self-assessment from the directors or co-

ordinators of LRCs/Libraries, surveys, and discussions with clients. On the other hand the Omani LRCs depend on a limited range of methods of evaluating the quality of work. These methods are exclusively the assessment of the Heads of LRCs and the satisfaction of users. Therefore it would be very useful if the evaluation of work in the LRCs in the Colleges of Education adopted similar methods to those used in the Canadian LRCs/Libraries.

These services would enhance the provision in the LRCs in Oman and it is recommended that such facilities are developed in Oman.

CHAPTER SEVEN

OBSERVATION

7.1 Introduction

As already explained in the section on methodology, this chapter includes the features concerned with the interaction between LRC staff and users, users behaviour and activities in the LRCs, building of the LRCs, and the related aspects. This chapter also covers general notes concerned with use of materials, collaboration of staff of LRCs, organisation, instructions and signs, and facilities such as photocopying and microteaching facilities.

The classification of satisfaction used in this chapter is based on the experience of the researcher gained through observation.

7.2 How the LRC Staff Interact With Clients

7.2.1 What is the initial response to clients?

From the observation of the LRC staff's initial response to clients, the staff adopt a reasonably welcoming manner to users in most of the Colleges. The only difference noticed during the observation was that the LRC staff in Nizwa College sometimes do not respond quickly when they are busy with other work. Overall the initial response from LRC staff to users was reasonable.

7.2.2 Does the service help users to meet their needs?

Generally the LRC's staff direct users to the right places to find their requirements, then, if they require further assistance, they help them.

7.2.3 Are there any other relevant issues about staff interaction?

In the LRC in Sur College there were notes at the circulation desk, which encouraged the clients to ask for support. In Salalah College it was noticed that librarians read newspapers or talk to each other when there were no clients asking for service or assistance. The staff of the LRCs in the other four Colleges responded in a manner similar to that described earlier.

7.3 Users Behaviour and Activities

7.3.1 Activities

While conducting the observation I tried to identify the most common activities students perform in each section of the LRCs. There was little variation between the six colleges in the activities of students. Therefore the students' activities have been explained together in each section.

7.3.1.1 Library Section

Reading at the library was noted to be the most popular activity practiced by students in five Colleges. Writing was considered to be the second activity that students do in the library in four Colleges. Talking and socialising was noted as a third activity for students in the library of the LRCs.

7.3.1.2 Multi-Media Laboratory Section

Working on the Internet was the most popular activity for students using the multi-media lab (self-access lab). Typing has been noted to be the second most common activity practiced by students at the multi-media lab.

7.3.1.3 Media Laboratory Section

Studying in groups in the media lab was the most common activity of students in this area. The next most popular activity was the production of materials. Watching video represented the third activity for students.

7.3.2 *What materials or equipment are used most frequently by the users?*

Looking at the most commonly used materials or equipment in the LRCs in general showed that computers and textbooks are most popular with the students. After those two elements users seem to use OHPs, scanners, stereo, LCDs (data show) and printers more than the other services provided in the LRCs.

7.3.3 Noise Level

The noise level in the library section of the LRCs was considered very high in the male students' Colleges (Nizwa and Sohar) and high in the other Colleges. The level of noise in

the multi-media lab and media lab at all six Colleges was generally considered to be reasonable.

7.4 Building

7.4.1 Availability of Study Spaces in the LRCs' Sections

- Very Sufficient (V-S) - Sufficient (S) - Fair (F) -Insufficient (I) -Very Insufficient (V-I)

Availability of study spaces in the LRCs sections	College					
	Nizwa Male	Sohar Male	Ibri Female	Rustaq Female	Sur Mixed	Salalah Mixed
Library	F	S	F	V-I	I	F
Multi- Media lab	I	S	I	V-I	F	I
Media lab	S	S	I	V-I	I	F

Table 7.1 Availability of study spaces in the LRCs' sections

7.4.1.1 Library Section

The table (7.1) shows that the space in the library section was sufficient only in one College (Sohar) while the spaces were at a fair level in three Colleges Nizwa, Ibri and Salalah. Moreover in the remaining two Colleges: (Sur and Rustaq) spaces were at insufficient and very insufficient levels respectively.

7.4.1.2 Multi-Media Lab Section

The number of spaces in the multi-media lab section in some of the Colleges (Nizwa, Ibri and Salalah) was considered to be insufficient. The multi-media labs in Sohar and Sur Colleges were stated to be at sufficient and fair categories respectively. Rustaq College was considered to be less satisfactory compared with the other Colleges, being at a very insufficient level.

7.4.1.3 Media Lab Section

Availability of spaces has reached a sufficient level at two Colleges (Nizwa and Sohar). The situation was fair at Salalah College. While there was an insufficiency of space

identified in the media lab section in both Ibri and Sur Colleges. The availability of space in the media lab in Rustaq College was considered to be very insufficient as was the unavailability of space in its library and multi-media lab.

It is apparent from the above that there is a shortage of space in the three sections of the LRCs (library, multi-media lab and media lab). This shortage is most obvious in Rustaq College.

7.4.2 Features Related to the Building

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (U) -Very Unsatisfactory (VU)

Subject	Level of satisfaction (Categories)
Accessibility	Satisfactory
Security	Fair
Ventilation / Air-conditioning	Very Satisfactory
Lighting	Fair
Furniture	Satisfactory
Location of the Centre	Very Satisfactory
The building generally	Very Satisfactory

Table 7.2 Features related to the building

It can be seen from the satisfaction categories described above that ventilation/air-conditioning and location have been considered very satisfactory. Furniture at the LRCs was identified to be at a satisfactory level, while lighting and security were stated to be fair. Overall the general impression reached regarding the LRCs building indicates a very satisfactory standard.

7.5 General notes

7.5.1 Equality of Use of the Services for Females and Males

Since four Colleges have exclusively either male students or female students this subject applies only to the two mixed gender Colleges (Sur and Salalah). The observation showed that there were equal opportunities in the use of services for both genders in Sur College.

Although the treatment is equal, for both genders in Salalah College there is a division of timetable between male and female students. Male students are likely to get more opportunities to use the facilities than female students. This was due to more hours being allocated for male students than for female students. The division of evenings also could affect the equality of opportunity between the two genders. The LRC in Salalah College opens four evenings of which three are allocated for male students and one evening for female students. These divisions were made according to the number of students of each gender (696 male students and 350 female students) as well as in recognition of cultural differences, which prevent female students from benefiting from regular evening availability. Female students usually are restricted from leaving their houses except with relatives or with a group of female students and they are expected to return to their homes after their lectures. Furthermore the situation is even more complicated for them in the evening.

7.5.2 What level of staff support and supervision is there at the Multi-Media lab for the use of computers and Internet?

- Support:

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (u) -Very Unsatisfactory (VU)

- Supervision:

-Very Sufficient (VS) -Sufficient (S) -Fair (F) - Insufficient (I) -Very Insufficient (VI)

College	Support	Supervision
Nizwa	S	VS
Sohar	F	F
Ibri	VS	S
Rustaq	-- --	-- --
Sur	-- --	-- --
Salalah	S	VS

Table 7.3 Level of staff support and supervision at the Multi-Media lab.

7.5.2.1 Support in the Multi-Media Lab

The table (7.3) shows that there is a satisfactory level of support in the computer service in Nizwa and Salalah Colleges. The staff at the multi-media lab at Ibri College provide a very satisfactory support for users. The support in the multi-media lab was stated to be fair in

Sohar College because there was only one computer specialist who undertakes both support and supervision duties.

I did not manage to observe the support and usage of Internet in the multi-media labs in Rustaq and Sur Colleges, therefore no answers were included for them.

7.5.2.2 Supervision on the Usage of the Internet

The table (7.3) also shows that there is a very sufficient level of supervision on the usage of the Internet in the multi-media labs in Nizwa and Salalah Colleges. There is a sufficient level of supervision in the multi-media lab from the staff at Ibri College on the usage of the Internet. Again the table shows us there is a fair level of supervision on the usage of the Internet in the multi-media lab in Sohar College. However the data from the interviews with the LRC staff indicates a sufficient level of supervision on the use of Internet through the presence of the computer technicians in the labs. The history of sites visited by users through the main servers can also be checked.

7.5.3 Organisation of Materials (e.g. books, periodicals, Journals and equipment etc)

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (U) -Very Unsatisfactory (VU)

College	Level of organisation of materials
Nizwa	F
Sohar	U
Ibri	F
Rustaq	F
Sur	F
Salalah	F

Table 7.4 Organisation of materials

From my visit to the Colleges and the observation of the LRCs the disorganisation (of books in particular) was one of the features which I have noticed. The above table (7.4) shows that the organisation was considered fair at all Colleges except at Sohar College where it was stated to be unsatisfactory.

7.5.4 Instructions About Using Services, Availability and Usefulness

- Availability:

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (U) -Very Unsatisfactory (VU)

- Usefulness:

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (U) -Very Unsatisfactory (VU)

College	Availability	Usefulness
Nizwa	VU	VU
Sohar	VU	U
Ibri	S	S
Rustaq	S	VS
Sur	U	F
Salalah	VU	VU

Table 7.5 Availability and usefulness of instructions

7.5.4.1 Availability of Instruction

It was intended to use the observation to assess the availability and usefulness of instructions, which guide and assist users to benefit from services such as E-mail, Internet and collection etc. The availability of instructions was considered very unsatisfactory at the LRCs in three Colleges (Nizwa, Sohar, and Salalah) and it was identified as unsatisfactory at Sur College. The table (7.5) shows that the availability of instructions was stated to be satisfactory in Ibri and Rustaq Colleges. The overall opinion regarding the availability of instructions in the Colleges indicates an unsatisfactory level.

7.5.4.2 Usefulness of Instruction

The table (7.5) shows that the usefulness of the instructions in the LRC of Rustaq College was very satisfactory. The usefulness of instructions in Ibri LRC was satisfactory which shows less satisfaction than the situation in Rustaq College. The level of satisfaction dropped to fair and unsatisfactory in Sur and Sohar respectively. The usefulness of the instructions at Nizwa and Salalah Colleges indicates a very unsatisfactory level which represents the lowest category of satisfaction. Overall the availability of instructions was very limited but what was available represents a benefit for users.

7.5.5 Signs Availability and Clarity

- Availability:

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (U) -Very Unsatisfactory (VU)

- Clarity:

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (U) -Very Unsatisfactory (VU)

College	Availability	Clarity
Nizwa	F	S
Sohar	U	F
Ibri	U	S
Rustaq	S	VS
Sur	F	VS
Salalah	F	S

Table 7.6 Availability and clarity of signs

7.5.5.1 Availability of Signs

Rustaq College represented the only College which achieved a satisfactory category in the availability of signs in the LRCs. The availability of signs was suggested to be fair for Nizwa, Sur and Salalah Colleges. While the situation was considered unsatisfactory at Sohar and Ibri Colleges. The table (7.6) shows that generally the availability of signs did not reach a satisfactory level.

7.5.5.2 Clarity of Signs

Clarity of signs was considered very satisfactory in Rustaq and Sur Colleges and satisfactory in Nizwa, Ibri and Salalah Colleges. The least clear signs were stated to be at a fair level in the LRC of Sohar College. The table indicates that clarity of signs generally was satisfactory.

7.5.6 Notice Board (whether it is well organised and up-dated)

- Organisation:

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (U) -Very Unsatisfactory (VU)

- Up-dating:

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (U) -Very Unsatisfactory (VU)

College	Organisation	Up-dating
Nizwa	VS	S
Sohar	S	F
Ibri	VS	S
Rustaq	S	F
Sur	S	F
Salalah	S	S

Table 7.7 Notice board

7.5.6.1 Organisation of Notice Board

As the table (7.7) shows the organisation of the notice board was very satisfactory in Nizwa and Ibri Colleges. The organisation of notices was considered satisfactory in the other four Colleges (Sohar, Rustaq, Sur and Salalah).

7.5.6.2 Up-dating of Notice Board

The up-dating of the notices on the boards was identified as satisfactory in Nizwa, Ibri and Salalah Colleges. The other three Colleges Sohar, Rustaq and Sur showed less up-dating of notices as they were only at a fair level of satisfaction in the table (7.7).

7.5.7 Photocopying Services

-Very Satisfactory (VS) -Satisfactory (S) -Fair (F) - Unsatisfactory (U) -Very Unsatisfactory (VU)

College	Photocopying services
Nizwa	F
Sohar	S
Ibri	F
Rustaq	U
Sur	F
Salalah	S

Table 7.8 Photocopying services

There were only two Colleges (Sohar and Salalah) which provided a satisfactory level of photocopying services. The photocopying services in Nizwa, Ibri and Sur Colleges were suggested to be at a fair category. Rustaq College had the least satisfactory photocopying service indicate by an unsatisfactory level.

7.5.8 Micro-teaching Facilities

Under the supervision of lecturers, students practice teaching in an equipped room which usually has video camera, video, TV, and LCD data show to record the students' performance while training to teach before they go to practice in schools. Through the observation, facilities and places for micro-teaching activities have been explored. Sur, Salalah and Nizwa Colleges have dedicated places for micro-teaching facilities. These places in Sur and Salalah Colleges are equipped with the previous mentioned materials (video camera, video, TV, and LCD data show) and these facilities were suggested to be very satisfactory for the teacher-training. Although Nizwa College has a micro-teaching lab the equipment is located in the media lab and the staff move it to the micro-teaching lab when needed, except for the TV which is always in the micro-teaching lab. These facilities in Nizwa College were considered to be at a fair level. The other three Colleges (Sohar, Ibri, and Rustaq) have no dedicated places for micro-teaching activities, students and teachers run such activities in any classroom. The facilities in these three Colleges were considered to be at a fair category.

CHAPTER EIGHT

DISCUSSION OF THE EFFECTIVENESS OF THE LRCs

8.1 Introduction

This chapter considers the purpose of the study and related aspects. The first of the research questions "*Q.1. How effective are the LRCs in the Colleges of Education?*" is addressed in this section. Thus the discussion part begins by referring to aspects related to the evaluation of LRCs in the literature review. The aims of the LRCs' in the Colleges of Education in Oman are described and discussed. Afterwards this chapter compares the aims of the LRCs, with the aims identified in the literature review (in chapter three). This is followed by a discussion of the achievement of the LRCs' aims in the Colleges of Education. This part of the study compares the aims of the LRCs and those of the Colleges of Education. This is in order to investigate how the aims of the LRCs' support the Colleges of Education to accomplish their aims. Consideration is then given to meeting the aims of the Colleges. Finally the main obstacles to improving the LRCs are identified and methods of overcoming these discussed.

8.1.1. *Q.1 How Effective are the LRCs in the Colleges of Education in Oman?*

It was illustrated in the evaluation section of the literature review that essentially evaluation in LRCs or libraries is carried out to assure competence of work as well as to promote development. Consequently evaluation influences decisions on renewal and changes. Therefore regular assessment and feed-back of any characteristic of an LRC service is highly recommended in order to respond successfully to users. The evaluation section also indicated that the importance of an LRC/library has shifted to meeting users information needs rather than concentrating solely on providing a collection of materials.

The review of literature clarified that quality is easy to recognise, but difficult to define and accuracy in defining evaluative concepts is regarded as difficult to reach. While it is possible to measure quantitative features in an LRC or library such as the number of users, the size of the institution and the level of satisfaction etc, it is more difficult to determine those elements related to qualitative issues such as information services, because many of

the benefits, which require assessment, are related with outcomes that can not be assessed directly.

The evaluation section suggests performance indicators as a suitable method of evaluating the quality of work in an LRC particularly when a precise evaluation becomes impossible to accomplish. Performance indicators methodology seeks to measure the extent to which the objectives are achieved. This is done through reviewing all activities and aspects related to the undertaken objectives which then reveals indicators of the LRC's performance.

It was clarified (in chapter two) that MOHE plans to benefit from the Canadian experience in education. Therefore the LRCs in the Colleges of Education in Oman are managed by Canadians. I managed to visit six Universities in Canada and conduct interviews with the staff from the LRCs/Libraries of these Canadian Universities. It was intended to explore the Canadian experience from the survey in Canada in order to maximize the benefit from it in improving the effectiveness of LRCs in Oman. One of the main aspects investigated in Canada was "*How is the quality of work in the LRC/Library evaluated?*". The data collected from Canada revealed that LRCs/Libraries have a range of methods of evaluation, the main methods are: writing annual reports to their Universities, committees, self-assessment, surveys, discussions with clients and informal feed-back from users etc. Generally all of these LRCs/Libraries use several of these means to evaluate and improve the quality of their services.

The survey conducted in the LRCs in Oman clarified that the LRCs depend on limited methods of evaluating the quality of work. These methods are exclusively the assessment of the Heads of LRCs and the satisfaction of users.

The evaluation section recommends performance indicators methodology for evaluating the quality of work in an LRC through reviewing the extent to which the objectives are accomplished. The previously explained methods of evaluation in Canada and Oman also show that they generally depend on self-assessment, satisfaction of users using surveys, discussions, and committees. This study which intended to explore the effectiveness of the LRCs in Oman depended on interviews with the staff of LRCs, questionnaires for faculty,

and students which try to identify their satisfaction with the services provided, in addition to observation of the LRCs.

The study will examine the following elements as performance indicators to the LRCs and the Colleges of Educations' aims in order to explore the effectiveness of the LRCs in Oman. The elements are:

- 1- Comparison of the LRCs' aims with the aims in the literature review.
- 2- Achievement of the LRCs' Aims
- 3- Comparison of the Colleges' aims and the LRCs' aims.
- 4- Achievement of the Colleges' aims?

8.2 Learning Resource Centre Aims and Goals

The declared aims and objectives of the Learning Resource Centres (LRCs) in Oman were described in the LRC Handbook. It was clarified in the literature review that the aims specify the goals of the establishment and, in particular, those of the learning resource service. The Learning Resource Centre aims in the Colleges of Education in Oman were specified in the LRC Handbook as follows:

"Learning Resource Centre plays a vital role in the educational reform initiative of the Ministry of Higher Education in Oman. The LRC provides the College community with current materials and resources, access to the Internet for research and study, and educational technology to promote a learner-centred environment.

In order to meet this challenge, the LRC will:

- 1- Promote a learner-centred academic culture.*
- 2- Assist students and faculty to achieve learning and teaching excellence.*
- 3- Provide technologies for knowledge and skill acquisition, communication, information management, problem solving, research and design and development of integrated learning materials.*
- 4- Promote critical thinking and independent learning.*
- 5- Support student and faculty development initiatives which utilise an integrated learning approach.*
- 6- Encourage self-directed and lifelong learning.*
- 7- Encourage flexible delivery of education.*
- 8- Provide system-wide computerized access to materials and resource.*
- 9- Provide the College of Education with fully qualified LRC professional and technical staff to ensure full utilisation of the resources and equipment available in the LRC.*
- 10- Provide the community, particularly the community of teachers, with information technology services and learning resource."*

(Ministry Of Higher Education in Oman, Learning Resource Centre Handbook 1998/1999, p.2-0-1)

8.3 Comparison Between the Aims of the LRC and the Aims in the Literature Review

The literature review chapter demonstrates that many similarities were expressed by authors in their descriptions of the aims of the LRCs although there was some difference in the priority given to each aim. The aims of the LRC support the aims of the institution and complement the mission statements of the education system. The aims of the LRCs in the Colleges of Education in Oman support the improvement of education in the MOHE through an emphasis on the provision of contemporary materials and resources, information, and educational technology, in order to create independent learning approaches and a learner centred environment. Provision of support to meet curriculum requirements was also a major factor in the literature. This is not described directly in the aims of the LRCs in Oman, but; aim '2- *Assist students and faculty to achieve learning and teaching excellence*' could be considered directly relevant to supporting and meeting the curriculum needs.

Overall the aims of the LRCs in the Colleges of Education in Oman cover the common aims for learning resource centres and/or libraries, illustrated in the review, which concentrate on the provision of resources, materials, technological equipment, and flexible access to the services. The provision of skilled personnel supports the education system to fulfil its purpose. It is clear, therefore, that the aims of the LRCs could be used as one method for the evaluation of the suitability of the LRCs to meet the needs of the Colleges of Education.

8.4 Achievement of the LRCs' Aims

This part of the study will try to explore the extent to which the declared aims and objectives of the LRCs are achieved. Some of the aims of the LRCs in Oman can be linked together therefore related aims are discussed together as follows:

8.4.1 Independent Approaches to Learning

- 1- *Promote a learner-centred academic culture.*
- 6- *Encourage self-directed and lifelong learning.*
- 7- *Encourage flexible delivery of education.*

These goals seek to encourage and enable the user to learn using independent approaches instead of concentrating on a specific curriculum which is identified by the institution. The

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priority here moves to the students as researchers rather than the teacher or the institution which have in the past played the most active role in directing teaching and learning. The institution here pays attention to providing materials, equipment and encouragement to offer the user opportunities to learn in flexible and independent ways.

It was explained, in the definition of the LRC in the literature review that; the LRC ideal puts more emphasis on the learner. This is usually by providing equipment and materials as well as enabling the learners to learn at their own pace and using their preferred approaches to learning. It was also demonstrated in the literature review (in the section of the impact of the LRC on teaching and learning) that the provision of learning resources led to the development of new approaches to learning such as resource based-learning (RBL) which encourages the learner to develop his/her required skills for self-directed study as well as giving the learner opportunities to progress according to his/her ability and rate.

In addition in the literature review, the section of the impact of the LRC on teaching and learning describes how the LRC is moving from being merely a collection of physical objects to a resource to support independent and self-paced learning. This will lead to a decrease in the barriers between the information offered by the LRC/library and the data delivered by teacher and such divisions will eventually vanish. Thus the literature review placed the emphasis on shifting from the teaching approach to the learning approach by the provision of equipment and materials to the LRCs/library, and by helping the learner to learn using the facilities provided. This correlates with the LRCs previous aims 1,6 and 7.

Through interviewing the staff of the LRCs, the survey explored the availability and modernity of computing facilities and other educational materials and equipment. In chapter six the interviewees' answers revealed a range of opinions as to whether the LRCs' equipment and materials were satisfactory given the rapid development of educational technology. Although nearly half of the interviewees thought that equipment and materials in the LRCs were satisfactory given the rapid development of educational technology, in general they believed that there is still room for improvement by up-dating equipment and materials in the LRCs. The data collected from the questionnaires showed that the overall response of both students and academics indicates an acceptable level of satisfaction with computer services it is however clear that there is a divergence of views within this

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category between students and academics. There were more students dissatisfied compared with academics, who expressed their satisfaction with the computer services. Overall the responses of students and academics to the questionnaires reflected that they were satisfied with computer services, study materials and audio-visual facilities.

The users' satisfaction with the availability and modernity of educational materials and equipment, and computing facilities in the LRCs gives more opportunities to meet the earlier aims (1,6 and 7).

The observation clarified that users were utilising the services provided, particularly, computers, textbooks, and other materials and equipment such as OHPs, scanners, stereo, LCDs (data show) which support the promotion of a learner-centred and independent learning approach. Laurillard (2002) suggested that students should utilise the university as a set of resources generally under their control. She considers this to be the most attractive image of academic learning as a community of scholars practicing their own study towards information and enlightenment, stimulated, but not led by their teachers. In addition the educational technology resources enable students to create their own links between topics and pursue their own path of study which is essential if meaningful learning is to take place (Laurillard, 2002). Students are expected to use the services of the LRCs for the purpose of their study programmes as well as their self-learning interests. Therefore the results from the students' questionnaire clarified that borrowing books was the main purpose of using the LRCs for 97 % of respondents. 70% of respondents also come to the LRCs for the purpose of reading and doing research. Personal use of LRCs' facilities was the purpose identified by 26% of students.

It was recommended, in the role section of the literature review, that the LRC/library should be open for users at times which are suitable to them, in order to offer flexible learning. The results of the questionnaires agree with this showing that the opening hours were acceptable for students, and very satisfactory for academics. The survey indicated that accessibility for users ranges between satisfactory and highly satisfactory, which as a result offers more potential to meet aim7' *encourage flexible-delivery of education* throughout the LRCs.

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The interviewees suggested that the facilities provided encourage users to use the LRC services, such as lending equipment out of the Colleges, and workshops and seminars on the use of educational technology. The provision of such facilities gives an indication of further opportunities to enable the LRC to promote new approaches to learning especially a learner-centred, self-directed lifelong learning approach as described in aims 1 and 6. These concentrate on the learner gaining the skills to learn by him/her self and utilising the facilities provided.

The results of the observation and the interviews showed that there are no rooms provided for individual or group study. This could inhibit the promotion of a learner-centred academic culture by reducing opportunities for students to study either alone or in small groups. The provision of such rooms within the LRCs would provide a suitable environment for a learner-centred academic culture as well as contributing to reducing the level of noise.

As illustrated in the results of the interviews, the cultural differences preventing the mixing of males and females went beyond the division of timetable between male and female students in the LRC in Salalah College of Education. The results from the interviews also clarified that asking female students to take off their veils inside the classes and the LRCs causes difficulties and creates an uncomfortable atmosphere for some of them because of the cultural restrictions on women in Oman. As a result this produces obstacles to providing a learner-centred academic culture and flexible delivery of education.

The results of the academics questionnaire and the interviews with the LRC staff described the effect of users' limited ability in the English language on utilising some materials provided in English in teaching and learning activities. This represents a negative factor that inhibits the promotion of a learning-centred academic culture, self-directed and lifelong learning.

The services section of the literature review indicated that the purpose of distance education is to increase the opportunities for learning by maintaining the quality of learning and teaching at reduced cost. Despite this, the results of the interviews with the staff of the LRCs explored the non-availability of distance education in the Colleges of Education

which impedes the achievement of the flexible delivery of education. The lack of the distance learning services in the LRCs could be attributed to the reason that the Colleges of Education in Oman enrol only full-time students, which reduces the necessity of providing such services. However the absence of distance learning services in the LRCs reduces the users opportunities to benefit from the services provided in the LRCs which as a result decreases the opportunity of achieving aim 7 ' *encourage flexible delivery of education* '.

It was highlighted in the literature review (in the section of impact of LRC on teaching and learning) that the new learning approaches offer the learners more opportunities to gain information. It also emphasised that the teacher should facilitate learners' exploration of an area of study, supporting them to build up a basic foundation in a subject and enabling them to be skilled in discovering new learning approaches for themselves. The analysis of the questionnaire showed that about 47% of the academics who responded to Q.14 declared that they receive encouragement or incentives such as courses provided in the LRCs, staff support and treatment and the provision of up-to date educational technology materials and books which enhance their motivation to improve the teaching and learning process. This indicates further opportunities to meet the LRCs aims; 6 and 7.

Although instructions which were intended to help users to use the services and learn by themselves were at an acceptable level of satisfaction for students and academics the observation showed that they were limited in scope. This was considered a disadvantage towards meeting the aims 1,6 and 7.

The results of the students' responses showed that they consider using LRCs services, and working by themselves in the LRCs to be effective methods of learning, which enhance the feasibility of achieving the previous three aims 1,6 and 7 throughout the LRCs.

The results from the survey clarified that some of the LRCs materials were not utilised quite often by students and academics. This could be because most of the academics in the Colleges learned to rely upon particular resources, because when they were learning modern educational materials were not available. As a consequence they do not encourage their students to exploit all of the resources provided. Moreover students are trying to

please their tutors by depending upon the book that the tutors are using in teaching, so they can achieve higher marks.

This clarifies the tension between the model of an LRC and what academics and students are practicing. The LRC essentially aims to encourage clients to attain knowledge from various sources as well as to practice learning and teaching through the utilisation of integrated learning materials. This also reflects on the aim of the LRC which tries to promote a learner-centred academic culture and self-directed learning. It is clear from this study that there is still scope for progress towards a more learner-centred culture.

Thus changes should be made to the learning and teaching process in the Colleges of Education to support students and their tutors to improve their learning and teaching approaches. This would be achieved by a shift from traditional educational methods which concentrate on using particular textbooks for the purpose of exams to seeking knowledge from integrated learning educational materials or resources. However, this will involve considerable staff development resources to be committed. By this means the Colleges of Education could eliminate the tension between current methods of learning and teaching and the model of the LRC in Oman. In addition it is essential to continue to develop an Omani model for LRCs (which is based on Canadian experience) which should take in consideration the Omani systems and culture.

8.4.1.1 Conclusion on Independent Approaches to Learning

The provision of educational technology materials and equipment leads to new approaches to learning which encourages the learning approach rather than teaching approach. The data collected from the survey indicates that the modernity of equipment and materials, and computer services in the LRCs are satisfactory but could still be improved. Users' utilisation of the services provided, as noted during the observation, creates more opportunities to promote student-centred and self-directed learning approaches. The satisfactory and highly satisfactory levels of accessibility for users represent an important element towards encouraging flexible-delivery of education. The lack of rooms for individual or group study in the LRCs, the cultural difficulties in mixing male and female students, students' reliance on particular books and users' limited level in the English language contribute to inhibiting the achievement of the LRCs aims' 1,6 and 7 in the

Colleges of Education in Oman. The unavailability of distance education in the Colleges of Education constrains the encouragement of flexible delivery of education. In addition the limited instructions for helping users to learn by themselves also reduces the opportunity to achieve the LRCs' aims 1,6 and 7. Although the LRCs are provided with materials and equipment which are considered satisfactory by users there are deficiencies which require improvement and solutions to achieve the aims (1,6 and 7) discussed earlier.

Overall the LRCs are provided with materials and equipment which are considered satisfactory by users but there are deficiencies such as lack of rooms for individual/group study, users limited ability in English and lack of distance education which require improvement and solutions to achieve the aims (1,6 and 7) discussed earlier.

8.4.2 Assistance to Students and Faculty

The following aims for LRCs in the Learning Resource Centre Handbook in Oman deal with assisting students and faculty to improve learning and teaching, and develop their initiative to utilise an integrated learning manner:

2- Assist students and faculty to achieve learning and teaching excellence.

5- Support student and faculty development initiatives which utilise an integrated learning approach.

The LRCs were introduced to the Colleges of Education essentially to increase the achievement of students and faculty in learning and teaching. It was demonstrated in the literature review that the LRCs aim to support students and teachers in a range of different ways such as improving their skills and enhancing their motivation for learning. The roles of the LRCs also included the importance of the provision of effective technical support in the use of educational technology. The provision of facilities, a comfortable atmosphere and flexible accessibility which enhance the achievement of users in learning is a further role for the LRCs. Therefore the LRCs in the Colleges of Education in Oman seek to play a vital role in assisting students and members of the faculty to achieve learning and teaching excellence, and promote their learning initiatives through the provision of educational technology, a convenient environment and assistance and encouragement in utilising the provided facilities to meet their needs.

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The literature review illustrates the roles of the LRC indicating that the LRC staff contribute to influencing curriculum development through the selection of resources and improvement of the curriculum in conjunction with faculty members. The data from interviewees regarding the LRC staff roles stated that LRC staff help clients in meeting their needs in the library and doing research on the Internet as well as assisting academics in their lectures and the practical parts of their subjects. Moreover LRC staff prepare and set-up educational aids for academics and students as well as training them on using such equipment and materials for teaching and learning purposes. Accordingly these roles of LRC staff can play a significant function in supporting students and academics to improve the learning and teaching process.

The literature review describes (in the staff section) that the contribution of LRC staff members and librarians to academic activities supports learners to meet their needs which, as a result, helps them to achieve the purposes of learning and teaching. The literature review also demonstrates that, in supporting teachers to apply new curriculum or use new approaches towards the effective purpose of teaching and learning, LRC members of staff need to plan for the acquisition of resources to support course requirements.

The data from the LRC staff showed that the LRC members of staff and academics co-ordinate with each other to suggest the acquisition of new resources for the Colleges and then the Ministry of Higher Education (MOHE) makes the final decision. The LRC staff in the Colleges also co-ordinate with each other to generate the specification for the equipment and materials needed for the LRCs, and then they submit them to the MOHE for a decision to be made.

The results clarified that the MOHE concentrates on the materials recommended most often, the specification and the cost of the required equipment or resources. The results also showed that the procedure for purchasing resources and equipment was centrally co-ordinated by the MOHE and it is common that the LRCs do not get resources and equipment which they have requested, or sometimes resources arrive late.

Despite the centralisation of purchasing of resources and equipment for the LRCs by the MOHE, as explained earlier, the interviewees believed that LRC materials such as

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textbooks, equipment and software programmes are of direct relevance to the curriculum. This relationship between materials and the curriculum justifies the frequent use of materials by students in order to achieve the maximum benefit of the materials and equipment to meet their study requirements. Furthermore the LRC staff indicated the huge circulation of textbooks and the use of equipment as indicators of the students' and faculty usage of LRC materials to achieve the aims of the curriculum.

The data from students responses to Q. 7.28 and Q.7.30 (table: 5.1.9) showed that students were generally satisfied with the help and support of LRC staff to improve progress in learning. Academic staff agree with this in their answers to questions 7.24-7.27 by stating that they were highly satisfied with the level of support they received from LRC staff and technicians. Academics also appreciated the level of support from the technicians in teaching classes. The impression gained from the observation also revealed that in most cases the staff of LRCs guide users to their requirements, then, if they need more assistance, they help them further to meet their needs. Consequently this high level of help from the staff of LRCs enables students and academics to perform better in the learning and teaching process. This support would likely lead to the achievement of the aims 2 and 5.

Moreover the observation stated that in general there is a satisfactory level of support in the multi-media lab (self-access lab) which supports students in using computers and the Internet. Consequently this enables users to improve their learning activities. The students' answers to Q.14 and Q.15, show that students appreciated the collaboration of the LRC staff and their consideration in dealing with students of both genders, which as a result enhances the effectiveness of the learning process. The results collected from the survey revealed that both LRC staff and academics are satisfied with the liaison between them, which is considered to be pleasant and satisfactory. Accordingly this could encourage the LRC staff to support users (particularly academics) more enthusiastically to make more use of the LRC services in order to improve teaching and apply the integrated learning approach which basically depends on the utilisation of materials and equipment.

It was recommended in the literature review (Roles section) that, to increase the utilisation of the services provided, the skills and knowledge of users should be improved to suit the different learning styles. Therefore, LRC staff are required to develop the skills of

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academics and students in the use of new technologies. The results of the questionnaires found that both students and academics were highly satisfied with the training courses provided in the LRCs (see the tables: 5.1.20. and 5.2.22). These courses (all workshops) increase the ability of both students and faculty members to benefit from the resources provided, which as a result gives an opportunity to achieve the aims 2 and 5.

We saw in the discussion of the aims 1, 6 and 7 that nearly 50% of the academics who responded to Q.14 thought that they receive encouragement or incentives such as courses, staff support and the provision of modern educational technology materials and books which develop their motivation to improve teaching and learning. This demonstrates how the LRCs hope to achieve aim 5.

It is indicated by the interviewees' response to Q.44 that the staff of LRCs consider that it is important to improve the skills of users in order for them to benefit from the educational technology provided. This clarifies the awareness of the staff of LRCs in the importance of their contribution to enhancing the quality of learning and teaching and promoting users initiative to utilise an integrated learning approach.

It was clarified in the roles section in the literature review that a convenient atmosphere enhances the achievement of users in learning and teaching as well as providing effective learning. LRCs have an obligation to encourage users to maximize their benefits from the LRCs. The results of responses of both students and academics stated that they were at a high level of satisfaction with the environment of the LRCs in the Colleges of Education (see the tables: 5.1.16 and 5.2.14) which indicates a suitable environment for increasing the achievement of learning and teaching.

In addition the data gathered from students' responses to the questionnaires indicated that the use of computer-based learning packages was the most popular method of learning within the LRCs. Students also considered working by themselves at the LRCs as an effective method of learning. The discussion of the aims 1,6 and 7 demonstrated that the users were utilising the range of equipment and materials provided which works towards reaching the aim of utilising the resources and equipment in the LRCs. Therefore students'

utilisation of the LRCs creates useful opportunities to enable them to vary and improve their learning.

8.4.2.1 Conclusion on Assistance to Students and Faculty

The analysis of the data from the staff of LRCs shows that they help students and academics to meet their needs and support them in lectures and practical work. Academic staff and students appear to agree with this by describing their satisfaction with the assistance they get from the staff of LRCs members to improve the learning and teaching process. The results reported from the observation agree with the satisfactory level of assistance that users receive from the staff of LRCs. Moreover the friendly and satisfactory liaison between the staff of LRCs and academics creates more opportunities to increase the utilisation of the services in the LRCs, which as a result enhances the opportunity of achieving the aims 2 and 5. The results of the questionnaires showed that students and academics were highly satisfied with the training in the LRCs which develops their skills. The encouragement that academics receive from the LRCs increases students and academics initiative to the utilisation of the resources provided and develops their motivation to improve teaching and learning. Users reported that they were highly satisfied with the environment of the LRCs in the Colleges of Education which enhances the achievement of users and provides effective learning. Although the data presented previously showed that the procedures for acquisition limits the ability of the staff of LRCs and academics to get the required materials and equipment the staff of LRCs believed that materials in the collection are of direct relevance to the curriculum.

Overall the staff of LRCs offer satisfactory assistance to students and academics which could play a significant role in the fulfilment of achieving excellence in learning and teaching, and develop their initiatives to utilise an integrated learning approach.

8.4.3 Provision of Educational Technology Facilities

The following aims for LRCs in the Learning Resource Centre Handbook in Oman concern the provision of educational technology facilities to users.

3 - Provide technologies for knowledge and skill acquisition, communication, information management, problem solving, research and design and development of integrated learning materials.

8 - Provide system-wide computerized access to materials and resources.

10- Provide the community, particularly the community of teachers, with information technology services and learning resource.

As we saw earlier (in the roles section), the provision of resources and materials represents a major role for the LRCs. It was also demonstrated in the literature review (Impact of LRC on Teaching and Learning section) that the LRC plays an important role in the training of teachers through the provision of suitable information and data. Hence the MOHE in Oman tries to purchase modern educational technology equipment for the LRCs in order to meet the requirements of acquiring knowledge and skills. The provision of educational technology offers more opportunities for communication, therefore the LRCs liaise with other information providers as mentioned earlier in the aims of the LRCs. The provision of technological materials and facilitating users access to them also creates more prospects for training users about the learning resource service facilities and for developing their information-handling skills. The roles section demonstrated that the development of the responsibility of LRCs has created observable changes in access to and management of information (such as discovery, use and assessment of information) in order to suit different learning approaches. Aim 3 includes the need for the LRCs to design and develop integrated learning materials in order to provide users with a variety of learning and teaching resources which enhance achievement in the educational process.

It is clear (from the role section) that learning resources play a crucial role in increasing students' learning and research skills. The literature review also illustrated the LRCs aim to improve learners' skills in problem solving. Furthermore the LRCs require their staff members to teach users how to gain skills to improve their use of sources and interpretation of information. The staff section indicated that the computerization of the LRC/library requires continuous training for the staff to meet the needs of users. In addition it was demonstrated (in the roles section) that the librarians can play a significant role in improving the skills of clients to use the new technologies.

Some members of LRCs indicated the importance of improving users skills, so they can utilise the services provided. It was indicated (in the aims section) that the learning and teaching resource service provides and arranges materials and equipment for academic staff

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to enable them to develop and exploit their teaching skills and knowledge. Some members of the LRCs also emphasised the value of enhancing the skills of the academics to enable them in using technological materials and equipment to encourage and enable their students to make use of the resources to a higher level. As illustrated in the discussion of the aim 2 and 5 the responses of students and academics to the questionnaires showed that they were highly satisfied with the training in the LRCs which develops their skills and increases their utilisation of the resources provided.

It was explained in the observation section that students practice teaching activities under the supervision of lecturers in a room with educational technology equipment (micro-teaching facilities). It was suggested that these facilities were very satisfactory in two Colleges (Sur and Salalah) and fair in the other four Colleges (Nizwa, Sohar, Ibri and Rustaq).

The data gathered from the questionnaires clarified that to some extent academics were more satisfied than students with audio-visual and micro-teaching facilities. However results from both academics and students questionnaires indicated that their level of satisfaction with audio-visual and micro-teaching facilities was acceptable (academics 64% table: 5.2.7 and students 53% table: 5.1.6).

As explained earlier in the discussion of the aims 1,6+7 nearly half of the interviewees believed that equipment and materials in the LRCs were satisfactory given the rapid development of educational technology, and the staff of LRCs were keen to see improvement in updating equipment and materials in the Centres.

Thus the data collected from the survey highlighted the availability of satisfactory training for users but suggested that the provision of technological materials and equipment for knowledge and skill in the LRCs requires continued development to meet aim 3.

It was demonstrated in the literature review (Impact of LRC on Teaching and Learning) that educational resources are provided to assist teachers' explanation and to expand communication to enhance the achievement of learners.

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The interviewees' answers to Q.38, regarding co-ordination and collaboration between the LRCs in the Colleges of Education, showed that there are visits and consultations by telephone between the staff of LRCs to discuss different issues and exchange ideas related to LRCs work. The responses from the staff of the LRCs did not include aspects of communication through the technology provided in the Centres. The Heads/Assistant Heads of LRCs answers to Q.39, regarding co-ordination or collaboration between the LRCs in the Colleges of Education and other institutions demonstrated that Sultan Qaboos University (SQU) provides support in the training of the staff of LRCs through workshops in computer and media facilities. Moreover the results from interviewees clarified that there was no collaboration in interlibrary loan either between the Colleges of Education themselves or between the Colleges and other institutions.

Accordingly this shows that the LRCs do not have a computerized access system which facilitates accessing materials and resources in the LRCs and/or other institutions demonstrating that aim 8 '*Provide system-wide computerized access to materials and resource*' in the LRCs is not currently being met. In addition this also shows that the staff of LRCs are not utilising the technology provided in the Centres to the level that meets the provision of technology for communication in aim 3. Moreover the lack of an interlibrary loan service in the Colleges of Education represents an obstacle to achieve aim 10 which intends to provide the community, particularly academics with an information technology service.

The responses of interviewees to Q.1 and Q.2, described that each LRC consists of a library, computer laboratories (two teaching laboratories and self-access multi-media laboratory), and media laboratory. Each library has traditional resources such as books and periodicals, magazines and newspapers, as well as non-traditional such as CDs, videocassettes, tape cassettes etc. Each computer section in the LRC has computers, servers, LCD (data show projector), Internet access, CD-ROMs, printers and scanners. Moreover each media section in the LRCs has audio resources such as tape recorder; audio-video resources, (OHPs), computers; colour printers; scanners; and microphone etc (see chapter six).

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The results of students and academics questionnaires showed that their satisfaction with the range of study materials, acquisition of required materials and how up-to-date they are was at an acceptable level.

This shows that the LRC model represents a unit that integrates learning materials and equipment which provides opportunities for users to utilise these for both research and learning and teaching purposes. This agrees with the aims 3 and 10, which seek the provision of technology for research and design and the development of integrated learning materials as well as an information service and learning resource.

To make the best use of the services provided and to enable users to improve learning and achieve their tasks the roles section emphasised the necessity for the organisation of resources and facilitating the accessibility of information.

The results of the questionnaires (students' responses to Q.7.12 and academics responses to Q.7.11) regarding organisation and display of materials indicated that these were acceptable to users. Despite the literature emphasising the importance of the organisation of materials, the data collected from the physical observation of the LRCs noted the disorganisation of books. However the results of the survey (questionnaires and observation) generally concluded that organisation at the LRCs was acceptable though improvements could be made, in particular for the books.

To assist with learning and teaching, and research activities in further and higher education institutions, the LRC should aim to offer access to the learning resource services. It was recommended in the roles section that the collection should be enhanced by learning facilities such as enhanced computing facilities and on-line information systems.

As illustrated earlier in the discussion of the aims 1,6 and 7, the results of the quantitative data showed that overall response of both students and academics indicates an acceptable level of satisfaction with the computer services. Academics showed more satisfaction with the computer services (table: 5.2.5) than students (table: 5.1.4). Although academics consideration of the CD-ROM services was acceptable students were dissatisfied with these facilities. In general students and academics quantitative answers revealed their satisfaction

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with the computer services. The results of the qualitative data showed that there were more students and academics dissatisfied with the computer services (see students' responses to Q.14 and Q.15, and academics' responses to Q.16 and Q.17). Although students' responses to the previous questions showed that 177 (40%) students specified the computer service as their most popular element in the LRCs it was described as the least popular element by 188 (43%) respondents to the qualitative question. Despite academics responses to the qualitative questions revealing that they considered computer services to be their second most popular element in the LRCs, they suggested that the Internet service was the second least liked element.

This apparent contradiction may be attributed to the high value placed on computer services by students and academics. While the quantitative questions may reflect the importance of the computer services to the users, the responses to the qualitative question may indicate the need for the quality of the service to be improved to meet the needs of users even better.

Students and academics attributed their dissatisfaction with computer services mainly to the slow speed of the Internet and the small number of computers to meet the needs of users. Although users (students and academics) could benefit greatly from computer services and the Internet in their research and learning and teaching activities, the small number of computers compared with the number of users and the slow speed of Internet service represents constraints on their accessibility and usage.

As illustrated earlier (in the discussion of the aims 1,6 and 7) there are no distance learning services provided in the LRCs in Oman. The data collected from the staff of the LRCs showed that there are no plans, at the present, for providing a distance learning service in the Colleges of Education. This inability to access the materials and resources of the LRCs off-campus creates an obstacle to meeting aim 8 '*provide system-wide computerized access to materials and resources*'.

The data collected from the staff of LRCs (chapter six) clarified that two thirds of the LRCs have a simple automated catalogue system for circulation purposes. The remaining third of the Centres are using a manual catalogue system, due to the lack of an automated system. The staff of LRCs' responses to 'Q.34, *Is the Library automated?*' shows that they are

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seeking decisions and action from MOHE on the application of an automated catalogue system. Moreover the staff of LRCs are not sure when this will be introduced. Consequently this clarifies the inability of the LRCs to meet aim 8 and reduces the feasibility of meeting aim 10, which seeks to provide the community with information technology services.

It was clarified earlier in the discussion of the aims (2&5) that the LRC members of staff and academics co-ordinate with each other to suggest the acquisition of new resources, equipment and materials, and then MOHE makes the ultimate decision. In some cases the academics do not get the resources and equipment which they have requested. However the staff of the LRCs considered that the resources and educational equipment are of direct relevance to the curriculum. This gives an indication that the provision of materials and equipment could contribute to the achievement of providing the community of teachers with information technology services and learning resources, the target of aim 10.

The results of the quantitative data showed that students' general satisfaction with the library collection was at an acceptable level (see table: 5.1.1). The quantitative data collected from the academics indicated that their satisfaction with the availability of books, usefulness of references and modernity of the stock of books were at an acceptable level, while they were dissatisfied with the availability of journals (see table: 5.2.1). The results of the qualitative data revealed that there were more students and academics dissatisfied with the collection (see students' responses to Q.14 and Q.15, and academics' responses to Q.16 and Q.17). It is likely that there is some correlation between the responses to the qualitative and quantitative questions with the same respondents expressing their dissatisfaction to each question. It is clear that the unsatisfactory collection will limit students' opportunities to learn from various sources. The unsatisfactory availability of journals will influence negatively on meeting the academics needs for access to up-to-date information for research and teaching. Consequently the deficiencies in meeting the requirements of academics will affect their ability to provide up-to-date information technology services and learning resources to their students.

Moreover the deficiencies in the collection could inhibit the possibility of achieving aim 10, which seeks to provide the community, particularly the community of teachers, with

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information and learning resources. Therefore the analysis of interviews concluded that, eight out of 24 respondents (33%) suggested that the collection of the library should be developed with increased reference works and subscriptions to both printed and electronic periodicals.

Overall the interviewees' answers reflected that equipment and materials at the LRCs were not at the required level to meet the users needs. Hence according to the interviewed librarians the library collection was considered to be the least sufficient section in the LRCs.

It was explained in the interviews data (chapter six) that users do not use some books because either there are too many copies which makes them surplus to students needs in some Colleges or some books are too old. Also some teachers do prefer a particular book for a specific programme which, as a result, directs their students' attention to these books in order to score more in their exams.

In addition some equipment, such as video and tape recorders, were not being used because of the lack of suitable learning programmes. In other cases learning packages do not match the students' needs. Also some academics do not encourage their students to use a variety of materials in the LRCs. This prevents the required utilisation of the full contents of LRCs.

There is no specific policy regarding the number of items academics can borrow, some LRCs lend academics up to 12 items and some lend them up to 24 items at a time. Generally the LRCs lend academics books for a semester. Mostly the LRCs lend students between five and six items for two weeks.

Earlier (in the services section) we saw that the survey conducted in Canada showed that academic institutions and libraries provide services (such as interlibrary loan and on-line searching etc.) to outside users. If we look at the experience of the LRCs in Oman the results from the interviews illustrated that students, academics and the staff at the Colleges represent the main users of the six LRCs. Most of the LRCs provide services for some members of their local communities such as researchers, teachers, and academics from

private colleges. Despite not having a formal policy for community usage, to some extent LRCs provide services to users from the local community which correlates with aim 10, that seeks the LRCs contribution into the local community.

There is no unified policy in lending computer-software materials to LRCs users. Thus most of the Colleges allow their students to borrow computer-software materials only within the LRCs. Whereas almost half of the Colleges allow their academics to borrow software materials for outside usage, generally for a period of up-to two weeks. Users from outside the Colleges are usually restricted to using software and LRCs equipment within the Colleges only. Moreover LRCs could lend equipment (e.g. a portable computer) to academics when necessary such as on joining a workshop. Students also can borrow such materials for specific purposes but for a shorter time compared with academics.

The staff of LRCs responses to Q.26 (in the interviews section) attributed the reasons for not lending some LRCs materials to causes such as limited copies of some materials which may be used regularly as references for certain subjects, encyclopaedias and some materials and equipment were considered expensive therefore the LRCs preferred not to lend them out to avoid loss or damage as well as to avoid copying of software which is against the conditions of the licence.

Thus the lending system at the LRCs illustrates that the LRCs provide educational technology facilities and resources to the community with more flexibility for academics at the Colleges of Education. The academics answers to Q.10, regarding difficulties or obstacles in borrowing materials or equipment from the Centres revealed that more than 91% (128) of respondents believed that there are no problems in either of these cases. Accordingly, to some extent, this agrees with aim 10, which plans to provide the community, particularly the community of teachers, with information technology services and learning resources.

8.4.3.1 Conclusion on Provision of Educational Technology Facilities

The LRCs play an important function in increasing users skills in educational activities and problem solving through training and utilisation of resources. The survey revealed the satisfactory training of users but explored the need for developing LRCs resources to meet

the requirements of aim 3. The investigation exposed the unavailability of aim 8, which seeks the provision of system-wide computerized access to materials and resources. The staff of the LRCs were not using technological communication which shows that, the provision of technology for communication as included in aim 3 is not being fully met. The lack of an interlibrary loan service prevents achieving aim 10. The LRC principle characterizes an integrated unit of resources which supports users to utilise these for research and learning and teaching purposes. On the whole this is consistent with the aims 3 and 10. The previous discussion clarified that the LRCs are not automated, therefore the lack of accessibility of LRCs resources from off-campus represents a barrier to meeting aim 8, as well as diminishing the possibility of meeting aim 10. The level of relevance between resources and the curriculum and the fact that academics experience no serious difficulties in borrowing materials or equipment assist the achievement of aim 10. On the other hand the deficiencies in the collection reduce the achievability of aim 10, which seeks to provide the community of teachers with information technology services and learning resources.

Thus the LRCs consist of integrated learning materials and play an important role in enhancing users skills, which contribute fundamentally towards meeting the aims 3 and 10. The relevance between resources and the curriculum and the academics ease of borrowing materials also increase the achievement of aim 10. Moreover to achieve the previous aims (3, 8 and 10) the LRCs need to develop further the educational technology resources, automate the Centres and introduce system-wide computerized access to materials and resources.

8.4.4 Promotion of Critical thinking and Independent Learning

The following aim seeks to develop the critical thinking and independent learning of users.

4- Promote critical thinking and independent learning.

The literature review (background section) recognised the importance of the promotion of independent learning. This is one of the elements that support the trend to changing learning approaches by moving from didactic teaching to enhancing self-learning and life-long learning. It was also mentioned in the definition section that the emphasis on learning strategies rather than teaching styles requires students to spend most of their learning time in libraries or LRCs. The conclusion of the aims section showed that the LRC aims to provide flexible methods of learning and teaching to support users to gain the skills of

independent learning, as well as to provide users with the ability to discover, use and evaluate information. Therefore the LRCs in Oman aim to develop users' critical thinking such as evaluating information and independent learning through the utilisation of the facilities in the LRCs.

It was explained earlier that the decrease in the barriers between the information offered by the LRC and the data provided by teacher places an emphasis on changing from a teaching approach to a learning approach through the provision of resources and helping the learner to learn by utilising the facilities provided. This change in the educational system agrees with aim 4.

The investigation pointed out that users' views of the accessibility of the LRCs resources range between satisfactory and highly satisfactory. The results from the staff of LRCs also suggested that the LRCs facilities, lending equipment to users and training them on the use of educational technology encourage them to practice independent learning activities. Therefore this offers more possibilities of fulfilling the aims of independent learning.

The literature review (in the section of impact of LRC on teaching and learning) clarified that the new learning strategies offer the learners more opportunities to gain information. It also explained that the role of teachers should include helping learners to gain skills which could enable them to find new learning methods. The data collected from the questionnaire showed that nearly half of the academics who responded to Q.14 were satisfied with the encouragement, support and treatment they receive from the staff of LRCs. As a result this enhances the motivation of academics to improve teaching and learning. Hence this gives more opportunities to achieve independent learning throughout the LRCs.

The definition section indicated that the technology is increasingly changing the LRC into a hub for independent, self-based learning, which allows learners to learn actively through technology. Users responses to the questionnaires revealed that 30.40% of academics and 22.46% of students use the LRCs daily and the biggest group of students' responses (42.9%) showed that their usage of the LRCs is increasing, while the usage of 15.3% only is decreasing. It was clarified (in the discussion of aim 2) that students suggested that working by themselves at the LRCs is an effective method of learning. Students also

believed their usage of computer-based learning packages to be their most popular method of learning. Thus learners' utilisation of the LRCs enhances their abilities in independent learning.

Users with limited ability in the English language, as discussed earlier, face obstacles which inhibit the benefit from the materials provided in English. This also constrains their usage of Internet to navigate only within the sites available in Arabic. As a result users' lack of ability in English minimizes their opportunities to learn from different cultural information which effects the LRCs achievement of promoting critical thinking. In addition this limits the range of materials they are using, and consequently influences negatively the promotion of independent learning.

The discussion of the aims 1, 6 and 7 illustrated the need for improving the instructions, which were provided to assist users to help them utilise the facilities and learn by themselves. Therefore the inadequacy in the provision of instructions could in some sense indicate a lack of independence in the users, but could also be seen as a barrier to the development of independent learning in the users.

No explicit questions were asked in the survey about the development of students' ability to think critically. However, it can be inferred from the data collected that this is not being developed fully. e.g. the use of preferred text to 'revise' so as to maximize exam marks does not show that students are interacting critically with text materials. The level of satisfaction with the journal collection by students (qualitative responses), although not by staff, again could be seen as an indicator of poorly developed critical thinking in students.

8.4.4.1 Conclusion on Promotion of Critical thinking and Independent Learning

Independent learning is considered an aspect that supports the tendency to move away from a didactic teaching approach in order to enhance self-learning. The Colleges of Education try to achieve this through the provision of learning facilities in the LRCs and supporting the learners to utilise these facilities in an independent manner. The survey showed that the satisfactory accessibility to resources, supporting users to deal with the LRCs facilities and the satisfactory treatment of the users' of LRCs by staff could represent significant factors in encouraging users to apply the concept of independent learning. In addition the analysis

of the questionnaires revealed the users frequent usage of the LRCs which indicate the satisfactory utilisation of the LRCs facilities. As a result this enhances the achievement of independent learning in aim 4. On the other hand users with limited ability in the English language find this prevents them from utilising the materials in English which decreases their opportunity to learn from the variety of resources. The insufficiency of instructions in the Centres also limits users abilities in performing independent learning activities.

Overall the LRCs have satisfactory factors (such as accessibility of resource, support and treatment from personnel and the utilisation of facilities) which enhance the possibility of meeting aim 4. However the LRCs require to improve users abilities in the English language as well as increasing the instructions to provide more guidance to users in order to promote critical thinking and independent learning approach.

8.4.5 Provision of Suitable Staff to LRCs

This aim intends to provide the LRCs with qualified staff as shows below.

9- Provide the College of Education with fully qualified LRC professional and technical staff to ensure full utilisation of the resources and equipment available in the LRC.

The staff section showed that broadening the collection of information and the involvement of researchers and learners in the use of information require staff of LRCs to improve their knowledge and ability to respond to the changing requirements of users. The aims section indicated that LRCs aim to manage resources competently and cost-effectively, which also emphasises the importance of employing qualified personnel. LRCs also aim to identify other requirements of users in order to meet their needs and to respond to any developments in education. Therefore it is recommended (in the staff section) that a teacher-librarian with double qualification would represent the most suitable employee to administer the LRC/library to ensure that learners are dynamic in their learning.

The results collected from the interviewees' responses to Q. 7 clarified that the provision of staff to LRCs is centralised at the MOHE and the Ministry of Civil Service and the administrators of the LRCs are not involved in recruiting employees. Consequently the LRCs needs are not entirely achieved.

The sample interviewed comprised 24 employees (14 M and 10 F); five Heads of LRCs who were Canadians and one Omani Assistant Head (acting) of a LRC, six librarians, six computer specialists and six media specialists.

It was illustrated in the analysis of the interview data that four LRC Heads have Masters degrees in specialities related to librarianship or educational technology. One LRC Head has a Masters degree in Education Administration. One Assistant/Head of LRC has a Bachelor degree in Librarianship and Educational Technology. The survey also revealed that all six librarians interviewed have degrees in librarianship and information or librarianship and documents. In the chapter describing the interviews it was clarified that five of the six computer specialists/technicians hold Bachelor degrees in computing science and the remaining computer technician has a diploma in computing from a technical college. The situation of qualifications was different with media specialists/technicians. The survey showed that there was only one of the media specialists who had a qualification considered relevant to the media section.

Therefore due to the investigation of the qualifications of the sample interviewed, we may infer that, in the main, administrative members, librarians and computer specialists/technicians in the LRCs have qualifications of direct relevance to the needs of Centres. Conversely, media specialists/technicians mostly have qualifications which are irrelevant to the media section.

The data collected from the interviewees showed that 9 of the 24 interviewees were non-Omanis. Five of them were Canadians occupying positions as Heads of the LRCs. The other four, from Egypt and Jordan, work as computer specialists/technicians or librarians. Employing non-Omanis in the Centres especially in positions such as Heads of LRCs may indicate a shortage in the availability of qualified Omanis in this field. This also shows the efforts the MOHE are making to gain fully qualified LRC professional staff in order to ensure full utilisation of the resources and equipment available in the LRCs through benefiting from the experiences of Canadians and other nationalities which contributes to aim 9.

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Moreover the data collected from the interviewees' responses to Q.8 indicated that both long and short term plans for training the staff of the LRCs have been prepared. The training plans are divided into three types within the Educational Colleges, within the country (Oman) and outside Oman. The courses range from short courses on the use of materials and equipment in the LRCs to postgraduate programmes such as Masters or PhDs.

The staff section in the literature review suggested that to encourage well qualified staff to librarianship, the salary and career structure need to be improved.

The results from the interviews with Heads/Assistant Heads showed their satisfaction with their liaison with the Administration Departments in the Colleges. Although the majority of the staff of LRCs interviewed believed that the liaison between them and the academics is sociable and satisfactory in several cases academics were thought to consider themselves superior to librarians and technicians. This causes a difficulty in dealing with them to come to the LRCs for their departments needs or to share ideas with them about the students needs.

The data collected from the questionnaires revealed that the satisfaction of students and academics with the helpfulness, knowledge and skills of the staff of LRCs ranged respectively from satisfied to highly satisfied (see the tables: 5.1.9 and 5.2.9).

Although the data collected from students' questionnaire in mixed Colleges suggested that some members of staff at the LRCs show preference to female students when lending materials compared with male students, some female students expressed their wish that female staff would be appointed to serve them in the LRCs instead of having only male members of staff.

The roles section demonstrated that users need to be assisted, encouraged and trained by staff of LRCs to enable them to meet their needs and gain skills to utilise all types of sources.

The results of the questionnaires demonstrated that users were highly satisfied with the training in the LRCs which increases their skills. The discussion of the aims 1, 6 and 7 illustrated that the users were utilising the variety of equipment and materials provided (such as; computers, textbooks, OHPs, scanners, stereo, LCDs projectors). Consequently these support the achievement of the aim of the utilisation of the resources and equipment in the LRCs.

The discussion of the aims 2 and 5 indicated that the staff of the LRCs provide satisfactory assistance to students and academics in lectures and practical work and support them to meet their requirements. It was also illustrated (in the discussion of the aims 2 and 5) that the friendly and satisfactory liaison between the staff of LRCs and academics expands the utilisation of the resources and equipment in the LRCs.

Academics were asked in Q.12 about those materials and equipment in the LRCs which are relevant to their topics, but which they don't use. Their responses showed that 89% of academics did not identify any such unused materials or equipment. The remaining 11% of academics who reported differently did not include the staff of LRCs amongst the reasons for not using such materials. This gives an indication that not using all of the materials or equipment in the Centres was not due to the deficiency in the staff of LRCs or to their lack of support to users.

8.4.5.1 Conclusion on Provision of Suitable Staff to LRCs

The growth of information and its usage and the need to manage resources efficiently require well qualified personnel. The staff of LRCs need to be involved in the recruitment of new employees in order to gain the most suitable people for their Centres. To encourage female students to utilise the services provided the ratio of male and female employees needs to be considered in the recruitment of staff of the LRCs. The investigation clarified that staff of LRCs, apart from those in the media section, have qualifications of direct relevance to the requirements of the Centres. The MOHE tries to benefit from other experiences (e.g. Canada) to ensure the utilisation of the resources and equipment provided. The MOHE also prepares Omanis to manage the LRCs effectively through enrolling them in various courses as well as postgraduate programmes. Although the investigation indicated satisfactory liaison between the staff of LRCs and the others in the Colleges,

some academics are required to show more consideration to the other staff of LRCs to avoid any difficulties which may occur during dealings with each other. Students and academics appreciated the assistance and the training they get in the LRCs. Consequently this extends the possibility of achieving aim 9, which intends to ensure the full utilisation of the resources and equipment available.

In general the qualifications of the staff of LRCs, the training they get as well as the satisfactory assistance and training for users can play a major role in achieving aim 9. Moreover to reach the full utilisation of the resources and equipment, LRCs need to be involved in employing new staff. In addition some academics need to pay more consideration to the staff of LRCs.

8.5 Comparison of the Aims of the Colleges of Education and the Aims of the LRCs

This section explores how the aims of the LRCs support the aims of the Colleges and indicates any additions required to the aims of the LRCs in order to enable them to contribute more effectively in supporting the Colleges to meet their aims.

A- Unifying the sources of training of Omani teachers by preparing them to reach university level for teaching all educational stages. As part of this process the qualifications of primary school teachers will be up-graded to university level.

Aims 5 and 6 of the LRCs represent important elements in preparing Omani teachers (whilst they are students in the Colleges of Education) to reach university level qualifications for teaching all educational stages. This could be achieved by supporting them to develop their independent learning through the provision of educational technology and supporting them to utilise the materials and equipment provided. Training the students to gain skills and acquire learning approaches such as self-directed and lifelong learning will also support them to teach all educational stages.

B- Accelerating the Omanization [replacing employees of other nationalities with Omanis] of teaching jobs at different educational stages particularly in the preparatory and secondary stages.

This aim is a national aim that the Government of Oman tries to apply in all sectors. The LRCs, therefore, can support the Colleges of Education to prepare and qualify Omanis to be

competent so they can replace teachers from other nationalities at different educational stages. This could be fulfilled through the utilisation of all kinds of resources (human and material) in the Centres for the purpose of the learning and teaching process.

The Colleges of Education nominate the students who score the highest marks in each specialism/subject when they graduate to be assistant teachers in the Colleges then to do their postgraduate studies to teach. The Colleges sometimes employ Omanis with masters or PhDs qualifications to teach or to work in the Colleges. The Colleges intend not to employ those who are working in other ministries belong to the civil service unless they are posted to the MOHE with the agreement of the original employer and the MOHE and the Ministry of Civil Service. This is because the system in Oman does not allow those who resigned from the government civil service to work in other ministries until they complete a year after their resignation which causes obstacles in front of the MOHE to accelerate the Omanization in the Colleges of Education.

C- Developing the student's ability to perform his/her duties with competence and effectiveness as a teacher at different educational stages, as well as increasing his/her contribution to the school's different educational activities and to playing an effective role in the development of the local environment and community.

The LRCs aims 1,3,4,5,6 and 7 include aspects which support the Colleges to increase the abilities of students for teaching purposes. It was illustrated in the discussion of the aims 1,6 and 7, that the facilities provided encourage users to use the LRCs' services which enables them to promote new learning approaches and increases their acquisition of skills. Aim 3 highlights the importance of the provision of technology for increasing knowledge and skill which supports the development of the ability of students to carry out teaching competently. Moreover, aiming to enhance the critical thinking and independent learning of users as described in aim 4, as well as developing the initiative of students by utilising an integrated learning approach as in aim 5 also contributes positively towards the development of students' ability for teaching objectives.

Although aim 10 in the LRCs intends to provide the community, particularly the community of teachers, with an information technology service and learning resources, the aims of the LRCs do not focus directly on increasing students contribution to school's

activities and the development of the local environment and community. Therefore this indicates the need for adding a new aim to the LRCs' aims which could contribute effectively to supporting the Colleges to achieve a contribution to the school's wider activities and the development of the local environment and community.

D- Matching the level of teaching of scientific subjects, mathematics and technology to the level of current technological development by giving special attention to the training of teachers in these subjects.

The LRCs aims 2 and 5 try to assist students and academics to reach excellence in learning and teaching and encourage them to apply an integrated learning approach which could improve teaching in all aspects. Since the LRCs' aim 3 seeks to provide technology for knowledge and skill acquisition supported by satisfactory training (as described in the discussion of the aims 2 and 5) developing users' skills to utilise the resources provided, it is likely that the LRCs will participate positively in improving the students' skills to teach their subjects competently.

In contrast the discussion of the LRCs aims demonstrated that academics were dissatisfied with the availability of journals and some students were dissatisfied with the collection which limits the ability of the LRCs to meet academics and student needs to gain knowledge from various sources and access up-to-date information. As a result this will affect the Colleges' opportunity to achieve aim D, which intends to match the level of teaching of scientific subjects, mathematics and technology to the level of current technological development.

E- Provision of the required human, and material resources for training and development of instructors and employees in the educational field throughout their service.

The LRCs aims 8 and 10 intend to provide the Colleges (particularly teachers) with information technology services and learning resources and try to introduce system-wide computerized access to these. Accordingly this matches the provision of the required material resources in aim E. In addition aim 9 tries to provide the Colleges with fully qualified LRC staff to ensure full utilisation of the services in the LRC. This could play a vital role in the achievement of the training and the development of instructors and employees in the educational domain throughout their service.

F- Carrying out research and educational studies related to issues and problems in education, as well as publishing them and utilising them in developing the educational process.

Aims 2,3,4,6,8,9 and 10 of the LRCs contain elements which concerned with the provision of support to the Colleges of Education to conduct research and educational studies related to subjects and problems in education, in order to improve the educational process. Aims 4 and 6 seek to promote users' critical thinking, independent and self-directed learning which form essential skills for researchers. Aims 3 and 10 intend to provide the Colleges with information, learning resources and technology services. Aim 8 is also concerned with the provision of automated wide access to materials and resources which could help investigators to gain information for subjects they are aiming to tackle. Researchers need to be supported to achieve their goals, therefore the aims 2 and 9 were devoted to providing the Colleges of Education with fully qualified LRC staff to assist users to make full use of the resources and equipment available in the LRCs in order to achieve learning and teaching excellence. In addition the provision of technology for communication as in aim 3, could facilitate publishing any research or study. Hence these aims (2,3,4,6,8,9 and 10) could play a fundamental role in supporting the Colleges of Education to meet aim F. Although that the LRCs provide services participate in providing researcher requirements, the LRCs' aims do not include aspects which indicate to contributing in conducting researches. Therefore it might be very useful if the LRCs conduct researches such as, researches about the LRCs and the Colleges of Education etc.

G- Setting-up projects and programmes that serve the environment and the community as well as participating in their development.

This aim seems related to aim C, which seeks to develop the student's ability to contribute to the school's educational activities and to perform an effective function in the environment and community. As demonstrated earlier in aim C, despite aim 10 of the LRCs requiring the provision of information technology services and learning resource to the community, there is still a need for an additional aim which could emphasise clearly the contribution of the LRCs in the development of the local environment and community.

8.5.1 Conclusion on Comparison of the Aims of the Colleges and the LRCs

Thus the trail of matching the Colleges of Education aims with the LRCs' aims demonstrates that with the exception of the Colleges aims C and G, the Colleges of Education could be supported by the aims of the LRCs to achieve their aims. However there is still a requirement for additional aims for the LRCs to contribute effectively to the achievement of the aims of the Colleges of Education particularly those aims specified earlier C and G.

8.6 Achievement of the Colleges' Aims.

This section will investigate to what extent the LRCs support the Colleges of Education to achieve their aims.

8.6.1 Unifying the Sources of Training of Omani Teachers

A. Unifying the sources of training of Omani teachers by preparing them to reach university level for teaching all educational stages. As part of this process the qualifications of primary school teachers will be up-graded to university level.

The aim of preparing students in the Colleges of Education to reach university level for teaching all educational stages could be enhanced by supporting them to develop their independent learning through the provision and utilisation of educational technology resources equipment and materials. This can only occur if the learning outcomes of the programme are made explicit to all concerned. Training the students to gain skills as well as adopting learning approaches such as self-directed and lifelong learning will increase their ability to teach all educational stages.

The results of the survey illustrated the satisfaction of the staff of LRCs and users with the availability of up-to-date educational technology aids, and computing facilities even though they think it still needs improvement. In addition students consider using the LRCs services to work by themselves as an effective method of learning. It is however important, as noted during the observation, that opportunities are offered to expand students' independent learning approaches.

As already illustrated in the discussion of LRCs aims, users' limited ability in the English language constrains their utilisation of some materials which are only provided in English.

This consequently limits the users' ability for independent and lifelong learning as required for a teacher to manage teaching all educational stages.

The data collected from observation and students' questionnaire demonstrated that staff of LRCs provide users with satisfactory assistance and guidance to meet their needs and to improve learning. This satisfactory support represents an important aspect of the improvement of the benefits users gain from the LRCs. This furthermore leads to the enhancement of students' ability to teach different educational stages.

It was illustrated earlier (in the discussion of the LRCs' aims 2 and 5) that the staff of LRCs were aware of the importance of improving the skills of users to make best use of the educational technology provided. Moreover the results of the students' questionnaire revealed that the training courses provided in the LRCs were highly satisfactory to them. Accordingly this seems significant in promoting students' initiative to employ an integrated learning approach and improving their ability to utilise the resources provided as well as providing a better chance to achieve the Colleges' aim A.

8.6.1.1 Conclusion on Unifying the Sources of Training of Omani Teachers

The satisfactory educational technology materials, equipment, facilities and students' utilisation of them represent important factors towards expanding students' independent learning approaches. The satisfactory support that users receive from the staff of LRCs is fundamental for increasing the benefits users get from the LRCs. In addition the staff of LRCs' awareness of developing student skills alongside the highly satisfactory training courses certainly will develop their abilities. These aspects all together represent vital methods of advancing the students' ability to utilise the resources provided as well as extending the opportunity of enabling them to teach all educational levels which the Colleges aim to achieve. Furthermore users' ability in the English language needs to be advanced so they can successfully benefit from materials supplied in English.

8.6.2 Omanization of Teaching Jobs

B. Accelerating the Omanization [replacing employees of other nationalities with Omanis] of teaching jobs at different educational stages particularly in the preparatory and secondary stages.

According to the Department of Students Affairs' Statistic in the MOHE (February 2001) students registered in the Colleges of Education in the academic year 2000-2001 were as follows in table 8.1.

Year	Number of Students	Male	Female
1 st	1984	1260	724
2 nd	1987	1288	699
3 rd	2608	1266	1342
4 th	2129	1290	839

Table 8.1 Students registered in the Colleges of Education in 2000-2001.

Graduates of the Colleges of Education usually start teaching at schools the semester following their graduation when schools open. This shows how the Colleges of Education are performing in accelerating the Omanization of teaching jobs at different educational stages as well as indicating the Colleges' success in meeting aim B.

The discussions of the achievement of both LRCs' and Colleges' aims clarify how the LRCs represent an important factor in supporting the Colleges of Education to prepare and qualify Omanis through the utilisation of all kinds of resources (human and material) in the Centres for the purpose of the learning and teaching process. In addition as already explained in the comparison of the aims of the Colleges and the LRCs that the students who score the best results in each specialism/subject in 4th year are recommended to become assistant teachers in the Colleges then to carry on their postgraduate studies. As a result this could enable the Colleges to produce competent teachers so they can replace teachers from other nationalities in different educational stages.

8.6.2.1 Conclusion on Omanization of Teaching Jobs

The previous explanation shows the support of the LRCs to the Colleges Of Education in training students as well as the number of students enrolled in different stages of the Colleges. Moreover it was illustrated that the graduates of the Colleges have the opportunity of employment in schools or the Colleges themselves. Accordingly this

demonstrates how the Colleges of Education are well doing towards speeding up the Omanization of teaching jobs at different educational stages.

8.6.3 Development of Student's Ability and Role in the Community

C. Developing the student's ability to perform his/her duties with competence and effectiveness as a teacher at different educational stages, as well as increasing his/her contribution to the school's different educational activities and to playing an effective role in the development of the local environment and community.

The Colleges of Education seek to prepare competent teachers to carry out their teaching tasks successfully and contribute effectively to the local community. The introduction of effective LRCs in the Colleges of Education could be seen as significant factors in supporting the Colleges to achieve this aim.

The interviewees' answers showed that each LRC contains a variety of printed and non-printed materials as well as computers and a range of equipment. These resources are very useful for increasing students' knowledge and skills which enhances their ability to teach effectively at all educational levels.

The data collected from the staff of LRCs indicated that the facilities provided encourage users to utilise them. It was also demonstrated previously in the discussion of aim A that the training courses provided in the LRCs were highly satisfactory for students. These consequently enable students to improve their experience and build up new skills to learn by themselves.

It was clarified earlier in the discussion of LRCs' aims that the aims of the LRCs do not include direct aims which encourage students' contribution to school's activities and the development of the local environment and community. Therefore it was stated that the LRCs still do not have a formal policy for users from the local environment and community. Nevertheless the results from the interviewees' responses to Q.11 explored that the LRCs of five Colleges of Education provide services for some clients of their local communities such as researchers, academics from private colleges, and school teachers.

8.6.3.1 Conclusion on Development of Student's Ability and Role in the Community

The variety of resources that LRCs have, combined with the training students receive, could play a fundamental role in providing students with knowledge and valuable skills which prepares them well for teaching. The LRCs generally provide services for certain users of their local communities. It is advisable that the LRCs set a formal policy for services to the local environment and community, so the staff of LRCs can take part in any activities that the Colleges plan for their students to contribute to the surrounding area and community.

8.6.4 Enhancing the Ability of Teachers in Science, Mathematics and Technology in Technological Education.

D. Matching the level of teaching of scientific subjects, mathematics and technology to the level of current technological development by giving special attention to the training of teachers in these subjects.

We saw earlier how the LRCs' aims 2 and 5 seek to assist students and academics to achieve excellence in learning and teaching and support them to develop their initiative to use an integrated learning approach. Consequently this could enhance the quality of teaching in all subjects.

There is no acknowledged attention being given to the training of teachers of scientific subjects, mathematics and technology to match the level of current technological development particularly in computer technology. The data from interviewees showed that LRCs' staff support academics in their lectures and the practical parts of their subjects. The scientific subjects frequently have practical aspects alongside the theoretical basis. The staff of the LRCs arrange and set-up educational technology aids and train users on their use. Hence somehow training of teachers of such subjects (scientific subjects, mathematics and technology) could be enhanced to match the level of current technological development.

The responses of the staff of the LRCs' clarified that the MOHE focuses on the specification and the cost in purchasing equipment and materials. For that reason occasionally the LRCs do not get the necessary resources and equipment. Furthermore the

staff of LRCs indicated the need for improving educational technology materials and equipment.

Academics indicated that the up-dating of books and journals was unsatisfactory. In addition the students' dissatisfaction with the collection constrains achieving their requirement to gain knowledge and information from a wide variety of sources. Accordingly this will reflect negatively on reaching the required level of teaching different subjects.

8.6.4.1 Conclusion on Enhancing the Ability of Teachers

Assisting students and academics in the theoretical and practical educational aspects through preparing educational technology materials and equipment as well as training them to utilise such aids could play a vital role in improving teachers ability to be competent in teaching scientific subjects, mathematics and technology subjects. On the other hand the deficiency in gaining the required educational materials as well as the deficiency in the collection would cause barriers to achieve the needed level of teaching the previous subjects. Therefore such deficiencies need to be reformed to enable Omani teachers to teach scientific subjects, mathematics and technology effectively.

8.6.5 Provision of Human, and Material Resources

E. Provision of the required human, and material resources for training and development of instructors and employees in the educational field throughout their service.

It was indicated earlier, in the comparison of the LRCs' and the Colleges' aims, that LRCs' aim 9 intends providing the Colleges with competent LRC staff. In addition the LRCs' aims 8 and 10 seek to provide the Colleges with information technology services and learning resources and attempt to have computerized access to these. Accordingly these match the provision of the required human, and material resources (in aim E) as well as supporting any training and development of instructors and employees in the educational field.

The staff of LRCs explained that they are not involved in the provision of human resources to LRCs because it is centralised at the MOHE and the Ministry of Civil Service. Subsequently the needs of LRCs for the most suitable employees are not always met.

However the investigation of the qualifications of the sample interviewed (24 employee), showed that staff of LRCs, except for those in the media section, hold qualifications which do match the needs of the Centres. In addition 9 of the 24 interviewees were non-Omanis which shows how the MOHE tries to recruit fully qualified professional staff from abroad when qualified Omanis are not available.

The data analysed from the staff of LRCs' responses to Q.8 indicated that the MOHE arranges short and long term plans for training the staff of the LRCs to ensure their competence in their work. Accordingly students and academics expressed their satisfaction with the helpfulness, knowledge and skills of the staff of LRCs. This can be interpreted as showing that the LRC's staff are capable of performing their jobs.

To provide material resources for the Colleges of Education it was illustrated in the interviews' chapter that the staff of LRCs and academics co-ordinate with each other to suggest required books and periodicals without duplication with what is available in the LRCs. For purchasing equipment and materials the LRCs' staff develop specification, type and numbers for the equipment and materials needed. This is passed to the MOHE who make the ultimate decision. Often MOHE select the most popular and cheapest items that the Colleges asked for. Therefore the Colleges do not always get the most appropriate resources, which can cause problems in the delivery of the LRCs services.

Moreover it was illustrated previously (in the discussion of aim C) that the LRCs do not have an official policy for serving users from out with the MOHE. Therefore any utilisation of the previous human and material resources are exclusively for employees belonging to the MOHE.

8.6.5.1 Conclusion on Provision of Human, and Material Resources

Despite the provision of the required human, and material resources being centralised at the MOHE so the most suitable requirements are not always obtained, to some extent the qualifications of the current staff of LRCs are quite relevant to the Centres needs.

Moreover the staff of LRCs are being trained to ensure that they are able to meet the users' needs. On the other hand it is common that the Colleges do not always get the resources which they would accord the highest priority. The lack of a formal policy for serving

clients from out with the MOHE would limit the services that the LRCs could provide towards training and development of instructors and employees in the educational field, such as those in the Ministry of Education. This is due to the priority given for use of resources in the LRC by the members of the MOHE.

8.6.6 Conducting Research and Educational Studies

F. Carrying out research and educational studies related to issues and problems in education, as well as publishing them and utilising them in developing the educational process.

None of the aims of the LRCs specifically address the need to participate in carrying out research activities within the College. However, many of the LRCs aims fit with aim F from the College's aims. Consequently this could give the Colleges a wider opportunity to conduct educational research then enhance and develop the process of learning and teaching.

However the results of the survey conducted in the LRCs of the Colleges of Education did not include any data which could show that the Colleges of Education in Oman carry out or publish research or educational studies for the development of the educational process.

8.6.6.1 Conclusion on Conducting Research and Educational Studies

To date there has been no published research which addresses specific educational issues within the Colleges of Education. The LRCs are uniquely placed to support the Colleges in achieving their tasks. This is most likely to happen when the tasks are clearly addressed by the Colleges.

8.6.7 Setting-up Projects for the Environment and the Community

G. Setting-up projects and programmes that serve the environment and the community as well as participating in their development.

It was clarified earlier in the discussions of the LRCs and the Colleges aims that the LRCs do not have a formal policy for serving the outside community. This was attributed to the reason that the LRCs do not include direct aims which have commitment towards the local community and environment. Despite the lack of policy and aims regarding the contribution of the LRCs to the local community and the surrounding environment the

LRCs mostly provide services for particular users from their local communities. For instance from my own experience as an Assistant Head of an LRC, a computing course was offered for teachers from the Ministry of Education. This was arranged through the collaboration of the College and the LRC. However it was the only programme provided for the local community during two academic years between 1997 and 1999.

8.6.7.1 Conclusion on Setting-up Projects for the Environment and the Community

Generally the LRCs provide services for some users from their communities even though they lack a strategy and aims which would encourage them to contribute effectively to their local community and the environment. Apparently what the LRCs offer for their local communities and environment do not promote their participation in development effectively. This clarifies the need for setting aims that persuade the LRCs to share responsibility and programmes to the growth of their community and environment.

8.7 Main Obstacles

One of the research questions was: '*What are the obstacles in the way of improving the LRCs and how can these obstacles be overcome?*'. Therefore this part of the study will concentrate only on the main issues which are considered obstacles to improving the LRCs.

The issues which will be dealt with are:

- Centralisation of acquisition of human and material resources.
- Space
- Policy
- Classification System and Catalogue

8.7.1 Centralisation of Acquisition of Human and Material Resources.

The data collected from the interviewees' responses demonstrated that the personnel at the LRCs are not involved in the employment of new members of staff for the Centres. The enrolment of staff to LRCs is centralised at the MOHE and the Ministry of Civil Service. Consequently this contributes to a delay in providing the LRCs with suitably qualified staff. The LRC Heads consider that their needs are not always provided. For instance the results from the interviews showed that there was only one member of the six media specialists interviewed who holds a qualification that is recognised as relevant to the media section.

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This could be attributed to the belief by the staff of LRCs that they are more familiar with the needs of the LRCs and that this should be taken into consideration when employing new members of staff for the LRCs.

The MOHE could save a lot of money by employing qualified people, because this will reduce the need for training the new staff as well as having staff employed who have appropriate experience and can therefore begin to take on their duties quickly. The staff of LRCs focussed on the significance of employing suitable people with qualifications related to education. A teacher-librarian with double qualification was recommended (in the staff section of the literature review) as the most suitable employee for the LRC/library to ensure that learners are dynamic in their learning.

Regarding acquisition of material resources it was clarified that the academics and staff of LRCs communicate with each other to create lists with the most needed books and/or periodicals then they send them to the MOHE to make the final decision. Usually the MOHE chooses the most recommended books, periodicals or journals as well as considering the cost.

Purchasing equipment and materials also follows a similar procedure. Regularly the MOHE asks the LRCs' staff to suggest type, numbers and specification for the equipment needed. The disadvantage of this system was that the MOHE focuses on the specification and the cost of the required equipment or materials. However in some cases some small items could be obtained through the Administration Departments of the Colleges.

Thus the MOHE centrally perform the procedure of acquiring books, periodicals, materials and equipment and it is common that the LRCs do not receive what they have requested. Consequently the results from the interviews with the staff of LRCs and users indicated a need for improving the educational technology materials and equipment at the LRCs which shows that the acquisition of material resources do not always meet the needs of the Colleges.

In addition the staff answers clarified that the LRCs have no budget and the Colleges of Education budget is centrally managed at the MOHE. Accordingly the Colleges of

Education and their LRCs always have to contact the MOHE for their requirements. This could indicate the existence of inflexibility in the financial system to meet the needs of the Colleges of Education.

Therefore it would be more cost effective if the staff of LRCs take part in selecting human and material resources for their Centres. If a sum of money is designated for the LRCs and managed by their staff to purchase some of the Centres needs it would support the LRCs to achieve the appropriate material resources. Moreover the staff contribution and consultation in employing new staff would contribute effectively to gaining the most suitable qualified personnel. As a consequence the procedure of acquiring human and materials resources could show more flexibility and improvement.

8.7.2 Space

The data collected from the survey specified a shortage of space as one of the common problems of the LRCs sections. The data from the observation and the interviews showed that LRCs lack rooms for research and individual or group study purposes. LRCs also lack storage and space for working on books, especially new supplies when they arrive, before providing them to users. In addition the Centres lack offices for computer technicians.

Students illustrated their dissatisfaction with the availability of spaces in the multi-media and media labs. They attributed this to the teaching classes being set in the LRCs labs as well as to the shortage of spaces compared with the number of users. Moreover students and staff of LRCs illustrated that the media lab is not big enough for teaching and self-working. Therefore they suggested another media lab for teaching and dedicating the existing lab for training and production of educational materials.

Matching the number of students in the Colleges also represents one of the factors that puts the emphasis on the necessity of dealing with the issue of space in the LRCs. This shortage of space is most obvious in Rustaq College. This might be attributed to the reason that Rustaq College has the biggest number of students (2054 students) compared with the other Colleges of Education.

The staff of LRCs offered their perception on the shortage of space as due to the reason that the amount of materials and equipment keeps growing and the LRC's building is not getting bigger.

Consequently the lack of rooms for individual or group study will affect the promotion of independent learner approaches by limiting the opportunities for learners to study either individually or in groups. The growing number of users with the stability of the size of the LRCs will also reduce the users opportunity of utilising the facilities provided in the Centres.

The halls of the first floor at the LRCs apart from one computing lab are currently managed by the Colleges' Administration and used for teaching purposes. Therefore in order to eliminate or to control the problem of shortage of space in the LRCs these halls should be managed by the LRCs' Administrators and utilised for the LRCs' purposes.

8.7.3 Policy

The staff of LRCs pointed out that there was no specific policy followed in all of the LRCs regarding the number of items academics can borrow or loan of the computer software materials. The LRCs also do not have a policy of serving users from their local communities. The earlier parts of the discussion also clarified that the aims of the LRCs do not place emphasis on enhancing students' contribution to the school's activities and the development of the local environment and community. Moreover the LRCs' aims do not comprise aspects which are designated for contributing to carrying out educational researches.

Hence this signifies the need for an addition to the LRCs' aims which could identify an improvement in the role of the LRCs in participating in the development of their local communities. In addition the LRCs need to form a clear unified policy for serving users particularly those from outwith the Colleges of Education. Moreover it would be useful if the LRCs would conduct research in issues related to the LRCs and the Colleges of Education so they could support the Colleges to achieve their purposes.

Consequently the LRCs could participate effectively in supporting the Colleges to achieve a satisfactory contribution to their local community instead of concentrating on the achievement of what they (LRCs) have been asked to do.

8.7.4 Classification System and Catalogue

The previous parts of the discussion illustrated that four LRCs use a simple automated catalogue system for circulation purposes with the initial Library of Congress (LC) classification system and the remaining two LRCs are using a manual catalogue system. The data from the observation and the questionnaires pointed to the disorganisation of books. This was attributed to the incomplete classification and cataloguing within the LRCs, as well as to students' carelessness in using the collection. However the LRCs are waiting for the introduction of an automated system with cataloguing and classification from the MOHE.

The MOHE is planning to apply the LC system in the Colleges of Education as exists in the Library of SQU. However, the schools are using the Dewey system and this is where the students are going to work when graduate. The visit to Canada explored that four of the six surveyed Universities use the LC classification system, while two particularly in Toronto use the Dewey system. They justified keeping this system because public libraries and schools in Toronto are using this system. Hence they preferred to match their community. Thus the decision of selecting classification system requires further careful study to suit the Colleges as well as the community.

CHAPTER NINE

CONCLUSIONS

9.1 Conclusions

This study which sought to investigate the effectiveness of the LRCs in the Colleges of Education in Oman focused mainly on: the achievements of the LRCs aims, the scope to which the LRCs support the Colleges of Education to attain their aims, identifying the obstacles in the way of improving the LRCs and how to improve the effectiveness of the LRCs in the Colleges of Education.

The overall conclusion of this thesis is that the LRCs in the Colleges of Education in Oman are mainly effective, and improvements can be made.

This conclusion is based on data gathered by questionnaires, interviews, observation and work experience in the LRCs. The claim is based on comparing the data with theories and rationalisations in the literature on the requirements for LRCs (including their ideal aims and objectives), literature on evaluation of learning resources and libraries, and the aims and objectives declared by the Omani LRCs, Colleges of Education and the MOHE. There has been no literature previously available on evaluating the Omani LRCs.

The LRCs aim to develop the independent learning and critical thinking of users in order to support them to move away from a didactic teaching approach to an approach which enhances self-directed learning. The study indicated that the provision of materials and equipment was considered satisfactory by users. It also indicated that the level of support offered to users by the personnel of the LRCs was sufficient to encourage them to use the LRCs facilities. Moreover the results illustrated that students' usage of the LRCs is increasing. These features represent significant elements in encouraging independent learning and critical thinking methods in the Colleges of Education.

Although the LRCs are provided with materials, equipment and computer services which are considered satisfactory there is scope for further development. Moreover there are deficiencies and difficulties which need development to enable independent learning and

critical thinking approaches. These deficiencies can be described as: lack of rooms for individual or group study, users limited ability in English, lack of a distance education service, limited instructions for helping users to learn independently, as well as the cultural difficulties in mixing male and female students in the use of the LRCs services.

The discussion showed that academics do not encourage their students to gain the maximum benefit from the LRCs materials. Accordingly students rely on the books that are quite often used by tutors in order to score better marks. This demonstrates the contradiction between the model of an LRC and the learning and teaching that takes place in the Colleges of Education. This is, in particular, because the LRCs materials primarily were made available to enhance learning and teaching. Thus changes should be made to the learning and teaching process to diminish the tension between the existing approaches of learning and teaching and the model of LRC.

In addition the analysis of data indicates that critical thinking and independent learning is not being developed. In general the LRCs have satisfactory factors (such as accessibility of resources, support from personnel and the utilisation of facilities) which enhance the possibility of achieving these aims but these factors need to be utilised effectively to promote critical thinking and independent learning.

The findings of the survey show that the staff of LRCs offer satisfactory assistance to students and academics and encourage them to utilise the services provided. The study also revealed the friendly and satisfactory liaison between the staff of LRCs and academics which enhances the utilisation of the services. Consequently these reflect positively on the ability of the LRCs to playing a significant role in the achievement of excellence in learning and teaching, and developing the users' initiative to utilise an integrated learning approach.

The LRCs consist of integrated learning resources and play an important role in enhancing users' skills, which contribute fundamentally towards providing technologies for knowledge and skill acquisition. The results of this study showed that students and academics were highly satisfied with the training in the LRCs which develops their skills. The relevance of resources to the curriculum and the academics ease of borrowing

materials also support the achievement of the LRCs' aim which seeks to provide technological resources for knowledge as well as improving the ability of users.

On the other hand the deficiencies in the collection and the need for developing the resources in LRCs reduce the possibility of reaching the required level of providing the community of teachers with information technology services and learning resources.

The study showed that the collection in the LRCs lacked a curriculum resource collection for students and teachers in schools. This normally contains materials for practical activities in teaching. These materials, such as audio-visual, video programmes, guidebooks for teaching students at schools of the Ministry of Education, CD-ROMs and software packages are used regularly by teachers but not available in the LRCs.

In addition the investigation exposed that the LRCs are not automated and have not yet reached the aim of providing system-wide computerized access to materials and resources. Consequently this prevents users from accessing LRCs resources from off-campus. Moreover the staff of LRCs were not using technological communication which demonstrates that, the aim of increasing the use of technology for communication is not being fully met. Furthermore the lack of an interlibrary-loan service inhibits the provision of technologies for knowledge and skill acquisition and communication.

The MOHE seeks to provide the College of Education with fully qualified professional and technical staff in the LRCs to ensure full utilisation of the resources and equipment available. The investigation demonstrated that the majority of staff of LRCs have qualifications of direct relevance to the needs of the LRCs. The exception to this is the staff employed in the media sections. The training of staff in the LRCs can play a major role in meeting the need for the employment of suitably qualified staff to LRCs in order to ensure the full utilisation of the resources and equipment available. Thus the staff of LRCs need to be involved in the recruitment of new employees in order to appoint the most suitable people for their Centres. Furthermore to encourage female students to utilise the services provided the ratio of male and female employees needs to be considered in the recruitment of staff of the LRCs.

The research investigated the extent to which the LRCs support the Colleges of Education to achieve their aims. The Colleges of Education aim to prepare Omani teachers to university level for teaching all educational stages. The study found that the availability of technology, and the availability of training courses together with support from LRCs staff contributed towards enabling students to reach degree level qualifications. With further support and development these aspects will play a vital role in expanding students' ability and enable them to teach all educational levels. This will hopefully accelerate the Omanization of teaching jobs at different educational stages which the Colleges of Education are supporting.

The Colleges of Education also seek to set-up projects and programmes that serve the environment and the community as well as preparing capable teachers to contribute to the activities of their local community. Although the introduction of LRCs could play a major role in supporting the Colleges to achieve these aims, the LRCs do not have a formal policy for contributing to the local environment. There are also no specific aims to encourage the LRCs to share responsibility in their community. However the findings of the study illustrated that most of the LRCs provide services for some clients of their local community.

The Colleges of Education aim to provide the human, and material resources required for the development of those in the educational field throughout their service. As illustrated previously, the provision of such resources is centralised at the MOHE so the most appropriate requirements are not always met although the qualifications of the staff of LRCs are generally applicable to the LRCs needs. Additionally the staff of LRCs are being trained to meet the users' requirements. The lack of a formal policy for serving clients from outwith the MOHE would limit the services that the LRCs could provide towards training and development of those in the educational field.

The Colleges of Education aim to ensure that teachers of scientific subjects, mathematics and technology are educated to the level of current technological development. The LRCs assist students and academics in theoretical and practical educational aspects and train them to utilise educational technology aids. This could play an essential role in improving their ability to be competent in teaching such subjects. On the other hand, shortages in the

collection and lack of acquisition of the required educational materials inhibit the Omani teachers from teaching effectively to the level of current technological development.

One of the aims of the LRCs is to support Colleges of Education to meet their aims. Despite one of these aims being to conduct and publish research which can develop the education process, there have been no research studies published which identify specific educational issues within the Colleges of Education.

This study intended to address the obstacles to the development of the LRCs. The findings of the research considered that the main obstacles to improving the LRCs are: centralisation of acquisition of human and material resources, space, policy, and the classification system and catalogue.

The research findings clarified that the acquisition of human and material resources are centralised at the MOHE. As explained earlier in some cases this prevents the LRCs from gaining the most suitable human and material resources.

Shortage of space was considered to be one of the common problems of the LRCs. Students expressed their dissatisfaction with the availability of spaces in the multi-media and media labs. Moreover there is a lack of rooms for individual or group study which will inhibit the encouragement of independent learning approaches.

The research illustrated that there was no specific policy followed in all of the LRCs regarding lending equipment and materials to academics and providing services to users from the local community. Furthermore the LRCs' aims do not include any aspects of carrying out educational research.

The study considered the incomplete classification and cataloguing within the LRCs as obstacles in the way of improving the LRCs. The findings showed that four LRCs use a simple automated catalogue system and the remaining two LRCs are using a manual catalogue system. Accordingly the data from the survey indicated the disorganisation of books. The incomplete classification and cataloguing within the LRCs represents a main factor for the books disorganisation at the libraries of LRCs. However the MOHE is

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planning to apply the Library of Congress (LC) classification system in the Colleges of Education.

The data revealed some users and staff comments on limitations of the LRCs and their provision and availability of their resources. But these were not arguments against the overall effectiveness, and respondents mainly reported positively.

This chapter has shown that the LRCs made an effective contribution towards to the aims that they have been set by the MOHE. However, improvements and enhancements can be made on these are discussed in following chapter.

CHAPTER TEN

RECOMMENDATIONS

10.1 Lessons from the Canadian Experience of LRCs.

This study did not explicitly explore the Canadian LRC model in terms of aims and objectives. Their differ from those set for Omani LRCs and so the lessons learned from the Canadian experience included only the services offered in the Canadian LRCs/libraries that can be applied to the Omani LRCs. Therefore, it is essential to develop an Omani model for LRCs (which is based on Canadian experience) which should take into consideration the specific requirements of the Omani education system and the country's culture.

The following services offered in the Canadian LRCs/libraries can be implemented in the Omani LRCs. These services can be addressed as: —

Curriculum resource collection

Curriculum resource collection for students and teachers in schools. The collection comprises educational materials from the Ministry of Education these materials can be; video programmes, guidebooks for students, picture books, audio-visual, references and articles, and CD-ROMs and software packages.

Interlibrary-loan services

This can be applied within the Colleges of Education themselves and other educational institutions in Oman.

Rooms for individual and group study,

Such rooms for individual study and group discussions activities will be useful for users at the Colleges of Education to practice various approaches of learning such as learning in groups and self-study as well as for research.

On-line services

Provision of an on-line service Open Public Access Catalogue (OPAC) will facilitate the clients' access to information from both on-campus and off-campus. This also would encourage the development of a distance learning service in the Colleges of Education which could support researchers to a great extent.

Methods of evaluating the quality of work of LRCs.

It would be very useful if the evaluation of work in the LRCs in the Colleges of Education could be expanded to comprise various methods of evaluation such as: annual reports, committees, self-assessment from the directors of LRCs, surveys, and discussions with users. This is particularly applicable because the Omani LRCs use limited choices of methods of evaluation.

10.2 Recommendation for Improvements to the LRCs.

The main aim of the research is to identify recommendations which will lead to improvements in the Learning Resource Centres in the Colleges of Education. The following recommendations have been identified and should be considered.

1. Acquisition of Human and Material Resources

Centralisation of the acquisition of both human and material resources at the MOHE leads to a concentration on the specification and the cost of the required equipment or resources, thus the most appropriate resources for the specific situations are not always obtained. Accordingly to minimise this problem centralisation at the MOHE should be reduced to a level that allows the staff of LRCs to be consulted and to contribute directly to the acquisition of new human and material resources. This would recognise that staff of LRCs are more familiar with the requirements of their Centres. Furthermore if a budget is allocated to the LRCs and managed by their staff appropriate resources would be obtained to meet local need.

The ratio of male and female employees should be considered when recruiting new staff to LRCs. This would respond to the wishes of some female students who would be more comfortable with female staff and who are inhibited by male members of staff. This would

reduce cultural difficulties which are experienced when male and female students share LRC facilities.

The study revealed that the availability and modernity of equipment, materials, and computer services in the LRCs are satisfactory but could be improved further. The required development is illustrated as follows:

- Increasing the speed of computers (an on rolling basis) and the Internet service.
 - Increasing the number of computers to match the needs of the numbers of users.
- Currently there is an imbalance between the small number of computers compared with the large number of users. This presents constraints on their accessibility and usage.
- Up-dating educational equipment and materials.

2. Space

Shortage of space was revealed as a common problem in the LRCs. This could be improved by allowing the use of the first floor halls in the LRCs to be used for the LRCs purposes rather than using them as teaching halls by academics. These halls could then be modified and utilised for purposes such as rooms for individual or group study, a place for staff working on books, creating an additional lab for media section services, storage and an office for technicians etc.

3. Policy

The findings of the research showed a lack of any aims directly encouraging a contribution to the development of the local environment and community and school's activities. The LRCs also lack a formal policy for serving users from outwith the MOHE which would limit the services that the LRCs could provide towards the training and development of those in the educational field. Therefore it is advised that the LRCs set a formal policy and additional aims for services to the local community and environment, so the staff of LRCs can participate actively in the growth of their community and environment. In addition although the LRCs provide services which support the requirements of researchers, the LRCs' aims do not include aspects which recognise their contribution to conducting research. Therefore it would be useful if the LRCs conduct studies such as, research studies related to the concerns of the LRCs and the Colleges of Education.

The findings of the study demonstrated the lack of a unified policy in lending LRCs materials to users. Hence the LRCs need to adopt a unified procedure in lending LRCs materials to their different types of users from the Colleges of Education and those from the local community.

4. Automating the Library & Classification and Catalogue System

The investigation described incomplete classification and cataloguing within the LRCs. This creates a significant obstacle to improving the LRCs. The MOHE is planning to apply the LC system in the Colleges of Education. Whilst the schools are using the Dewey system and this is where the students of the Colleges of Education are going to teach later. Hence the decision of selecting classification system needs a careful study to suit the Colleges as well as the community they are located in. The MOHE also is required to accelerate the implementation of a classification and cataloguing system. This will enable swift access to required materials as there will be a clear organisational structure.

The study showed that the LRCs have not been automated yet and still lack a computerised system for access to materials. Accordingly the Colleges of Education should seek automation of LRCs and provision of computerised access to materials as soon as possible. This could lead to the provision of a distance learning service such as the ability to access materials from off-campus, and would facilitate the provision of an interlibrary-loan service.

5. Development of Collection

The findings of the study clarified the need to develop the collection of the library. Although the users considered the books and references to be at an acceptable level of satisfaction they were dissatisfied with the availability of journals as well as requiring an improvement in the collection. Therefore the collection of the library should be developed with increased reference works and subscriptions to both printed and electronic periodicals. Accordingly this could extend users opportunities to gain knowledge from various sources and access up-to-date information.

It is very important that the LRCs add a curriculum resource collection for students and teachers in schools. The collection needs to cover all of the subjects. It should contain materials for practical activities in teaching, therefore it should contain materials for audio-visual services, guidebooks for students from the Ministry of Education, audio-visual learning programmes, CD-ROMs and software packages.

6. Instructions

The findings of the study indicated a lack of adequate instructions in the LRCs. Consequently this limits users' opportunities in applying independent learning activities. Therefore the LRCs are required to improve the availability of instructions for users to a level that could enable them to use the services provided and learn by themselves. This also would reduce the users requirements for assistance from the staff of LRCs which as a result will save the staff's time and allow other priorities to be addressed.

7. Interlibrary-loan Service

It is advisable for the LRCs to provide an interlibrary-loan service. So users of LRCs can benefit from the resources provided in other Colleges of Education. This also would be cost-effective for the MOHE. Therefore instead of providing all materials in all Colleges users can get them through an interlibrary-loan service.

8. Improving Independent Learning and Critical Thinking

Users with limited ability in the English language cannot use many of the materials in English. This limits their opportunity to learn from the variety of resources available, in particular this restricts their usage of the Internet to navigate only within the sites available in Arabic. As a result this inhibits those users opportunities to learn from different cultural information which has a significant effect on the LRCs to promote critical thinking and independent learning. Therefore in order to enhance users' independent learning and critical thinking and promote their utilisation of the services their ability in the English language should be developed to the level that could enable them to utilise the variety of resources including those in English. In addition further support is required to enhance students skills and interests towards developing independent learning and critical thinking.

To enable the LRC model in Oman to play its genuine role, changes should take place in the learning and teaching process in the Colleges of Education. This is through moving from the traditional (didactic) approaches of learning and teaching which rely on limited or particular materials such as textbooks to more of an inquiry based approach which allows the students to utilise the various integrated educational materials. Both students and academics should be persuaded, helped and supported to attain the best advantage from the variety of materials provided in the LRCs. This could create a closer fit between the model of learning and teaching and the model of LRC in the Omani Colleges of Education.

9. Researches and Evaluation

It is advisable that the LRCs conduct regular studies such as evaluations of their quality of work. This can be conducted after each term of the year. It is also recommended that the MOHE set benchmarks for the LRCs then carry out regular evaluations on the effectiveness of the LRCs in the Colleges of Education.

10.3 Suggestions for Further Researches:

More focussed and detailed investigations on the following topics would be useful for the Colleges of Education at the MOHE in Oman.

- The influence of the LRC on improving the performance of the graduates of the Colleges of Education at schools, by doing a study of in-service teachers.
- The role of the LRC in promoting and enhancing independent learning approaches.
- Carrying out of discipline based studies looking at the development of particular types of teacher, e.g. teachers of basic education primary schools and teachers of particular subjects such as maths, science, Arabic language, history etc.

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Appendix One:

Letter from the Directorate General of the Colleges of Education
to The Colleges (in Arabic).

Appendix Two:

Students' Questionnaire (English and Arabic)

*Survey of Learning Resource Centres (LRCs) In
The Colleges of Education in the Sultanate of Oman*

Students' Questionnaire

This questionnaire, which is part of a Ph.D programme, aims to investigate the extent of the effectiveness of the Learning Resource Centres (LRCs) in the Colleges of Education in the Sultanate of Oman. It is hoped that this aim can best be served through the answers to the enclosed questions as well as the comments and critical remarks of the LRCs users and staff.

As the results and recommendations of this questionnaire contribute to improving the effectiveness of the Learning Resource Centres, your help and contribution would be very much appreciated.

Could you kindly complete the enclosed questionnaire and send it to the Dean's secretary.

Thanking you in advance

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Survey of Learning Resource Centres
In The Colleges of Education in Oman

Students' Questionnaire

Please tick 4 the appropriate boxes or write answers inside the larger boxes.

These boxes are for your written answers
.....
.....

Note: The questions are written in italics.

Q.1. Name of college:

.....College of Education

Q.2. Gender Male: Female:

Q.3. Course you are doing:

.....

Q.4. Department:

.....

Q.5. What year are you in? 1 2 3 4 other

Q.6. Age:

17-19	<input type="checkbox"/>	26-28	<input type="checkbox"/>
20-22	<input type="checkbox"/>	29-30	<input type="checkbox"/>
23-25	<input type="checkbox"/>	over 30	<input type="checkbox"/>

Q.7. How satisfied are you with the following aspects of the service in the Learning Resource Centre (LRC)?

This scale ranges from 1 - 5 where 1 is excellent and 5 is poor. If you have no experience of a particular aspect, just tick 4 (not applicable).

	Excellent	Very good	Good	Fair	Poor	Not applicable
	<input type="checkbox"/>					
7.1. The availability of subject specialist books	<input type="checkbox"/>					
7.2. The availability of text books	<input type="checkbox"/>					
7.3. Usefulness of reference and reserved books	<input type="checkbox"/>					
7.4. Books for loan are up-to date	<input type="checkbox"/>					
7.5. Availability of journals on the shelves	<input type="checkbox"/>					
7.6. The short loan collection meets your need	<input type="checkbox"/>					
7.7. Number of items you can borrow	<input type="checkbox"/>					
7.8. Lending period sufficiency	<input type="checkbox"/>					
7.9. The procedure for borrowing materials	<input type="checkbox"/>					
7.10. The time waiting in the queue for borrowing	<input type="checkbox"/>					
7.11. Catalogue ease of use	<input type="checkbox"/>					
7.12. Organisation and display of materials	<input type="checkbox"/>					
7.13. Availability of computing facilities	<input type="checkbox"/>					
7.14. Up-to date computing facilities	<input type="checkbox"/>					
7.15. Mouse (navigating with mouse)	<input type="checkbox"/>					
7.16. Headphones	<input type="checkbox"/>					
7.17. Computer printing	<input type="checkbox"/>					
7.18. Access to the Internet	<input type="checkbox"/>					
7.19. Internet instructions for new users	<input type="checkbox"/>					
7.20. Instructions on how to set-up your own E-mail account	<input type="checkbox"/>					
7.21. Help with computers	<input type="checkbox"/>					

Appendix Two

	Excellent	Very good	Good	Fair	Poor	Not applicable
	<input type="checkbox"/>					
7.22. Range of study materials	<input type="checkbox"/>					
7.23. Up-to date study materials	<input type="checkbox"/>					
7.24. Audio-Visual facilities	<input type="checkbox"/>					
7.25. Micro teaching facilities	<input type="checkbox"/>					
7.26. CD-ROM service	<input type="checkbox"/>					
7.27. Photocopiers	<input type="checkbox"/>					
7.28. Helpfulness of staff	<input type="checkbox"/>					
7.29. Knowledge and skills of staff	<input type="checkbox"/>					
7.30. Staff supports to improve learning progress	<input type="checkbox"/>					
7.31. Clarity of signs and instructions	<input type="checkbox"/>					
7.32. Usefulness of information sheets	<input type="checkbox"/>					
7.33. Notice board	<input type="checkbox"/>					
7.34. Advertising about new books and new materials	<input type="checkbox"/>					
7.35. Availability of spaces in the Multi-Media laboratory	<input type="checkbox"/>					
7.36. Availability of study spaces in the Media laboratory	<input type="checkbox"/>					
7.37. Availability of Study spaces in the Library	<input type="checkbox"/>					
7.38. Facilities for private study	<input type="checkbox"/>					
7.39. Facilities for group study	<input type="checkbox"/>					
7.40. Noise level	<input type="checkbox"/>					
7.41. Opening Hours	<input type="checkbox"/>					
7.42. Environment: Ventilation/Air-conditioning	<input type="checkbox"/>					
7.43. Lighting	<input type="checkbox"/>					
7.44. Location of the Centre	<input type="checkbox"/>					

Excellent Very good Good Fair Poor Not applicable

7.45. Accessibility of the Centre

7.46. General appearance of the Centre

Usage:

Q.8. How often do you use the following:

8.1. A. The library?

Every day 2 - 3 times a month

2 - 3 times a week Never

Once a week Other please specify.....

8.2. B. The Multi-Media Laboratory?

Every day 2 - 3 times a month

2 - 3 times a week Never

Once a week Other please specify.....

8.3. C. The Media Laboratory?

Every day 2- 3 times a month

2 - 3 times a week Never

Once a week Other please specify.....

Q.9. For which of the following facilities or purposes do you use the Centre?

Please tick all of the appropriate boxes.

9.1. Borrowing books 9.6. Learning packages

9.2. Reading in the Centre 9.7. CD-ROMs

9.3. Reading News papers/Magazines 9.8. Printing

9.4. Doing researches 9.9. Tape recorder cassettes

9.5. Typing Essays with computer 9.10. Scanner

- | | | | |
|---------------------|--------------------------|--------------------------------|---|
| 9.11. Copying | <input type="checkbox"/> | 9.15. Overhead Projector (OHP) | <input type="checkbox"/> |
| 9.12. Internet | <input type="checkbox"/> | 9.16. Satellite | <input type="checkbox"/> |
| 9.13. E-mail | <input type="checkbox"/> | 9.17. Socialising | <input type="checkbox"/> |
| 9.14. Personal uses | <input type="checkbox"/> | 9.18. Others | <input type="checkbox"/> please specify |
| | | | |

Q.10. How do you assess the usefulness of the following available training courses in the Centre?

Please tick the appropriate boxes. If the course does not exist, just tick not available.

	Good	Average	Not useful	I didn't need	Not available
	<input type="checkbox"/>				
10.1. Induction course on the services in the Centre in general	<input type="checkbox"/>				
10.2. Induction course on how to use the Library	<input type="checkbox"/>				
10.3. Training course on how to use the Multi-Media Laboratory	<input type="checkbox"/>				
10.4. Training courses on how to use the Media laboratory	<input type="checkbox"/>				
10.5. Training course on computer (word processing)	<input type="checkbox"/>				
10.6. Training course on Learning packages	<input type="checkbox"/>				
10.7. Training course on CD-ROMs	<input type="checkbox"/>				
10.8. Training course on the Internet	<input type="checkbox"/>				
10.9. Training course on E-mail	<input type="checkbox"/>				
10.10. Video (Learning Programmes)	<input type="checkbox"/>				
10.11. Others please specify -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Q.11. Taking into account new facilities introduced in the Learning Resource Centre (LRC) please rate the following learning situations in terms of how effective they are in helping you to learn.

	Very effective	Effective	Not at all effective	Not applicable
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.1. Class and group discussion in classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.2. Working by yourself in the Centre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.3. Working by yourself at Home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.4. Listening to lectures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.5. Personal reading of texts and study materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.6. Using CD-ROMs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.7. Using other computer - based learning packages please specify.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Q12. Are you increasing or decreasing your usage of the Centre or there is no change? Please tick the appropriate box.

- Increasing - Decreasing - No changes
 - Other please specify.....

Q13. How satisfied are you with the Learning Resource Centre in general?

- Very satisfied Satisfied Fair Poor Very dissatisfied

Q14. What do you like most about the Learning Resource Centre?

Q15. What do you like least about the Learning Resource Centre?

Q16. What facilities would you like to see in the Learning Resource Centre?

Q17. What changes (if any) would you like made in the Learning Resource Centre?

Q 18. Please add any comments you have about the Learning Resource Centre that haven't been included in the questionnaires.

Thank you very much for your help

دراسة ميدانية لمراكز مصادر التعلم في كليات التربية بسلاطنة عمان

الاستبيان للملاب

هذا الاستبيان جزء من برنامج دراسة الدكتوراه والتي تهدف إلى بحث مدى فعالية مراكز مصادر التعلم بكليات التربية بسلاطنة عمان.
فمن المرجو أن يتحقق هذا الهدف من خلال الأجوبة على الأسئلة المرفقة إلى جانب التعليقات والملاحظات من المستخدمين لمراكز مصادر التعلم والعاملين فيها.
إن نتائج وتوصيات هذا الاستبيان سوف تساهم في تحسين فعالية مراكز مصادر التعلم وإن مساهمتكم ومساهمتم ستكون مقدرة كثيراً.

لطفاً يرجى تكملة الاستبيان المرفق وإرساله إلى منسق/منسقة العميد.

نشكر لكم بالغ اهتمامكم وعايتكم ،،،

بختيت بن أحمد بن سهيل المهدي

مركز روبرت كلارك لتكنولوجيا التعليم

جامعة جلاسكو

المملكة المتحدة

بريد إلكتروني: balmahri@elec.gla.ac.uk

al_mahri@hotmail.com

2001م

دراسة ميدانية لمراكز مصادر التعلم
في كليات التربية بسلطنة عمان

استبيان للطلاب

الرجاء أن تضع علامة في المربع المناسب أو كتابة الأجوبة داخل المربع الأكبر.

ملاحظة هذه المربعات لكتابة أجوبتك

كلية التربية

س1 : اسم الكلية ؟

نكر : أنثى :

س2 : الجنس :

س3 : التخصص :

س4 : ما اسم القسم الذي تنتمي إليه؟

س5 : في أي سنة أنت ؟ 1 2 3 4 أخرى

س5 : في أي سنة أنت ؟

س6 : العمر :

28 - 26

19 - 17

30 - 29

22 - 20

اكثر من 30

25 - 23

Appendix Two

	لا ينطبق	سيئ	متوسط	جيد	جيد جدا	ممتاز
	5	4	3	2	1	
- مجموعة مصادر و وسائل التعلم	<input type="checkbox"/>					
- حداثة مصادر و وسائل التعلم	<input type="checkbox"/>					
- الوسائل البصرية - السمعية	<input type="checkbox"/>					
- خدمات التعلم المصغر	<input type="checkbox"/>					
- توفر الأقراص المضغوطة CD. ROMs	<input type="checkbox"/>					
- آلات تصوير (ناسخات)	<input type="checkbox"/>					
- تعاون الموظفين	<input type="checkbox"/>					
- معرفة و مهارات الموظفين	<input type="checkbox"/>					
- دعم الموظفين لتحميل العملية التعليمية	<input type="checkbox"/>					
- وضوح العلامات و الإشارات	<input type="checkbox"/>					
- فائدة صفحات المعلومات	<input type="checkbox"/>					
- لوجحة الإعلانات	<input type="checkbox"/>					
- الإعلان عن الكتب الجديدة و المواد الجديدة	<input type="checkbox"/>					
- توفر أماكن في مختبر الوسائط المتعددة	<input type="checkbox"/>					
- توفر أماكن للدراسة في مختبر الوسائل	<input type="checkbox"/>					
- توفر أماكن في المكتبة	<input type="checkbox"/>					
- تسهيلات للدراسة الفردية	<input type="checkbox"/>					
- تسهيلات للدراسة في مجموعات	<input type="checkbox"/>					
- مستوى الضوضاء	<input type="checkbox"/>					
- الساعات التي يفتح فيها المركز	<input type="checkbox"/>					
- التهوية و التكييف	<input type="checkbox"/>					
- الإضاءة	<input type="checkbox"/>					
- موقع المركز	<input type="checkbox"/>					
- سهولة الوصول إلى المركز	<input type="checkbox"/>					
- المظهر العام للمركز	<input type="checkbox"/>					

الاستخدام :

س8 : كم مرة تستخدم التالي؟

أ - المكتبة :

- | | | | |
|--------------------------|--------------------|--------------------------|---------------------|
| <input type="checkbox"/> | كل يوم | <input type="checkbox"/> | 2 - 3 مرات في الشهر |
| <input type="checkbox"/> | 2 - 3 مرات أسبوعيا | <input type="checkbox"/> | لا استعمله أبدا |
| <input type="checkbox"/> | كل أسبوع مرة | <input type="checkbox"/> | بخلاف ذلك |
| | | <input type="checkbox"/> | الرجاء التحديد |
| | | | |
| | | | |

ب - مختبر الوسائط المتعددة :

- | | | | |
|--------------------------|--------------------|--------------------------|---------------------|
| <input type="checkbox"/> | كل يوم | <input type="checkbox"/> | 2 - 3 مرات في الشهر |
| <input type="checkbox"/> | 2 - 3 مرات أسبوعيا | <input type="checkbox"/> | لا استعمله أبدا |
| <input type="checkbox"/> | كل أسبوع مرة | <input type="checkbox"/> | بخلاف ذلك |
| | | <input type="checkbox"/> | الرجاء التحديد |
| | | | |
| | | | |

ج - مختبر الوسائل والإعلام :

- | | | | |
|--------------------------|--------------------|--------------------------|---------------------|
| <input type="checkbox"/> | كل يوم | <input type="checkbox"/> | 2 - 3 مرات في الشهر |
| <input type="checkbox"/> | 2 - 3 مرات أسبوعيا | <input type="checkbox"/> | لا استعمله أبدا |
| <input type="checkbox"/> | كل أسبوع مرة | <input type="checkbox"/> | بخلاف ذلك |
| | | <input type="checkbox"/> | الرجاء التحديد |
| | | | |
| | | | |

س9 : لأي من الخدمات أو الأغراض التالية تستخدم المركز ؟

الرجاء الإشارة على جميع المربعات المناسبة.

- | | | | |
|--------------------------|-------------------------|--------------------------|----------------------------|
| <input type="checkbox"/> | استعارة كتب | <input type="checkbox"/> | - حقائب تعليمية |
| <input type="checkbox"/> | القراءة في المركز | <input type="checkbox"/> | - أقراص مضغوطة (CD-ROMs) |
| <input type="checkbox"/> | قراءة الجرائد / المجلات | <input type="checkbox"/> | - استخدام طابعات الحاسوب |
| <input type="checkbox"/> | عمل بحوث | <input type="checkbox"/> | - أشرطة تسجيل |

س 12 : هل استخدامك للمركز في ازدياد أم في نقصان أم بنفس المعدل؟

الرجاء الإشارة على المربع المناسب.

في ازدياد في نقصان بنفس المعدل

خلاف ذلك يرجى التحديد.....

س 13 : ما مدى رضاك عن مركز مصادر التعلم بشكل عام؟

راضي جداً 1 راضي 2 متوسط 3 ضعيف 4 غير راضي أبداً 5

س 14 : ما الذي نال رضاك أكثر بمركز مصادر التعلم؟

س 15 : ما هو الشيء الذي لم ينل رضاك بمركز مصادر التعلم؟

س16 : ما الخدمات التي ترغب في توفرها بمركز مصادر التعلم ؟

س17 : ما التغييرات التي ترغب في إحداثها بمركز مصادر التعلم إن وجدت ؟

س18 : الرجاء إضافة أي تعليقات حول مركز مصادر التعلم لم تضمن في هذا الاستبيان.

مع خالص شكري وتقديري لمساعدتكم

Appendix Three:

Academics' Questionnaire (English and Arabic)

***Survey of Learning Resource Centres (LRCs) In
The Colleges of Education in the Sultanate of
Oman***

Academics' Questionnaire

This questionnaire, which is part of a Ph.D programme, aims to investigate the extent of the effectiveness of the Learning Resource Centres (LRCs) in the Colleges of Education in the Sultanate of Oman. It is hoped that this aim can best be served through the answers to the enclosed questions as well as the comments and critical remarks of the LRCs users and staff.

As the results and recommendations of this questionnaire contribute to improving the effectiveness of the Learning Resource Centres, your help and contribution would be very much appreciated.

Could you kindly complete the enclosed questionnaire and send it to the Dean's secretary.

Thanking you in advance

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February 2001

Survey of Learning Resource Centres (LRCs)
In The Colleges of Education in Oman

Academics' Questionnaire

Please tick 4 the appropriate boxes or write answers inside the larger boxes.

These boxes are for your written answers

Note: The questions are written in italics.

Q.1. Job title:

Q.2. Name of college:

Q.3. Gender *Male:* *Female:*

Q.4. Department:

Q.5. Nationality:

Q.6. Age:

21-25	<input type="checkbox"/>	36-40	<input type="checkbox"/>
26-30	<input type="checkbox"/>	41-45	<input type="checkbox"/>
31-35	<input type="checkbox"/>	46-50	<input type="checkbox"/>
		51 and over	<input type="checkbox"/>

Q.7. How satisfied are you with the following aspects of the service in the Learning Resource Centre (LRC)?

This scale ranges from 1 - 5 where 1 is excellent and 5 is poor. If you have no experience of a particular aspect, just tick (not applicable).

	Excellent	Very good	Good	Fair	Poor	Not applicable
	<input type="checkbox"/>					
7.1. The availability of subject specialist books	<input type="checkbox"/>					
7.2. Usefulness of reference and reserved books	<input type="checkbox"/>					
7.3. Stock of books is up-to date	<input type="checkbox"/>					
7.4. Availability of Journals on the shelves	<input type="checkbox"/>					
7.5. Number of items you can borrow	<input type="checkbox"/>					
7.6. Lending period sufficiency	<input type="checkbox"/>					
7.7. The procedure for borrowing materials	<input type="checkbox"/>					
7.8. Opening hours	<input type="checkbox"/>					
7.9. Timetabling and booking	<input type="checkbox"/>					
7.10. Catalogue ease of use	<input type="checkbox"/>					
7.11. Organisation and display of materials	<input type="checkbox"/>					
7.12. Availability of computing facilities	<input type="checkbox"/>					
7.13. Up-to date computing facilities	<input type="checkbox"/>					
7.14. Help with computers	<input type="checkbox"/>					
7.15. Access to the Internet	<input type="checkbox"/>					
7.16. Internet instructions for new users	<input type="checkbox"/>					
7.17. Computer printing	<input type="checkbox"/>					
7.18. Range of study materials	<input type="checkbox"/>					
7.19. Acquisition of requested materials	<input type="checkbox"/>					
7.20. Up-to date study materials	<input type="checkbox"/>					

Appendix Three

	Excellent	Very good	Good	Fair	Poor	Not applicable
	<input type="checkbox"/>					
7.21. Audio-Visual facilities	<input type="checkbox"/>					
7.22. Micro teaching facilities	<input type="checkbox"/>					
7.23. CD-ROM service	<input type="checkbox"/>					
7.24. Helpfulness of staff	<input type="checkbox"/>					
7.25. Knowledge and skills of staff	<input type="checkbox"/>					
7.26. Level of support from the technicians in teaching classes with academics	<input type="checkbox"/>					
7.27. The Centre staff liaison with academics	<input type="checkbox"/>					
7.28. Clarity of signs and instructions	<input type="checkbox"/>					
7.29. Notice board	<input type="checkbox"/>					
7.30. Getting informed about new books and new materials	<input type="checkbox"/>					
7.31. Availability of spaces in the Centre	<input type="checkbox"/>					
7.32. Facilities for private study	<input type="checkbox"/>					
7.33. Facilities for group study	<input type="checkbox"/>					
7.34. Noise level	<input type="checkbox"/>					
7.35. Environment/Ventilation Air-conditioning	<input type="checkbox"/>					
7.36. Lighting	<input type="checkbox"/>					
7.37. Location of the Centre	<input type="checkbox"/>					
7.38. Accessibility of the Centre	<input type="checkbox"/>					
7.39. General appearance of the Centre	<input type="checkbox"/>					

Usage:

Q.8. How often do you use the Learning Resource Centre?

Every day	<input type="checkbox"/>	2 - 3 times a month	<input type="checkbox"/>
2 - 3 times a week	<input type="checkbox"/>	Never	<input type="checkbox"/>
Once a week	<input type="checkbox"/>	Other	<input type="checkbox"/>

Q.9.1. Do you give classes in the Centre?

Yes:

No:

Q.9.2. If yes please tick the appropriate box

Less than 1 hour a week	<input type="checkbox"/>	2 - 3 hours a week	<input type="checkbox"/>
1 - 2 hours a week	<input type="checkbox"/>	3 - 4 hours a week	<input type="checkbox"/>
		More than 4 hours a week	<input type="checkbox"/>

Q.10. Are there any difficulties or obstacles in borrowing materials or equipment from the Centre?

Yes:

No:

If yes please give examples:.....

Q.11. For which of the following facilities or purposes do you use the Centre?

Please tick 4 all of the appropriate boxes.

11.1. Borrowing books	<input type="checkbox"/>	11.4. E-mail	<input type="checkbox"/>
11.2. Doing researches	<input type="checkbox"/>	11.5. Printing	<input type="checkbox"/>
11.3. Overhead Projector (OHP)	<input type="checkbox"/>	11.6. Scanner	<input type="checkbox"/>

- | | | | |
|--------------------------------|--------------------------|--|--------------------------|
| 11.7. Internet | <input type="checkbox"/> | 11.11. Satellite | <input type="checkbox"/> |
| 11.8. CD-ROMs | <input type="checkbox"/> | 11.12. Video (Learning Programmes) | <input type="checkbox"/> |
| 11.9. Learning packages | <input type="checkbox"/> | 11.13. Personal uses | <input type="checkbox"/> |
| 11.10. Tape recorder cassettes | <input type="checkbox"/> | 11.14. Socialising | <input type="checkbox"/> |
| | | 11.15. Others <input type="checkbox"/> | please specify: |
| | | | |
| | | | |

Q.12. Do you know if there are any materials or equipment in the Centre which are relevant to your topic, but you don't use?

Yes:

No:

If yes please give examples and explain why don't you use them?

.....

.....

Q.13. How do you assess the usefulness of the following available training courses in the Centre?

Please tick 4 the appropriate boxes. If the course does not exist, just tick not available.

	Good	Average	Not useful	I didn't need	Not available
	<input type="checkbox"/>				
13.1. Induction course on the services in the Centre in general	<input type="checkbox"/>				
13.2. Induction course on how to use the Library	<input type="checkbox"/>				
13.3. Training course on how to use the Multi-Media Laboratory	<input type="checkbox"/>				
13.4. Training courses on how to use the Media laboratory	<input type="checkbox"/>				
13.5. Training course on computer (word processing)	<input type="checkbox"/>				
13.6. Training course on Learning packages	<input type="checkbox"/>				
13.7. Training course on CD-ROMs	<input type="checkbox"/>				

	Good	Average	Not useful	I didn't need	Not available
13.8. Training course on the Internet	<input type="checkbox"/>				
13.9. Training course on E-mail	<input type="checkbox"/>				
13.10. Video (Learning Programmes)	<input type="checkbox"/>				
13.11. Others please specify -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Q.14. Are there any incentives or encouragement from the Centre or the College which enhance your motivation to improve your teaching and learning process?

- No:

- Yes: *If yes please give examples:*

.....

Q.15. How satisfied are you with the Learning Resource Centre in general?

Very satisfied	Satisfied	Fair	Poor	Very dissatisfied
<input type="checkbox"/>				

Q.16. What do you like most about the Learning Resource Centre?

Q.17. What do you like least about the Learning Resource Centre?

Q.18. What facilities would you like to see in the Learning Resource Centre?

Q.19. What changes (if any) would you like made in the Learning Resource Centre?

Q.20. Please add any comments you have about the Learning Resource Centre that haven't been included in the questionnaires.

Thank you very much for your help

دراسة ميدانية لمراكز مصادر التعلم في كليات التربية في سلطنة عمان

استبيان الأكاديميين

هذا الاستبيان جزء من برنامج دراسة الدكتوراه والتي تهدف إلى بحث مدى فعالية مراكز مصادر التعلم بكليات التربية بسلطنة عمان.
فمن المرجو أن يتحقق هذا الهدف من خلال الأجوبة على الأسئلة المرفقة إلى جانب التعليقات والملاحظات من المستخدمين لمراكز مصادر التعلم والعاملين فيها.
إن نتائج وتوصيات هذا الاستبيان سوف تساهم في تحسين فعالية مراكز مصادر التعلم وإن مساعدتكم ومساهمتم ستكون مقدرة كثيراً.
لطفاً يرجى تكملة الاستبيان المرفق وإرساله إلى منسق/منسقة العميد.

نشكر لكم بالغ اهتمامكم وعنايتكم ،،،

بخت بن أحمد بن سهيل المهري
مركز روبرت كلارك لتكنولوجيا التعليم
جامعة جالسدكو
المملكة المتحدة

بريد إلكتروني: b.almahri@elec.gla.ac.uk
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2001م

**دراسة ميدانية لمراكز مصادر التعلم
في كليات التربية في سلطنة عمان**

استبيان للأكاديميين

الرجاء أن تضع علامة في المربع المناسب أو كتابة الأجوبة داخل المربع الأكبر

ملاحظة هذه المربعات لكتابة أجوبتك

.....

س1 : المسمى الوظيفي:

..... كلية التربية

س2 : اسم الكلية:

ذكر : أنثى :

س3 : الجنس:

.....

س4 : ما إسم القسم الذي تنتمي إليه؟

.....

س5 : الجنسية:

س6 : العمر:

40 - 36

25 - 21

45 - 41

30 - 26

50 - 46

35 - 31

51 فما فوق

س 7 : ما مدى رضاك عن المظاهر التالية من خدمات مركز مصادر التعلم؟
التقييم متسلسل من 1- 5 حيث أن 1 ممتاز و 5 سيئ. وإذا كان ليس لديك معرفة
بأي من هذه المظاهر ضع علامة في لا ينطبق.

	لا ينطبق	سيئ	متوسط	جيد	جيد جدا	ممتاز
	5	4	3	2	1	
- توفر الكتب التخصصية	<input type="checkbox"/>					
- فائدة المراجع والكتب الاحتياطية	<input type="checkbox"/>					
- حداثة الكتب	<input type="checkbox"/>					
- توفر نشرات الدورية على الأرفف	<input type="checkbox"/>					
- عدد الكتب التي يمكنك استعمالها	<input type="checkbox"/>					
- كفاية فترة الاستعارة	<input type="checkbox"/>					
- إجراءات استعارة المواد	<input type="checkbox"/>					
- الساعات التي يفتح فيها المركز	<input type="checkbox"/>					
- الجدول بالمركز و حجز قاعاته	<input type="checkbox"/>					
- سهولة استعمال الفهرسة	<input type="checkbox"/>					
- التنظيم وعرض المواد	<input type="checkbox"/>					
- توفر خدمات الحاسوب	<input type="checkbox"/>					
- حداثة خدمات الحاسوب	<input type="checkbox"/>					
- المساعدة في استخدام الحاسوب	<input type="checkbox"/>					
- الوصول إلى شبكة الإنترنت	<input type="checkbox"/>					
- إرشادات استخدام الإنترنت للمستخدمين الجدد	<input type="checkbox"/>					
- استخدام طابعات الحاسوب	<input type="checkbox"/>					
- مجموعة مصادر و مسائل التعلم	<input type="checkbox"/>					
- طلب المصادر اللازمة	<input type="checkbox"/>					
- حداثة مصادر و وسائل التعلم	<input type="checkbox"/>					

Appendix Three

لا ينطبق	سيئ	متوسط	جيد	جيد جدا	ممتاز	
<input type="checkbox"/>	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- الوسائل البصرية - السمعية
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- خدمات التعليم المصغر
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- خدمة الأقراص المضغوطة CD. ROMs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- تعاون الموظفين
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- معرفة ومهارات الموظفين
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- مستوى مساندة التقنيين للأكاديميين في التدريس
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- علاقة و تواصل موظفو المركز مع الأكاديميين
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- وضوح العلامات والإشارات
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- لوحة الإعلانات
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- الإعلان عن الكتب الجديدة والمواد الجديدة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- توفر أماكن في المركز
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- تسهيلات للدراسة الفردية
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- تسهيلات للدراسة في مجموعات
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- مستوى الضوضاء
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- التهوية والتكييف
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- الإضاءة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- موقع المركز
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- سهولة الوصول إلى المركز
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- المظهر العام للمركز

الإستخدام :

س8 : كم مرة تستخدم مركز مصادر التعلم؟

- كل يوم 2 - 3 مرات في الشهر
- 3 - 2 مرات أسبوعيا لا استعمله أبدا
- كل أسبوع مرة بخلاف ذلك الرجاء التحديد
-
-

س 1. 9 : هل تعطي دروس بالمركز؟

نعم : لا :

2. 9: إذا كانت الإجابة نعم يرجى الإشارة على المربع المناسب.

- أقل من ساعة في الأسبوع 2-3 ساعات في الأسبوع
- 1-2 ساعة في الأسبوع 3-4 ساعات في الأسبوع
- أكثر من 4 ساعات في الأسبوع

س10 : هل هناك أي صعوبات أو معوقات في استعارة مواد أو أجهزه من المركز؟

نعم : لا :

إذا كانت الإجابة نعم يرجى إعطاء أمثلة:-

.....

.....

.....

س11 : لأي من الخدمات أو الأغراض التالية تستخدم المركز ؟

الرجاء الإشارة على جميع المربعات المناسبة.

- استعارة كتب - بريد إلكتروني
- عمل بحوث - استخدام طابعات الحاسوب
- جهاز عرض فوق الرأس (OHP) - ناسخ ضوئي (scanner)

- فمر صناعي - شبكة الإنترنت
- فيديو (برامج تعليمية) - أقراص مضغوطة (CD-ROMs)
- للاستخدام الشخصي - حقائب تعليمية
- الالتقاء بالآخرين - أنشطة تسجيل
- لأغراض أخرى
- الرجاء التوضيح:
-
-

س12 : هل تعرف أي من المواد أو الأجهزة في المركز تتعلق بمادتك لكنك لا تستخدمها؟

: نعم

: لا

إذا كانت الإجابة نعم يرجى إعطاء أمثلة و ذكر السبب لماذا لا تستخدمها:.....

.....

.....

س13 : ما هو تقييمك لفائدة البرامج التدريبية التالية المتوفرة بالمركز؟

الرجاء الإشارة على جميع المربعات المناسبة، وإذا لم يتوفر البرنامج أشر على غير متوفر.

جيد	متوسط	غير مفيد	لم أحتاجه	غير متوفر	
<input type="checkbox"/>	- برنامج تعريف عن خدمات المركز بشكل عام				
<input type="checkbox"/>	- برنامج تعريف عن استخدامات المكتبة				
<input type="checkbox"/>	- برنامج تدريبي عن استخدام معمل الوسائط المتعددة				
<input type="checkbox"/>	- برنامج تدريبي عن استخدام معمل الوسائل التعليمية				
<input type="checkbox"/>	- برنامج تدريبي على الحاسوب (وورد/معالجة الكلمات)				
<input type="checkbox"/>	- برنامج تدريبي على الحفائب التعليمية				
<input type="checkbox"/>	- التدريب على استعمال الأقراص المضغوطة CD- ROMs				
<input type="checkbox"/>	- التدريب على كيفية استعمال شبكة الإنترنت				
<input type="checkbox"/>	- التدريب على كيفية استعمال البريد الإلكتروني				
<input type="checkbox"/>	- فيديو (برامج تعليمية)				
<input type="checkbox"/>	- أخرى : الرجاء التحديد :-.....				
<input type="checkbox"/>	-.....				
<input type="checkbox"/>	-.....				

س14 : هل هناك أي حوافز أو تشجيع من المركز أو الكلية تحثك لتحسين عملية التعليم والتعلم؟

نعم :

لا :

إذا كانت الإجابة نعم يرجى إعطاء أمثلة: -

.....

.....

.....

س15 : ما مدى رضاك عن مركز مصادر التعلم بشكل عام ؟

راضي جداً 1

راضي 2

متوسط 3

ضعيف 4

غير راضي أبداً 5

س16 : ما الذي نال رضاك أكثر بمركز مصادر التعلم ؟

س17 : ما هو الشيء الذي لم ينل رضاك بمركز مصادر التعلم ؟

س18 : ما الخدمات التي ترغب في توفرها بمركز مصادر التعلم ؟

س19 : ما التغييرات التي ترغب في إحداثها بمركز مصادر التعلم إن وجدت ؟

س20 : الرجاء إضافة أي تعليقات حول مركز مصادر التعلم لم تضمن في هذا الاستبيان.

مع خالص شكري وتقديري لمساعدتكم

Appendix Four:

Questions of the interviews with the staff of the Learning Resource Centres in Oman (English and Arabic)

**Survey of Learning Resource Centres
In The Colleges of Education in Oman**

The Interviews of LRCs Staff
Head and Assistant Head

A- College of Education B- Job title:..... C- Male: Female:

D- Qualification and speciality:

E- In which age range are you: 18-23 24-29 30-35
This question is optional 36-40 41-45 46 or older

F- Nationality:

Description of the Learning Resource Centre (LRC)

Q. 1. Can you please tell me what does the LRC consist of (LRC sections)?

Q. 2. What are the types of resources for each section?

Equipment and Materials

Q. 3. About equipment and materials: (books, periodicals, technological materials etc.)

- Are they satisfactory, given the rapid development of educational technology?
- To what extent are they sufficient?

Q. 4. Can you explain the procedures to purchase books, periodicals, materials and equipment?

Q. 5. Are there any difficulties in the maintenance of the LRC contents?

If yes, can you describe these difficulties?

Staff

Q. 6. What is the actual role of the following staff in the LRC?

- Librarians
- Computer specialists (technicians)
- Media laboratory specialists
- Others

Q. 7. How is the LRC provided with staff?

Q. 8. Are there any long or short term plans for training staff?

If yes, can you describe them generally?

Q. 9. What is the LRC's experience of liaison with the Administration Department in the College?

Q. 10. How do the LRC staff and the academics liaise?

Users

Q. 11. Who are the LRC users?

- Students
- Academics
- Others

Q. 12. Are there any materials or equipment that are not used by the users?

If yes, can you mention some examples?

What do you think are the reasons for not using these items?

Q. 13. Do users get any incentives or encouragement from the LRC or the College which enhance their motivation in using the LRC equipment?

If yes, can you give some examples?

Q. 14. Are the LRC materials of direct relevance to the curriculum so that they will be used often by academics and students?

If yes, can you give some examples?

Q. 15. Does the LRC provide the users with guidebook or instructions about using the services?

If yes, can you please mention some examples?

Q. 16. How do users get information about new resources in the LRC?

Q. 17. What are the marketing activities about the services in the LRC?

Services

Q. 18. Can you list and describe the LRC services in general?

Q. 19. What are the courses / programmes the LRC offers for users?

Q. 20. Are there any services for users with special needs?

If yes, can you please mention them?

Q. 21. How does the LRC control the students' use of the Internet?

Q. 22. Are there any difficulties with students visiting undesirable sites (e.g. pornography sites) on the Internet, which conflict with the students' culture?

If yes, could you mention some examples?

Is there any penalty against such practices?

Q. 23. What are the procedures with users who cause noise or break rules in the Centre?

Q. 24. Can you please explain the procedures/system of lending the following materials to users?

	Books / Periodicals Magazines Official reports etc.	Computer- Software Materials e.g. CD-ROMs	Equipment (e.g. OHP)
No of items:
Period:
- Students
- Academics
- Others

Q. 25. What are the procedures and penalty followed with students who don't return books on time?

Q. 26. Are there any materials which can't be borrowed?

If yes, can you give some examples?

Could you explain why they can't be borrowed?

Q. 27. Does the LRC have the capability to offer a distance learning service?

If yes, can you illustrate how that could be offered?

If no, could you mention the reasons for not developing this option?

Are there plans to do that in the Centre?

Accessibility

Q. 28. Are there any gender specific obstacles which prevent or limit students from using the services provided?

Q. 29. Do each type of users (e.g. academics, students, males, females, others) benefit equally from the services in the Centre?

If no, can you explain in what respect do they not benefit equally and why?

Organisation and Use of Space

Q. 30. Is there a space in the LRC designated specially as study group area?

If yes, where is it located?

How many students can it accommodate?

Q. 31. Are there any private study rooms for individual users?

If yes, where are they placed?

How many places are there?

Q. 32. Which system of classification is applied in the Centre?

How useful is it?

If there is no specific system yet, could you please explain why?

How much time do you think it will take to complete the classification of the library materials?

Q. 33. Could you describe the catalogue system in the library and whether it is useful and easy to use?

Q. 34. Is the Library automated?

If no, when do you think it will be automated?

Building

Q. 35. Can you talk about the building and how satisfied you are with the following?

- Location of sections and offices in the LRC building.
- Space
- Security

- Fire alarm system
- Noise
- Ventilation/Air-conditioning
- Lighting
- Shelving
- Furniture
- Building maintenance
- The building generally

Q. 36. Does the LRC have storage?

If yes, where is it located? Is it big enough?

If no, is the LRC in need of storage? If yes, why?

Q. 37. Are there any advantages or disadvantages regarding the LRC building other than those you mentioned earlier?

Co-ordination and Evaluation

Q 38. Is there any co-ordination or collaboration between the LRCs in the Colleges of Education?

If yes, can you please specify?

Q. 39. Is there any co-ordination or collaboration between the LRCs in the Colleges of Education and other institutions such as Sultan Qaboos University and the Technical Colleges or other educational institutions?

If yes, can you please specify?

If no, can you explain why?

Q. 40. Does the Centre get feedback from users? If yes, how?

Q. 41. How is the quality of work in the Centre evaluated?

Q. 42. Please describe successes of the LRC what is good and positive.

Q. 43. How many of the LRC objectives do you think have been met? Is it;
- Excellent - Very good - Good - Medium - Poor

Q. 44. Do you have any suggestions which may contribute to improving the effectiveness of the LRC?

Q. 45. Is there anything else you want to say about the LRC that hasn't been discussed?

Thank you for your help

دراسة ميدانية لمراكز مصادر التعلم في كليات التربية بسلطنة عمان

مقابلات مع العاملين بمراكز مصادر التعلم رئيس ومساعد رئيس مركز مصادر التعلم

- أ - كلية التربية ب - ب - المسمى الوظيفي ج - ذكر: أنثى:
- د - المؤهل العلمي والتخصص
- هـ - وضح في أي مرحلة عمرية أنت هذا السؤال اختياري
 35- 30 29-24 23-18
 40- 36 45-41 46 أو أكبر
و - الجنسية :

وصف مركز مصادر التعلم:

- س1 : هل لك أن تخبرني عن أقسام المركز ؟
- س2 : ما هي أنواع الوسائل أو المصادر المتوفرة في كل قسم ؟
المعدات :
- س3 : فيما يختص بالمعدات والمواد : (الكتب ، النشرات الدورية ، المواد التقنية الخ)
- هل هي مرضية وتغطي التطور السريع للتكنولوجيا التعليمية ؟
- ما مدى كفايتها ؟
- س4 : هل لك أن توضح الإجراءات المتبعة في شراء الكتب ، النشرات الدورية ، المواد والمعدات ؟
- س5 : هل تواجهكم أية صعوبات في عملية صيانة محتويات مركز مصادر التعلم ؟
إذا كانت الإجابة نعم هل لك أن تصف تلك الصعوبات؟

العاملون :

- س6 : ما هو الدور الفعلي الذي يؤديه العاملون المذكورون أدناه في مركز مصادر التعلم؟
- أخصائيو المكتبات
 - أخصائيو الحاسوب
 - أخصائيو مختبر وسائل الإعلام
 - آخرون

س7 : كيف يتم تزويد مركز مصادر التعلم بالعاملين ؟

س8 : هل هنالك خطط لتدريب العاملين للمدى القصير أو البعيد ؟
إذا كانت الإجابة نعم ، هل لك أن تصفها بشكل عام ؟

س9 : ما هي تجربة مركز مصادر التعلم في الاتصال بقسم الإدارة بالكلية ؟

س10 : كيف تتم عملية الاتصال والتعاون بين العاملين بمركز مصادر التعلم والأكاديميين؟

المستخدمون :

س11 : من هم مستخدمي مركز مصادر التعلم ؟

- الطلاب
- الأكاديميين
- آخرون

س12 : هل هنالك أية وسائل أو معدات لا يستغلها المستخدمون ؟

إذا كانت الإجابة نعم، هل لك أن تذكر بعض الأمثلة ؟

ما هي الأسباب من وجهة نظرك التي تدعو لعدم استخدام هذه الوسائل ؟

س13 : هل يجد المستخدمون أي تحفيز أو تشجيع من قبل مركز مصادر التعلم أو الكلية يؤدي

إلي دفعهم أكثر نحو استخدام معدات مركز مصادر التعلم ؟

إذا كانت الإجابة نعم ، هل لك أن تعطى بعض الأمثلة ؟

س14 : هل هنالك صلة مباشرة بين ما يتوفر في مركز مصادر التعلم من مواد وأجهزة وبين

محتويات المناهج الدراسية تجعل الأكاديميين والطلاب في حاجة إلى استخدام

محتويات المركز بكثرة؟

إذا كانت الإجابة نعم يرجى إعطاء أمثلة على ذلك؟

س15 : هل يقوم مركز مصادر التعلم بتزويد المستخدمين بدليل أو إرشادات لاستخدام

الخدمات؟

إذا كانت الإجابة نعم ، يرجى ذكر بعض الأمثلة ؟

س16 : كيف يحصل المستخدمون على المعلومات المتعلقة بالمصادر التعليمية الجديدة بالمركز؟

س17 : ما النشاطات التي تبذل لترويج الخدمات المتوفرة بمركز مصادر التعلم ؟

الخدمات :

س18 : هلي يمكنك أن تعدد وتصف خدمات ووسائل مركز مصادر التعلم بصفة عامة؟

س19 : ما هي الدورات التدريبية أو البرامج التي يقوم المركز بتوفيرها للمستخدمين؟

س20 : هل يقوم المركز بتوفير أية خدمات لذوي الاحتياجات الخاصة ؟

إذا كانت الإجابة نعم ، هل لك أن تذكرها ؟

س 21 : كيف يتحكم العاملون في استخدام الطلاب للإنترنت؟

س22 : هل تواجهكم أية صعوبات من جانب الطلاب الذين يدخلون إلى المواقع غير المرغوبة

والتي تعرض صوراً داعرة بالإنترنت تتعارض مع قيمهم وثقافتهم؟

إذا كانت الإجابة نعم ، هل يمكنك أن تذكر بعض الأمثلة؟

هل هناك أية جزاءات ضد هذه الممارسات؟

س23 : ما هي الإجراءات التي تتخذ ضد المستخدمين الذين يثيرون الضوضاء أو يخالفون

اللوائح والنظم بالمركز؟

س24 : هل يمكنك أن توضح إجراءات / أو نظام إعاره المواد التالية للمستخدمين؟

معدات	برامج حاسوب	كتب / دوريات	
جهاز إسقاط فوق الرأس (Over head projector.)	مواد مثل CD-ROM	مجلات ، تقارير الخ	
.....	عدد الكتب أو المواد
.....	المدة
.....	طلاب
.....	أكاديميون
.....	آخرون
.....	

س25 : ما هي الإجراءات والجزاءات المتبعة مع الطلاب الذين لا يقومون بإعادة الكتب في

موعدھا؟

Appendix Four

س26 : هل هنالك مواد أو أجهزة لا يمكن إعارتها؟

إذا كانت الإجابة نعم ، الرجاء ذكر بعض الأمثلة؟

هل يمكنك أن توضح الأسباب التي تمنع إعارة مثل هذه المواد؟

س27 : هل يملك المركز القدرة على توفير خدمة التعلم عن بعد؟

- إذا كانت الإجابة نعم ، هل يمكنك أن توضح كيف يمكن تقديم ذلك؟

- إذا كانت الإجابة لا ، هل يمكنك أن توضح الأسباب التي تحول دون توفير هذا

الخيار؟

- هل هناك خطط مستقبلية لتقديم مثل هذه الخدمات في المركز؟

إمكانية الوصول إلى الخدمات :

س28 : هل هنالك أية معوقات تمنع أو تحد من استخدام الذكور أو الإناث للخدمات التي

يقدمها المركز؟

س29 : هل يجني مستخدمو المركز بأنواعهم المختلفة (أكاديميين ، طلبة ، ذكور ، إناث

وآخرون) فوائد متساوية من الخدمات التي يقدمها المركز؟

إذا كانت الإجابة لا ، هل يمكنك أن توضح من أي النواحي لا يستفيدون فائدة متساوية

ولماذا؟

التنظيم واستغلال المساحة :

س30 : هل هنالك مكان محدد في المركز تم تخصيصه كموقع للدراسة الجماعية؟

إذا كانت الإجابة نعم ، أين يوجد موقعه؟

كم عدد الطلاب الذين يسعون هذا المكان؟

س31 : هل هنالك أماكن دراسة مخصصة للاستخدام الفردي؟

إذا كانت الإجابة نعم ، في أي موقع هي؟

كم عدد الأماكن المتوفرة؟

س32 : أي أنواع نظم التصنيف يطبقها المركز؟

ما مدى فائدته؟

إذا لم يكن هناك نظام بعينه الآن ، هل يمكنك أن تعطى أسباب ذلك؟

كم من الوقت من وجهة نظرك ستستغرق عملية تصنيف المواد الموجودة بالمكتبة؟

س33 : هل يمكنك أن تصف نظام الفهرسة بالمكتبة وما إذا كان مفيد وسهل الاستخدام ؟

س34 : هل تعمل المكتبة أوتوماتيكياً؟

إذا كانت الإجابة لا ، كم من الوقت ستستغرق كي تعمل أوتوماتيكياً من وجهة نظرك؟

المبنى :

س35 : هل يمكنك أن تحدثنا عن المبنى وما مدى رضاك عن ما يلي ؟

- موقع الأقسام والمكاتب في مبنى مركز مصادر التعلم ؟

- المساحة والسعة

- الأمن / التحكم

- جهاز إنذار الحريق

- الضوضاء

- التهوية / التكييف

- الإضاءة

- لأرفف

- الأثاث

- صيانة المبنى

- المبنى بصفة عامة

س36 : هل يوجد مخزن بمركز مصادر التعلم؟

- إذا كانت الإجابة نعم ، أين يقع ؟ هل حجمه كاف؟

- إذا كانت الإجابة لا ، هل المركز بحاجة إلى مخزن؟

إذا كانت الإجابة نعم ، لماذا؟

س37 : هل توجد محاسن أو مساوئ لمبنى مركز مصادر التعلم لم تقم بذكرها فيما

سبق؟

التنسيق والتقييم:

س38 : هل يوجد أي نوع من التنسيق أو التعاون بين مراكز مصادر التعلم بكليات التربية؟
إذا كانت الإجابة نعم ، هل يمكنك أن تحدد ذلك؟

س39 : هل هنالك أي نوع من أنواع التنسيق أو التعاون بين مراكز مصادر التعلم في كليات التربية والمؤسسات الأخرى مثل جامعة السلطان قابوس والكليات الفنية أو المؤسسات التعليمية الأخرى؟

- إذا كانت الإجابة نعم ، هل يمكنك أن تحدد ذلك؟

- إذا كانت الإجابة لا ، هل يمكنك أن توضح السبب؟

س40 : هل ترد تقارير أو إفادات إلى المركز من قبل المستخدمين؟
إذا كانت الإجابة نعم ، كيف ؟

س41 : كيف يتم تقييم جودة العمل بالمركز ؟

س42: يرجى وصف إنجازات وإيجابيات مركز مصادر التعلم.

س43: ما مدى تحقيق أهداف مركز مصادر التعلم؟ هل هو؟

- ممتاز - جيد جدا - جيد - متوسط - ضعيف

س44 : هل لديك مقترحات يمكن أن تساهم في تحسين فعالية المركز؟

س45 : هل تود إضافته أي شيء عن مركز مصادر التعلم لم تتم مناقشته؟

نشكركم على كريم مساعدتكم

**Survey of Learning Resource Centres
In The Colleges of Education in Oman**

**The Interviews of LRCs Staff
Librarians**

A-..... College of Education B- Job title:..... C- Male: Female:

D- Qualification and speciality:

E- In which age range are you: 18-23 24-29 30-35
This question is optional 36-40 41-45 46 or older

F- Nationality:

Q. 1. What are the types of resources in the library?

Equipment and Materials

Q. 2. About equipment and materials: (books, periodicals, technological materials etc.)

- Are they satisfactory, given the rapid development of educational technology?
- To what extent are they sufficient?

Q. 3. Are there any difficulties in the maintenance of the library contents?

If yes, can you describe these difficulties?

Staff

Q. 4. What is the actual role of the librarians?

Q. 5. Are there any long or short term plans for training librarians?

If yes, can you describe them generally?

Q. 6. How do the librarians and the academics liase?

Users

Q. 7. Are there any materials or equipment that are not used by the users?

If yes, can you mention some examples?

What do you think are the reasons for not using these items?

Q. 8. Are the LRC materials of direct relevance to the curriculum so that they will be used often by academics and students?

If yes, can you give some examples?

Services

Q. 9. Can you please explain the procedures/system of lending the following materials to users?

	Books / Periodicals Magazines Official reports etc.	Computer-Software Materials e.g. CD-ROMs
No of items:
Period:
- Students
- Academics
- Others

Q. 10. Are there any materials which can't be borrowed?

If yes, can you give some examples?

Could you explain why they can't be borrowed?

Accessibility

Q 11. Do each type of users (e.g. academics, students, males, females, others) benefit equally from the services in the library?

If no, can you explain in what respect do they not benefit equally and why?

Organisation

Q. 12. Which system of classification is applied in the Centre?

How useful is it?

If there is no specific system yet, could you please explain why?

How much time do you think it will take to complete the classification of the library materials?

Appendix Four

Q. 13. Could you describe the catalogue system in the library and whether it is useful and easy to use?

Q. 14. Is the Library automated?

If no, when do you think it will be automated?

Q. 15. Is there any co-ordination or collaboration between the LRCs in the Colleges of Education?

If yes, can you please specify?

Q. 16. Do you have any suggestions which may contribute to improving the effectiveness of the LRC?

Q. 17. Is there anything else you want to say about the LRC that hasn't been discussed?

Thank you for your help

دراسة ميدانية لمراكز مصادر التعلم في كليات التربية بسلطنة عمان

مقابلات مع العاملين بمراكز مصادر التعلم

أخصائيو المكتبات

- أ - كلية التربية ب ب - المسمى الوظيفي ج - ذكر: أنثى:
- د - المؤهل العلمي والتخصص
- هـ - وضح في أي مرحلة عمرية أنت هذا السؤال اختياري
 35- 30 29-24 23-18 40- 36
 46 أو أكبر 45-41
- و - الجنسية :

س1 : ما هي أنواع المصادر أو الوسائل المتوفرة في المكتبة؟

المعدات :

س2 : فيما يختص بالمعدات والمواد : (الكتب ، النشرات الدورية ، المواد التقنية الخ)

- هل هي مرضية وتغطي التطور السريع للتكنولوجيا التعليمية؟

- ما مدى كفايتها؟

س3 : هل تواجهكم أية صعوبات في عملية صيانة محتويات المكتبة؟

إذا كانت الإجابة نعم هل لك أن تصف تلك الصعوبات؟

العاملون :

س4 : ما هو الدور الفعلي الذي يؤديه أخصائيو المكتبة؟

س5 : هل هنالك خطط لتدريب أخصائيو المكتبة للمدى القصير أو البعيد؟

إذا كانت الإجابة نعم، هل لك أن تصفها بشكل عام ؟

س6 : كيف تتم عملية الاتصال والتعاون بين أخصائيو المكتبة والأكاديميين؟

المستخدمون :

س7 : هل هنالك أية مصادر أو وسائل لا يستغلها المستخدمون؟

إذا كانت الإجابة نعم، هل لك أن تذكر بعض الأمثلة؟
ما هي الأسباب من وجهة نظرك التي تدعو لعدم استخدام هذه المصادر/الوسائل؟

س8 : هل هنالك صلة مباشرة بين ما يتوفر في مركز مصادر التعلم من مواد وأجهزة وبين محتويات المناهج الدراسية تجعل الأكاديميين والطلاب في حاجة إلى استخدام محتويات المركز بكثرة؟
إذا كانت الإجابة نعم يرجى إعطاء أمثلة على ذلك؟

الخدمات :

س9 : هل يمكنك أن توضح إجراءات / أو نظام إعاره المواد التالية للمستخدمين؟

برامج حاسوب	كتب / دوريات	عدد الكتب أو المواد
مواد مثل CD-ROM	مجلات ، تقارير الخ	المدة
.....	طلاب
.....	أكاديميون
.....	آخرون
.....	
.....	
.....	

س10 : هل هنالك مواد أو أجهزة لا يمكن إعارتها ؟

إذا كانت الإجابة نعم ، الرجاء ذكر بعض الأمثلة؟
هل يمكنك أن توضح الأسباب التي تمنع إعاره مثل هذه المواد؟

إمكانية الوصول إلى الخدمات :

س11 : هل يجني مستخدمو المركز بأنواعهم المختلفة (أكاديميين ، طلبة ، ذكور ، إناث وآخرون) فوائد متساوية من الخدمات التي تقدمها المكتبة؟
إذا كانت الإجابة لا ، هل يمكنك أن توضح من أي النواحي لا يستفيدون فائدة متساوية ولماذا؟

التنظيم :

س12 : أي أنواع نظم التصنيف يطبقها المركز؟

ما مدى فائدته؟

إذا لم يكن هناك نظام بعينه الآن ، هل يمكنك أن تعطى أسباب ذلك؟

كم من الوقت من وجهة نظرك ستستغرق عملية تصنيف المواد الموجودة بالمكتبة؟

س13 : هل يمكنك أن تصف نظام الفهرسة بالمكتبة وما إذا كان مفيد وسهل الاستخدام؟

س14 : هل تعمل المكتبة أوتوماتيكياً؟

إذا كانت الإجابة لا، كم من الوقت ستستغرق كي تعمل أوتوماتيكياً من وجهة نظرك؟

س15 : هل يوجد أي نوع من التنسيق أو التعاون بين مراكز مصادر التعلم بكليات التربية؟
إذا كانت الإجابة نعم، هل يمكنك أن تحدد ذلك؟

س16 : هل لديك مقترحات يمكن أن تساهم في تحسين فعالية المركز؟

س17 : هل تود إضافته أي شيء عن مركز مصادر التعلم لم تتم مناقشته؟

نشكركم على كريم مساعدتكم

**Survey of Learning Resource Centres
In The Colleges of Education in Oman**

The Interviews of LRCs Staff
Computer Specialists

A-..... College of Education B- Job title:..... C- Male: Female:

D- Qualification and speciality:

E- In which age range are you: 18-23 24-29 30-35
This question is optional 36-40 41-45 46 or older

F- Nationality:

Q. 1. What are the types of resources in the computer section?

Equipment and Materials

Q. 2. About equipment and technological materials:

- Are they satisfactory, given the rapid development of educational technology?
- To what extent are they sufficient?

Q. 3. Are there any difficulties in the maintenance of equipment and materials?

If yes, can you describe these difficulties?

Staff

Q. 4. What is the actual role of the computer specialists (technicians)?

Q. 5. Are there any long or short term plans for training computer specialists?

If yes, can you describe them generally?

Q. 6. How do the computer specialists and the academics liase?

Users

Q. 7. Are there any materials or equipment that are not used by the users?

If yes, can you mention some examples?

What do you think are the reasons for not using these materials or equipment?

Q. 8. Are the LRC materials of direct relevance to the curriculum so that they will be used often by academics and students?

If yes, can you give some examples?

Services

Q. 9. How does the LRC control the students' use of the Internet?

Q. 10. Are there any difficulties with students visiting undesirable sites (e.g. pornography sites) in the Internet, which conflict with the students' culture?

If yes, could you mention some examples?

Is there any penalty against such practices?

Q. 11. Can you please explain the procedures / system of lending the following materials to users?

	Computer-Software Materials e.g. CD-ROMs	Equipment
Period:
- Students
- Academics
- Others

Q. 12. Are there any materials which can't be borrowed?

If yes, can you give some examples?

Could you explain why they can't be borrowed?

Q. 13. Does the LRC have the capability to offer a distance learning service?

If yes, can you illustrate how that could be offered?

If no, could you mention the reasons for not developing this option?

Are there plans to do that in the Centre?

Accessibility

Q. 14. Do each type of users (e.g. academics, students, males, females, others) benefit equally from the services in the computer labs?

If no, can you explain in what respect do they not benefit equally and why?

Organisation

Q. 15. Is the Library automated?

If no, when do you think it will be automated?

Q. 16. Is there any co-ordination or collaboration between the LRCs in the Colleges of Education? If yes, can you please specify?

Q. 17. Do you have any suggestions which may contribute to improving the effectiveness of the LRC?

Q. 18. Is there anything else you want to say about the LRC that hasn't been discussed?

Thank you for your help

دراسة ميدانية لمراكز مصادر التعلم في كليات التربية بسلطنة عمان

مقابلات مع العاملين بمراكز مصادر التعلم

أخصائيو الحاسوب

- أ - كلية التربية ب ب - المسمى الوظيفي ج - ذكر: أنثى:
- د - المؤهل العلمي والتخصص
- هـ - وضح في أي مرحلة عمرية أنت 35- 30 29-24 23-18
- هذا السؤال اختياري 46 أو أكبر 45-41 40- 36
- و - الجنسية :

س1 : ما هي أنواع الوسائل أو المصادر المتوفرة في قسم الحاسوب؟

المعدات :

س2 : فيما يختص بالمعدات والمواد :

- هل هي مرضية وتغطي التطور السريع للتكنولوجيا التعليمية؟

- ما مدى كفايتها؟

س3 : هل تواجهكم أية صعوبات في عملية صيانة المعدات والمواد؟

إذا كانت الإجابة نعم هل لك أن تصف تلك الصعوبات؟

العاملون :

س4 : ما هو الدور الفعلي الذي يؤديه أخصائيو الحاسوب؟

س5 : هل هنالك خطط لتدريب أخصائيو الحاسوب للمدى القصير أو البعيد؟

إذا كانت الإجابة نعم ، هل لك أن تصفها بشكل عام؟

س6 : كيف تتم عملية الاتصال والتعاون بين أخصائيو الحاسوب والأكاديميين؟

المستخدمون :

س7 : هل هنالك أية وسائل أو أجهزة لا يستغلها المستخدمون؟

إذا كانت الإجابة نعم، هل لك أن تذكر بعض الأمثلة؟

ما هي الأسباب من وجهة نظرك التي تدعو لعدم استخدام هذه الوسائل / الأجهزة؟

س8 : هل هنالك صلة مباشرة بين ما يتوفر في مركز مصادر التعلم من مواد وأجهزة وبين

محتويات المناهج الدراسية تجعل الأكاديميين والطلاب في حاجة إلى استخدام

محتويات المركز بكثرة؟

إذا كانت الإجابة نعم يرجى إعطاء أمثلة على ذلك؟

الخدمات :

س9 : كيف يتحكم العاملون في استخدام الطلاب للإنترنت؟

س10 : هل تواجهكم أية صعوبات من جانب الطلاب الذين يدخلون إلى المواقع غير المرغوبة

والتي تعرض صوراً داعرة بالإنترنت تتعارض مع قيمهم وثقافتهم؟

إذا كانت الإجابة نعم ، هل يمكنك أن تذكر بعض الأمثلة ؟

هل هناك أية جزاءات ضد هذه الممارسات؟

س11 : هل يمكنك أن توضح إجراءات / أو نظام إعاره المواد التالية للمستخدمين؟

معدات وأجهزة

برامج حاسوب

مواد مثل CD-ROM

.....

.....

المدة

.....

.....

طلاب

.....

.....

أكاديميون

.....

.....

.....

.....

.....

.....

آخرون

.....

.....

س12 : هل هنالك مواد أو أجهزة لا يمكن إعارتها ؟

إذا كانت الإجابة نعم، الرجاء ذكر بعض الأمثلة؟

هل يمكنك أن توضح الأسباب التي تمنع إعاره مثل هذه المواد؟

- س13 : هل يملك المركز القدرة على توفير خدمة التعلم عن بعد؟
- إذا كانت الإجابة نعم، هل يمكنك أن توضح كيف يمكن تقديم ذلك؟
 - إذا كانت الإجابة لا، هل يمكنك أن توضح الأسباب التي تحول دون توفير هذا الخيار؟
 - هل هناك خطط مستقبلية لتقديم مثل هذه الخدمات في المركز؟

إمكانية الوصول إلى الخدمات :

- س14 : هل يجني مستخدمو المركز بأنواعهم المختلفة (أكاديميين، طلبة، ذكور ، إناث وآخرون) فوائد متساوية من الخدمات التي تقدمها معامل الحاسوب؟
- إذا كانت الإجابة لا، هل يمكنك أن توضح من أي النواحي لا يستفيدون فائدة متساوية ولماذا ؟

التنظيم :

- س15 : هل تعمل المكتبة أوتوماتيكياً ؟
- إذا كانت الإجابة لا، كم من الوقت ستستغرق كي تعمل أوتوماتيكياً من وجهة نظرك؟

- س16 : هل يوجد أي نوع من التنسيق أو التعاون بين مراكز مصادر التعلم بكليات التربية؟
- إذا كانت الإجابة نعم، هل يمكنك أن تحدد ذلك؟

- س17 : هل لديك مقترحات يمكن أن تساهم في تحسين فعالية المركز؟

- س18 : هل تود إضافته أي شئ عن مركز مصادر التعلم لم تتم مناقشته؟

نشكركم على كريم مساعدتكم

**Survey of Learning Resource Centres
In The Colleges of Education in Oman**

The Interviews of LRCs Staff
Media Specialists

A-..... College of Education B- Job title:.....C- Male: Female:

D- Qualification and speciality:

E- In which age range are you: 18-23 24-29 30-35
This question is optional 36-40 41-45 46 or older

F- Nationality:

Q 1. What are the types of resources in the media section?

Equipment and Materials

Q 2. About equipment and technological materials:

- Are they satisfactory, given the rapid development of educational technology?
- To what extent are they sufficient?

Q 3. Are there any difficulties in the maintenance of equipment and materials?

If yes, can you describe these difficulties?

Staff

Q 4. What is the actual role of the media specialists (technicians)?

Q 5. Are there any long or short term plans for training media specialists?

If yes, can you describe them generally?

Q 6. How do the media specialists and the academics liase?

Users

Q 7. Are there any materials or equipment that are not used by the users?

If yes, can you mention some examples?

What do you think are the reasons for not using these materials or equipment?

Q 8. Are the LRC materials of direct relevance to the curriculum so that they will be used often by academics and students?

If yes, can you give some examples?

Services

Q 9. Can you please explain the procedures / system of lending the following materials to users?

	Computer-Software Materials e.g. CD-ROMs	Equipment (e.g. OHP)
Period:
- Students
- Academics
- Others

Q 10. Are there any materials which can't be borrowed?

If yes, can you give some examples?

Could you explain why they can't be borrowed?

Q 11. Does the LRC have the capability to offer a distance learning service?

If yes, can you illustrate how that could be offered?

If no, could you mention the reasons for not developing this option?

Are there plans to do that in the Centre?

Accessibility

Q 12. Do each type of users (e.g. academics, students, males, females, others) benefit equally from the services in the media lab?

If no, can you explain in what respect do they not benefit equally and why?

Appendix Four

- Q 13. Is there any co-ordination or collaboration between the LRCs in the Colleges of Education? If yes, can you please specify?
- Q 14. Do you have any suggestions which may contribute to improving the effectiveness of the LRC?
- Q 15. Is there anything else you want to say about the LRC that hasn't been discussed?

Thank you for your help

دراسة ميدانية لمراكز مصادر التعلم في كليات التربية بسلطنة عمان

مقابلات مع العاملين بمراكز مصادر التعلم

أخصائيو الوسائل التعليمية

- أ - كلية التربية ب ب - المسمى الوظيفي ج - ذكر: أنثى:
- د - المؤهل العلمي والتخصص
- هـ - وضح في أي مرحلة عمرية أنت هذا السؤال اختياري
 35- 30 29-24 23-18
 46 أو أكبر 45-41 40- 36
- و - الجنسية :

س1 : ما هي أنواع الوسائل أو المصادر المتوفرة في قسم الوسائل التعليمية؟

المعدات :

س2 : فيما يختص بالمعدات والمواد :

- هل هي مرضية وتغطي التطور السريع للتكنولوجيا التعليمية؟
- ما مدى كفايتها؟

س3 : هل تواجهكم أية صعوبات في عملية صيانة المعدات والمواد؟

إذا كانت الإجابة نعم هل لك أن تصف تلك الصعوبات؟

العاملون :

س4 : ما هو الدور الفعلي الذي يؤديه أخصائيو الوسائل التعليمية؟

س5 : هل هنالك خطط لتدريب أخصائيو الوسائل للمدى القصير أو البعيد؟

إذا كانت الإجابة نعم ، هل لك أن تصفها بشكل عام؟

س6 : كيف تتم عملية الاتصال والتعاون بين أخصائيو الوسائل والأكاديميين؟

المستخدمون :

س7 : هل هنالك أية وسائل أو أجهزة لا يستغلها المستخدمون؟

إذا كانت الإجابة نعم، هل لك أن تذكر بعض الأمثلة؟

ما هي الأسباب من وجهة نظرك التي تدعو لعدم استخدام هذه الوسائل / الأجهزة؟

س8 : هل هنالك صلة مباشرة بين ما يتوفر في مركز مصادر التعلم من مواد وأجهزة وبين

محتويات المناهج الدراسية تجعل الأكاديميين والطلاب في حاجة إلى استخدام

محتويات المركز بكثرة؟

إذا كانت الإجابة نعم يرجى إعطاء أمثلة على ذلك؟

الخدمات :

س9 : هل يمكنك أن توضح إجراءات / أو نظام إعاره المواد التالية للمستخدمين؟

معدات	برامج حاسوب	المدة
مثل جهاز إسقاط فوق الرأس (Over head projector.)	مواد مثل CD-ROM
.....	طلاب
.....
.....	أكاديميون
.....
.....	آخرون
.....

س10 : هل هنالك مواد أو أجهزة لا يمكن إعارتها؟

إذا كانت الإجابة نعم، الرجاء ذكر بعض الأمثلة؟

هل يمكنك أن توضح الأسباب التي تمنع إعاره مثل هذه المواد؟

س11 : هل يملك المركز القدرة على توفير خدمة التعلم عن بعد؟

- إذا كانت الإجابة نعم، هل يمكنك أن توضح كيف يمكن تقديم ذلك؟

- إذا كانت الإجابة لا، هل يمكنك أن توضح الأسباب التي تحول دون توفير هذا

الخيار؟

- هل هناك خطط مستقبلية لتقديم مثل هذه الخدمات في المركز؟

إمكانية الوصول إلى الخدمات :

س12 : هل يجني مستخدمو المركز بأنواعهم المختلفة (أكاديميين، طلبة، ذكور ، إناث وآخرون) فوائد متساوية من الخدمات التي يقدمها معمل الوسائل؟
إذا كانت الإجابة لا، هل يمكنك أن توضح من أي النواحي لا يستفيدون فائدة متساوية ولماذا؟

س13 : هل يوجد أي نوع من التنسيق أو التعاون بين مراكز مصادر التعلم بكليات التربية؟
إذا كانت الإجابة نعم، هل يمكنك أن تحدد ذلك؟

س14 : هل لديك مقترحات يمكن أن تساهم في تحسين فعالية المركز؟

س15 : هل تود إضافته أي شيء عن مركز مصادر التعلم لم تتم مناقشته؟

نشكركم على كريم مساعدتكم

Appendix Five:

Questions of the interviews with the staff of the Learning Resource
Centres/Libraries in Canada (English)

Survey of Learning Resource Centres (LRCs)/Libraries
In Six Canadian Universities

The Interviews of the Staff
of LRCs/Libraries in Canada

- Q1. Can you please tell me what does the LRC/Library consist of (LRC/Library sections)?
- Q2. How do the LRC/Library staff and academics liaise?
- Q3. Who are the LRC/Library users?
- Q4. Can you list and describe the LRC/Library services in general?
- Q5. Does the LRC/Library have the capability to offer a distance learning service?
- Q6. Which system of classification and catalogue is applied in the LRC/Library?
- Q7. How is the quality of work in the LRC/Library evaluated?

Appendix Six:

Questions and checklist used for of the observation (English)

Survey of Learning Resource Centres In The Colleges of Education in Oman

Observation

1. How the LRC Staff Interact With Clients

Q.1. What is the initial response to clients?

Q.2. Does the service help users to meet their needs?

Q.3. Are there any other relevant issues about staff interaction?

2. Users Behaviour and Activities

2.1. Library Section

Section	Action	Time								
		No. of users								
Library	Reading books / Periodicals									
	Reading magazines/ newspapers									
	Writing									
	Studying in groups									
	Other activities									
	Talking / socialising									
	Queue									
		Total								
	Level of noise	- Very high	- High	- Reasonable	- Low					

2.2. Multi-Media Laboratory Section

Section	Action	Time								
		No. of users								
Multi - Media lab	Typing assignments									
	Internet									
	Studying in groups									
	Other activities									
	Talking / socialising									
		Total								
	Level of noise	- Very high - High - Reasonable - Low								

2.3. Media Laboratory Section

Section	Action	Time								
		No. of users								
Media lab	Studying in groups									
	Producing materials									
	Satellite									
	Video									
	Internet									
	Other activities									
	Talking / socialising									
			Total							
	Level of noise	- Very high - High - Reasonable - Low								

Q.4. What materials or equipment are used most frequently?

3. Building

- Availability of study spaces in the Library

- Very sufficient - Sufficient - Fair - Insufficient - Very insufficient

- Availability of spaces in the Multi-Media lab

- Very sufficient - Sufficient - Fair - Insufficient - Very insufficient

- Availability of spaces in the Media lab

- Very sufficient - Sufficient - Fair - Insufficient - Very insufficient

- Features related to the building:

	-Very Satisfactory	-Satisfactory	-Fair	- Unsatisfactory	-Very Unsatisfactory
- Accessibility	<input type="checkbox"/>				
- Security	<input type="checkbox"/>				
- Ventilation / Air-conditioning	<input type="checkbox"/>				
- Lighting	<input type="checkbox"/>				
- Furniture	<input type="checkbox"/>				
- Location of the Centre	<input type="checkbox"/>				
- The building generally	<input type="checkbox"/>				

4. General Notes

- Equality of use of the services for females and males

- Males have more opportunities - Females have more opportunities - Equal

- What level of staff support and supervision is there at the Multi-Media lab for the use of computer and Internet?

- Support:

-Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory

- Supervision:
 - Very Sufficient -Sufficient -Fair - Insufficient -Very Insufficient
- Organisation of materials (e.g. books, periodicals, Journals and equipment etc)
 - Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory
- Instructions about using services, availability and usefulness
- Availability:
 - Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory
- Usefulness:
 - Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory
- Signs availability and clarity
- Availability:
 - Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory
- Clarity:
 - Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory
- Notice board (whether it is well organised and up - dated)
- Organisation:
 - Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory
- Up-dating:
 - Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory
- Photocopying services
 - Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory
- Micro-teaching facilities
 - Very Satisfactory -Satisfactory -Fair - Unsatisfactory -Very Unsatisfactory

5. Any Further Issues Raised

