MD. ANISUR RAHMAN

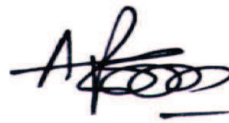## Challenges for International Students in Using Electronic Resources in the Learning Centre: A Case Study of Oslo University College

Supervisor: Prof. Ragnar Nordlie

Declaration

"I certify that all materials in this dissertation which is not my own work has been identified and that no material is included for which a degree has previously been conferred upon me."

26 June 2011

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Md. Anisur Rahman (Signature of candidate)

[Submitted electronically]

Dedication

I dedicate this work to my father and my mother whose tireless efforts made me who I am today; and to my brothers and sister for their honest encouragement.

Acknowledgements

Bismillahir-Rahmanir-Rahim

(In the name of Allah, The Most Gracious, The Most Merciful)

First, my utmost gratefulness to Almighty ALLAH for the great blessings and His will to accomplish this thesis and giving me patience and determination to continue my journey of acquiring knowledge. Alhamdulillah (Praise to Allah).

Hence, I would like to take the opportunity to write a note of acknowledgements to those who have assisted me in order to complete this study. I am indebted to my supervisor Professor Ragnar Nordlie for his guidance, advice and support throughout the research. He really enabled me to develop better understanding of the subject and truly helped for smooth progress of this thesis.

Prof. Ragnar Andreas Audunson, Prof. Nils Pharo, Prof. Sirje Virkus, Prof. Aira Lepik, Prof. Anna Maria Tammaro, Prof. Vittore Casarosa for giving me a really good advice, cheer and continued support on the way during two years of study, as well as the DILL scholars and visiting professors, I thank you all for conveying your knowledge and experience to me.

My sincere thanks to Kersti Ahrén Heløe, Oslo; Merje Songe & Karin Oolu, Tallinn; Federico Monaco & Christin, Parma; who have given a good support and advice on the way during two years of study.

I owe a boundless debt of gratitude to the European Commission for giving me financial support through the Erasmus Mundus Scholarship to pursue this two years Master Study.

I am thankful to all my DILL classmates, it is my great pleasure to know and be your friend, and you have made these past two years a memorable experience in my life. My deepest appreciations go to my beloved friend Amma Naningrum for making my study days pleasant and memorable and for her irreplaceable friendship.

I would like to expresses my gratitude to all my respondents and interviewees at Oslo University College for their keen participation and cooperation during my data collection.

I also owe my best friend Dr. S. M. Zabed Ahmed and Dr. Md. Anwarul Islam a debt of gratitude for their inspiration and encouragement in many ways in my educational endeavours.

Last but not least, I would like to grateful to my parents, brothers and sister for their moral support and prayers and many others who are not mentioned here.

Thank you all for your encouragement!

Abstract

The purpose of this study is to find out the challenges facing by international students in using electronic resources in the OUC learning center. This research has used a qualitative approach and purposive, a non-probability techniques used for sampling of this study. A semi-structured face-to-face interviews method is used for the collection of data. The interview questions were open ended and the discourse analysis method has been used for analysing data. In the data analysis section the researcher has chosen to quote the most significant utterances in unedited form and other utterances have been included in edited form as supporting evidence.

The study identified a number of the challenges faced by international students in using electronic resources in the OUC learning center. It also discovered some general problems in relation to international students' use of the libraries in general for instance, different classification system; different library location; closed shelves; no experience using automated library before; problems related to login and using FRONTER. These barriers were problematic to the informants for a while, but through asking for help from the library staff or their friends, they resolved them. So, these were not serious problems that need any intervention from the learning center. But of course some substantial problems which were particularly problematic to international students in connection with using the electronic resources in the OUC learning center, including: Cultural differences; Language barrier; Lack of training; Problems in user Interface; Unfamiliar teaching or learning style. These are the problems uncovered, demand intervention from the learning center.

Furthermore, in this study it is found that students from countries closely culturally related to Norway are more familiar or apt with library environment and teaching style than students from countries culturally distant from Norway. It is significant that library anxiety or barriers with staff, judging from the results of the interviews, were absent. The students overwhelmingly confirmed that they were happy with the assistance of library staff and that they were comfortable with using the 24/7 computer availability, printing and drop box facilities for return the borrowed items.

Suggestions for actions to increase the usefulness of the library resources for international students, include: to arrange cultural diversity workshops; both Norwegian and

English compatible web page; to make available all kind of forms are in English; to arrange web based training program; to provide online instruction for searching e-resources; to arrange practical training; to provide training program for 2/3 times; to replace the icon "book" with a suitable link like "library"; online chat with a librarian 24/7.

It is recommended that the learning center needs to be proactive in addressing the problems of these students in order to provide the learning center support required for them to successfully pursue their studies.

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List of Abbreviations

AACR	Anglo-American Cataloguing Rules
ACRL	Association of College and Research Libraries
AV	Audio Visual
AVM	Audio Visual Materials
ER	Electronic Resources
ESL	English as a Second Language
IBM	International Business Machines
IEEE	Institute of Electrical And Electronics Engineers
ISO	International Organization for Standardization
IT	Information Technology
LC	Learning Center
LIS	Library and Information Science
OPAC	Online Public Access Catalogue
OUC	Oslo University College
SCONUL	Society of College, National and University Libraries
UNESCO	United Nations Educational, Scientific and Cultural Organization

Chapter 1

Introduction

This chapter is the introductory section of this thesis and it outlines the background and context of the study, followed by the statement of the problems, purpose and objectives, scope of the study, research questions, research methodology, limitations of the study, and finally the structure of the thesis.

1. 1   Background and context of the study

Information Technology has become an integral part of higher education and learning. It is a tool which enables libraries to deliver services in a more efficient way. Thus, library systems are changing at an extremely rapid pace due to the development of technology. Libraries are dealing with a myriad of information sources, whereas computers have become an essential part of modern library systems. Swain & Panda (2009) stated that "the rapid advancement of Information and Communication Technology (ICT) has brought revolutionary changes in the information scenario giving rise to a number of options to the user community to handle varied information sources conveniently and effortlessly. As a result of this e-resources have become the lively substance to the modern library's reserves in satisfying varied needs of students, teachers, and researchers with minimum risk and time" (p. 108).

Electronic materials have become more popular for meeting the instant desire of users, having quick access to information and efficient retrieval facilities. Thachill (2008) stated that "academic libraries are part of an educational process and have a mission, they exist to support students, staff and academic faculty in their research and education by procuring and making available the best print and electronic resources". OUC is the largest state university college in Norway with over 12,000 students and 1,250 staff, 7 Faculties and around 50 study programmes. In 1st August, 1994, the Norwegian college system was restructured and 18 smaller colleges in Oslo area merged into Høgskolen i Oslo or Oslo University College (OUC). The OUC learning centre, which is the object of this study, is presented in more detail in chapter 2 (section 2.2).

McQuistan & Henderson (1999) stated that "as academic progress towards the 21ˢᵗ century, increases in student numbers, distance learning, changes in copyright issues and lack of funding means that academic institutions have to look more closely at the use of electronic resources in order to meet these challenges". OUC Learning Center provides access to a wide range of relevant and quality assured knowledge and learning resources, both in printed and electronic form and have facilities to access these different electronic resources for the users. And all of these electronic resources are presented in the learning centre web site. Contextually, e-resources in their scope primarily includes, e-books, e-journal, e-databases, e-papers, e-reference sources, e-content pages, e-prints, e-learning tools, e-mailing list, e-clipping, e-reports, e-publishing, e-advertising, OPAC, e-news, e-image, e-music, and several other materials in electronic form. Furthermore, they are those kinds of documents in digital formats which are made available to library users through a computer based retrieval system. Electronic resources have become an increasingly important part of academic library collections. The library patrons also prefer to use more electronic resources and computerized services compared to conventional materials for their needs. Liew, Foo & Chennupati (2000, p. 304) conducted a survey of 83 graduate students at Nanyang Technology University of Singapore on their use and perception of electronic journals. In their study they found that "a vast majority of graduate student (73%) preferred electronic medium over print journals. This was because electronic journals provided links to additional resources, currency, availability, easy/faster access, ease to use." In a study conducted at the Eskind Biomedical Library (EBL) at Vanderbilt University Medical Center (VUMC) Sathe, Grady & Giuse (2002, p. 240) found the highest preference of using electronic journals over print journals among the different categories of library patron, such as: fellows (70%); medical students (63%); Vanderbilt university students (63%); visitors and alumni (60%); and residents (57%). Several user studies have been conducted by students, research scholars, and faculty members of different educational institutes all around the world focusing on the use of e-resources. Swain (2010) stated that "owing to the technological revolution and advent of modern information and communication technologies (ICT), the student community no longer relies upon the traditional library services. They are, however, encouraged to trust in electronic resources with a presumption that the wealth of information available in electronic formats can utterly accomplish their scholastic needs as a better substitute to traditional print services" (p. 580). In several studies, particularly from English speaking

countries, it is found that international students are facing particular difficulties in using libraries and library resources. But the researcher still thinks that it is valid to investigate these difficulties outside the English speaking domain. Hence, this research attempts to identify and analyze the problems faced by international students in using electronic resources in the OUC learning centre.

1.2   Statement of problems

According to Madhusudhan (2010) providing access to resources is now considered more important than collection building, especially if the access is perpetual in nature. The e-resources facilitate the libraries to get the benefits of large number of resources at an affordable cost and in minimal time. Moreover, the technology has changed the expectations of researchers, their patience, and their willingness to accept services that are available on demand. The e-resources are the answer to the expectations of the users (p. 494).

The OUC learning centre/library has a department for Digital services (the digital library). This department is responsible for the learning centre website, the digital publications at the university college (self archiving), the management of shared electronic information resources, and the research documentation for Oslo University College. OUC learning centre website is a portal of its information to users. The learning centre buys access to wide range of academic databases and provides access to these different digital services for the users, and all of these digital services and resources are presented in the learning centre web site. Students, faculty members and staff are getting the benefit of using these electronic resources for their study and research. Several studies has been conducted which show that international students encounter many problems in using such library resources. In view of the rapid international student growth in OUC the present study has been taken up to know the current use of electronic resources and also problems faced while accessing these resources by the international students of Oslo University College.

1.3   Purpose and objectives

"The purpose of research is to discover answer to questions through the application of scientific procedures. The main aim of research is to find out the truth, which is hidden and...has not been discovered as yet"(Kothari, 2004, p. 2).

Purpose

The main purpose of this research study is to investigate the challenges faced by international students in using electronic resources in the OUC Learning Centre (LC). To achieve this, the study will examine how international students felt towards electronic resources, their actual needs, electronic resources usage and their expectations of using electronic resources.

Objectives

The main objective of this research study is to find out the challenges faced by international students in using electronic resources in the OUC Learning Centre (LC). All the electronic resources are presented through the website of LC, and some pages are in local language, so language might be a major problem to use those resources by international students. This research study is intended to focus on the following objectives:

- To identify the international students perception and awareness of the value/usefulness of electronic resources.

- To find out international students expectations in using the OUC electronic resources;

- To gauge the satisfaction and dissatisfaction in using electronic resources;

- To investigate the issues and problems faced by international students in their use of electronic resources.

- To identify possible improvements and extensions of the way the OUC provides access to electronic resources.

1.4   Scope of the study

The scope of this research is limited to the international student population of the Oslo University College, Norway.

1.5   Research questions

To achieve the objectives of this research the following research questions were framed:

- What are the challenges international students experiences in relation to use of electronic resources in the Oslo University College Learning Center?

- What specific recommendations to make electronic resources of the OUC learning center accessible to use by the international students?

1.6   Research methodology

A qualitative method is followed for this research study. The method for data collection is semi-structured interviews. In selecting the study population criteria-based purposive sampling method was followed, which allows the sample to include the most important characteristics of the group. Furthermore, the research is a case study in which the international students are encouraged to explore and share their experiences of using electronic resources. The interview questions were of open ended type. The method for analyzing data was discourse analysis. The researcher has chosen to quote the most significant utterances in unedited form and other utterances have been included in edited form as supportive evidence. The raw data collected throughout the interviews were coded manually, using just word processor software. The full detail of methodology is presented in chapter three.

1.7   Limitations of the study

There are some limitations in this study which could be considered as the factors influencing the objectives of this research.

First, the study was limited to students coming from outside Norway to study in the Oslo University College and did not include students who remain in their home country and are taught as distance students.

Secondly, purposive sampling was used in this study and the size of the sample represents a limitation of this study. Only 28 participants were interviewed. However, there is a considerable amount of participants' insights into the issues explored in this thesis.

Thirdly, the literature review covers only publications in English language.

Fourthly, limitation by place and time. This study is limited specifically to international students enrolled at Oslo University College. Therefore, the findings are not necessarily generalised to all international students.

1.8   Structure of the thesis

This thesis consists of five chapters and followed the APA citation style throughout the thesis.

This Chapter (Chapter-1) is a general introduction to the research and background and context of the study, statement of the problems, what the research purposes to achieve, research questions and methodology, limitations of the study.

Chapter 2 reviews the literature of previous research relevant to this research work. This includes a number of diverse areas, such as electronic resources and their uses, and challenges faces by international students in using the library resources.

Chapter 3 presents methodology used in the research process. It describes the data collection method used, analysis and sampling techniques employed and ethical considerations.

Chapter 4 discuss the data analysis in this research and presents the finding of the interviews.

Chapter 5 presents a discussion of the research results, conclusions arrived at, recommendations and suggestions for further research.

Chapter 2

Background and Literature Review

2.1 Introduction

This chapter reviews documented literature on various works related to the research topic of this study. It starts with the discussion of relevant concepts needed to find answers to the research problem. The review is therefore aimed at gaining an insight on different challenges facing by international students in using the electronic resources. The review of literature was done through literature search of both print and electronic materials on topics related to international students and the challenges they faced while using the libraries in a foreign country in order to carry out their study.

2.2 Oslo University College Learning Center

Oslo University College (OUC) is the largest state university college in Norway, established in 1994 when the Norwegian college system was restructured and 13 smaller colleges in the Oslo area merged. At present OUC have over 12,000 students and 1,250 staff, 7 faculties, provide degree programmes on all the three Bologna cycles; bachelor, master and doctoral. These faculties are offering 33 bachelor studies, over 20 Master's programs and two doctoral programs (one in professional studies and one in social work and social policy).

OUC has a learning centre in 3 locations for students and faculty members, which is a multi-professional meeting place, mainly involving library, IT and AV.

- Learning Centre P48 (main campus)

- Learning Centre PP (location: Pilestredet Park)

- Learning Centre P35 (location: Pilestredet 35)

OUC Learning Centre is responsible to provide services to ensure the quality of education and research for their student and faculty members. OUC learning centre/library has a department for Digital services (the digital library). The OUC library system contains

links to reliable and credible sources and different electronic services for the users and all sources and services are accessible to users with visible links available at the library's' home page. The department has 4-5 employees and is responsible for the learning centre website, the digital publications at the university college (self archiving), the management of shared electronic information resources, and the research documentation for Oslo University College.

2.3   Definition of international student and electronic resources

Defining the international students, Carroll (2005) mentioned that "...we speak of international students when we mean students who have chosen to travel to another country for tertiary study … most of their previous experience will have been of other educational systems, in cultural contexts and sometimes in a language that is different from the one in which they will now study." (as cited in SCONUL working group, 2008). UNESCO Institute for Statistics (UIS) (2009) defines the definition of international student is "those student who study in a foreign country of which they are not a permanent resident" (p. 35).

Defining the E-resources Sinha (2011) mentioned that "E-resources are those resources which include documents in electronic or e-format that can be accessed via Internet in digital library environment. E-resources are that electronic product that delivers a collection of data, be it text, image collection, other multimedia products like numerical, graphical mode for commercially available for library and information centre's" (p. 490). Gibson D. Lewis Health Science Library mentioned that "the term Electronic Resources used to describe all of the information products that a library provides through a computer network. This includes electronic books and journals, bibliographic databases, and library website pages. Online dictionary of LIS define electronic resources as "material consisting of data and/or computer program(s) encoded for reading and manipulation by a computer, by the use of a peripheral device directly connected to the computer, such as a CD-ROM drive, or remotely via a network, such as the Internet...."

AACR2 Rule 9.0A1 states, electronic resources consist of data (information representing numbers, text, graphics, images, maps, moving images, music, sounds, etc.),

programs (instructions, etc., that process the data for use), or combinations of data and programs. Electronic resources often include components with characteristics found in multiple classes of materials so there will frequently be a need to consult other chapters. Swain (2009) stated that "electronic resources and services refer to the variety of electronic and digital sources of information available to teachers and learners within an academic context" (p. 75). In the words of Saye (2001) "electronic resources are the resources that are generated through some electronic medium and made available to a wide range of viewers both on-site and off-site via some electronic transferring machine or internet" (p. 76).

Contextually, e-resources in their scope primarily includes, e-books, e-journal, e-databases, e-papers, e-reference sources, e-content pages, e-prints, e-learning tools, e-mailing list, e-clipping, e-reports, e-publishing, e-advertising, OPAC, e-news, e-image, e-music, and several other materials in electronic form. Furthermore, they are those kinds of documents in digital formats which are made available to library users through a computer based retrieval system.

2.4   Uses of electronic resources

Focusing on the use of e-resources several number of user studies have been carried out by students, research scholars and teachers at various institutions and universities all over the world. Some of them are mentioned bellow:

Madhusudhan (2010, p. 493) expressed that "electronic resources (e-resources) have given us the power to get information timely and manage information more effectively and also the means to dissolve barriers and offer equity of access to knowledge and information. Furthermore, e-resources can meet the instant desire of users to have an access to information." The JUSTEIS project in the UK (Urquhart et al., 2003) explored that, "although books are still considered a reliable, basic source of information but an increasing number of students have started using or tended to use electronic resources" (p. 175). Solis & Hampton (2009) in their findings expressed that "students and professors appreciate course-specific web pages that provide access to library resources that relate directly to class assignments" (p. 81).

Discussing the benefit of E-resources Wilson (2003) stated that "E-resources offer a greater variety of learning experiences than those offered by text on paper, its enable instant feedback on their progress and facilitate students' ability to understand concepts more easily and clearly". Commenting on the advantages of electronic resources, Dadzie (2005, p. 290) writes that "electronic resources are invaluable research tools which complement print-based resources in any traditional library... they also provide access to current information as these are often updated frequently... in addition, electronic resources are convenient to use since users are able to access information from the library, internet cafes, offices or at times from the comfort of their homes at any time of the day." Discussing the benefit of ER a study by Ellis & Oldman (2005) has shown that "electronic resources would ease access to holdings, save time and financial resources and would solve problems connected with a lack of space in research libraries" (p. 34).

2.5   Uses of OUC electronic resources

The OUC library system contains links to reliable and credible sources and different electronic services for the users and all sources and services are accessible to users with visible links available at the library's home page. OUC library's E-resources are used for both educational and research purposes. It provides information for user to access e-books, research papers and e-journals for their own interest. The databases are arranged by alphabetic order (A-Z) and as well as faculty based. The e-journals are also arranged by alphabetic order A-Z. Some of the electronic resources of the OUC library system access through BIBSYS, ebrary, Emerald database, IEE, ProQuest, Science Direct, etc. All of these electronic services are presented through the library website. The following statistical data of user visits of the OUC learning center from 2007 to October 2010 show that the total numbers of visiting users in three locations are continually increasing. And data in relation to the use of different databases from 2007 to November 2010 are also showing increasing usages of the various databases and other electronic resources.
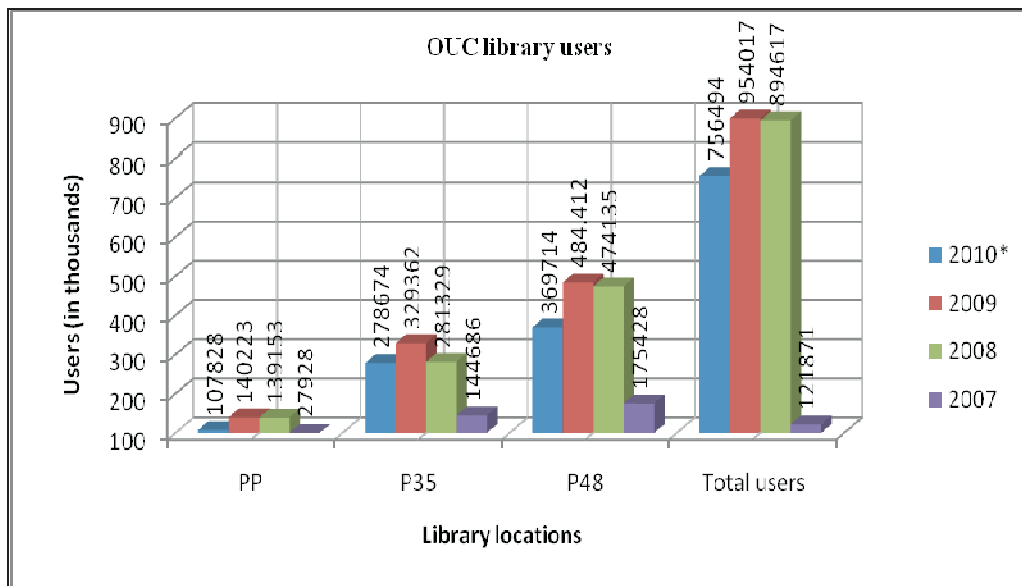
*data upto Oct. 2010

Fig. 2.1 OUC library users
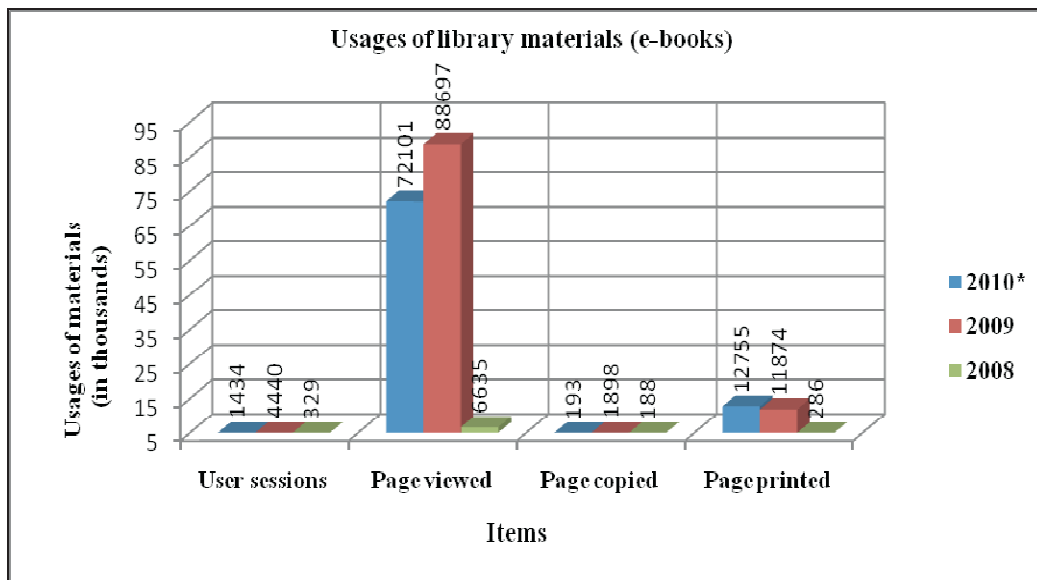
*data upto Nov. 2010

Fig. 2.2 Uses of library materials (e-Book)
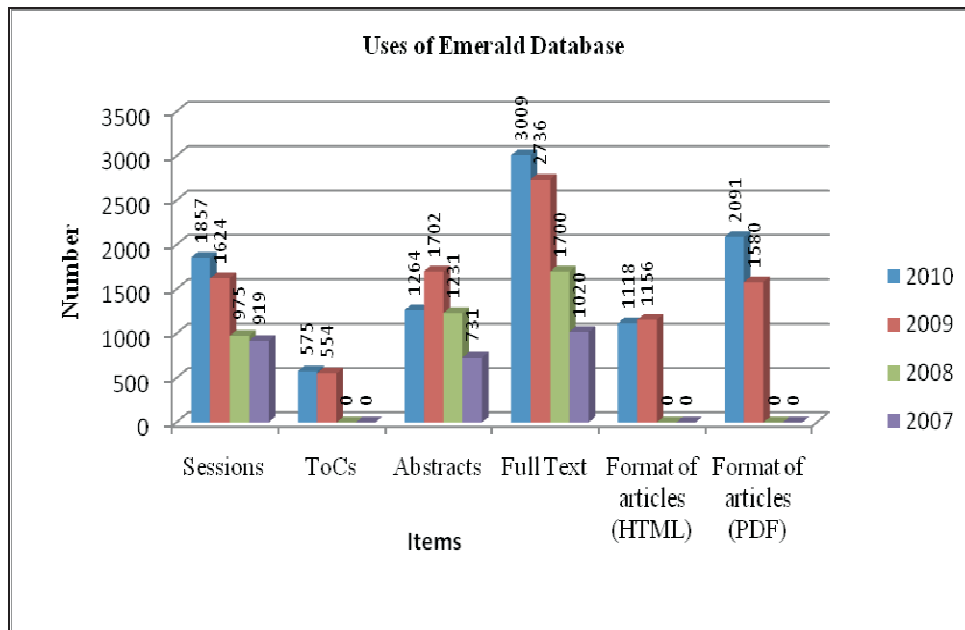
Fig. 2.3 Uses of Emerald databases
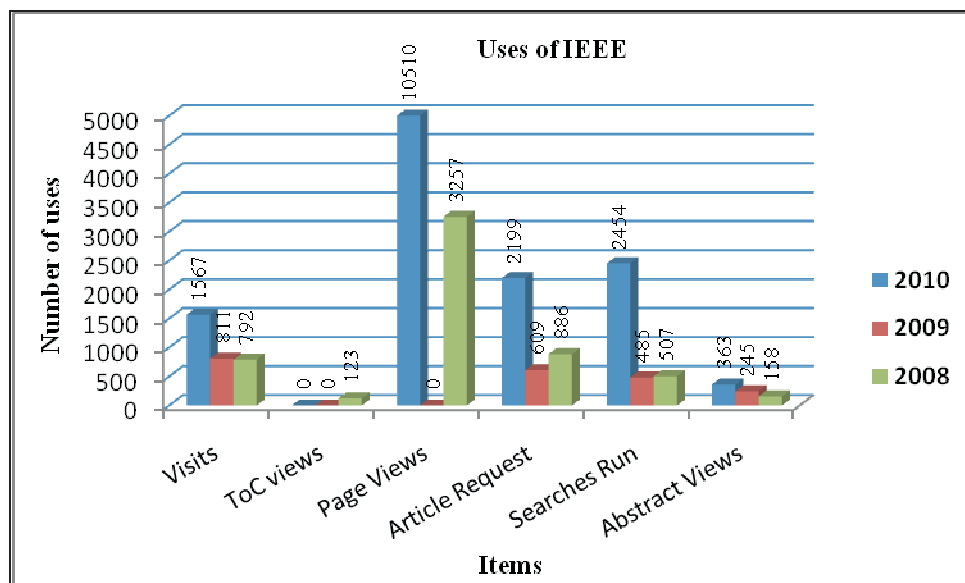
Fig. 2.4 Uses of IEEE
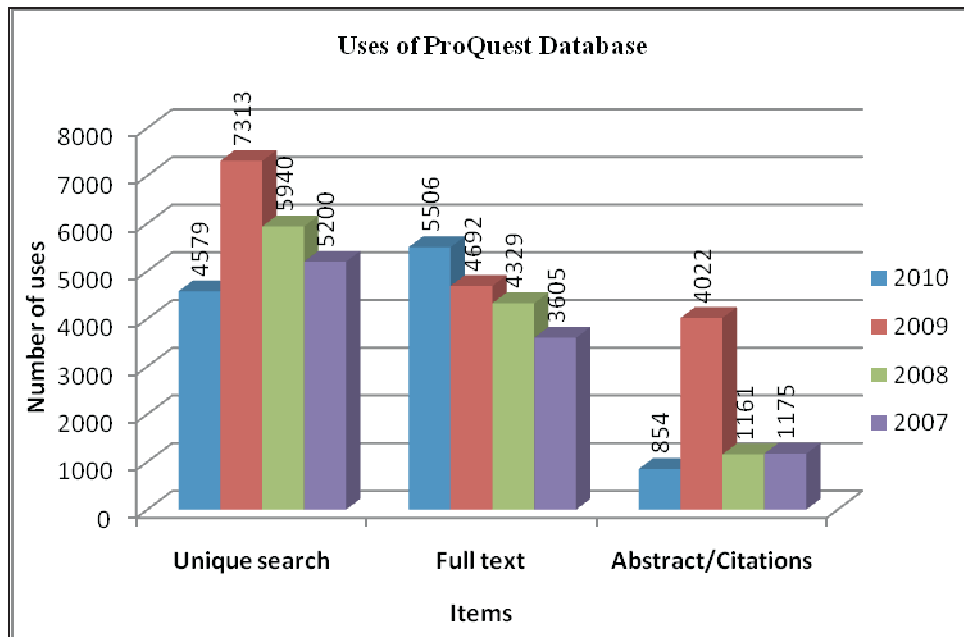
Fig. 2.5 Uses of ProQuest databases
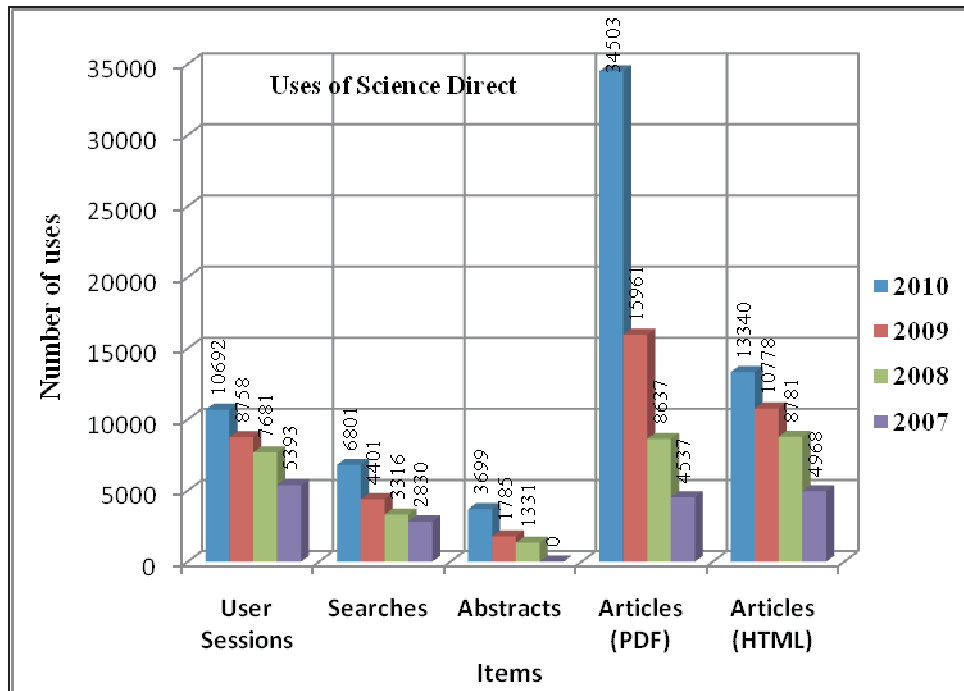
Fig. 2.6 Uses of Science Direct
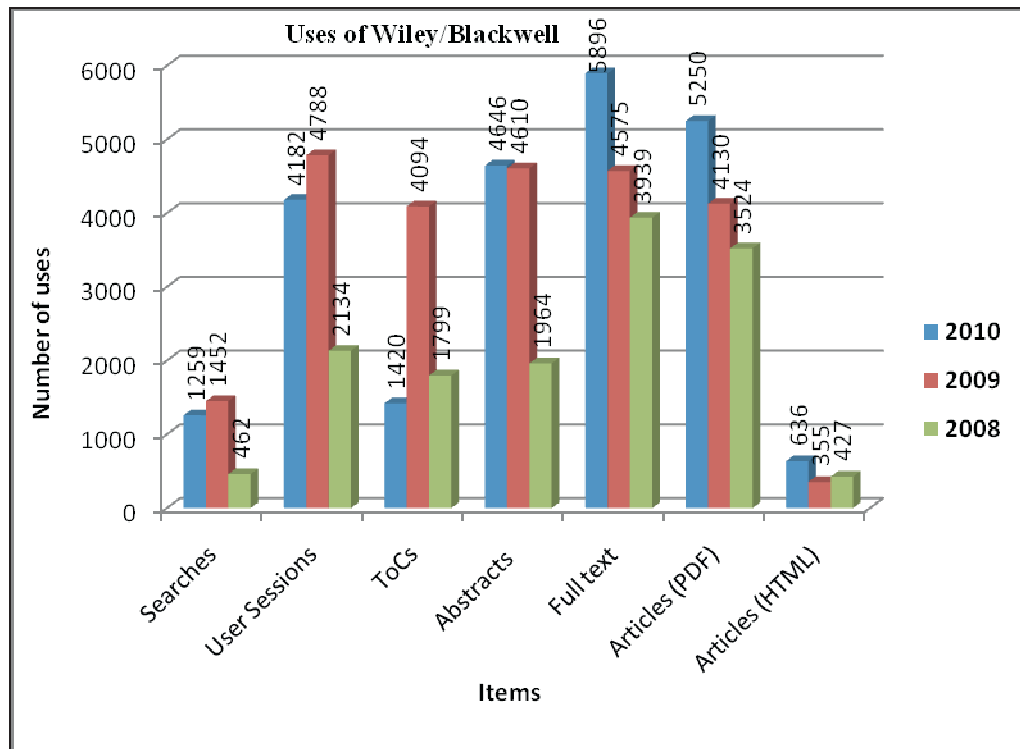
Fig. 2.7 Uses of Wiley/Blackwell

2.6   Challenges faced by international students

International students play a vital role to enrich the cultural and intellectual diversity of the education system in their host countries. But these students encounter many problems adjusting to the new environment due to their different backgrounds. These difference influences their expectation of library services and their adjustment of the new academic, cultural and library environment. Several studies showed that foreign students faced the challenges of library anxiety, computer anxiety, and lack of instruction or experience with digital resources, differences in education systems, libraries, and language.

In the following literature the researcher tried to draw attention to the problems of international students experienced to use libraries. Baron & Strout-Dapaz (2001) Stated that "three major problems—perceived by library staff –that occur with international students in their use of library are: Language barrier, e.g. pronunciation; general English language skills; library terminology. (2) Cultural barriers, e.g. customs; Social norms;

Education methods; Library service offered. (3) Library differences; Open vs. closed stacks; Self service vs. full service; request system" (p. 318). In a comprehensive review of 18 articles written between 1987 and 1993 on international students' use of US academic libraries, Natowitz (1995, p. 4) effectively identified three major barriers that commonly experienced by international students with regards to their library use: language, cultural, and technological barriers. These three barriers prevent international students from taking full advantage of library services. Wayman (1984, p. 336) claimed that "foreign students are encountering difficulties as communication, learning styles and behaviours, and expectations of and previous experience in libraries." Boers (1994) noted in this study that "aside from basic cultural differences, factors such as learning styles, English language ability, and previous experience with computers affect foreign students' ability to use the library" (p. 95). Goudy & Moushey (1984) conducted a survey of forty-four academic libraries in the United States and found that foreign students do have significantly greater problems in using the library than do most native born students...cultural differences, difficulties in oral communication, lack of an adequate vocabulary, and the inability to conceptualize and apply the English alphabet all combine to make the library a laborious place to accomplish research" (p. 224).

2.6.1 Language barriers

International student faces language related challenges in a range of communication and study context. Although, international students are required to meet English language competency on arrival, they have a lack of understanding of the accent, they are unable to pronounce words correctly while others lack of vocabulary to describe what they mean. In addition to different cultural library practices, English language proficiency is a difficulty widely documented in the literature on international students.

In her survey of incoming international students at San Jose State University, Jackson (2005) stated that "…English language proficiency is a difficulty widely documented in the literature on international students. Both librarians and students encounter verbal and written language barriers and non-verbal communications problems" (p. 199). Lack of proficiency in English can be a major concern for international students in their library use as it related to asking for and receiving assistance. Natowitz (1995) stated that if students are self-conscious about their English skills, they may avoid the

library to avoid asking questions. Because of varying values related to information-seeking behaviour, international students may cloud the issue of what question they really want answered in an effort to seem less needy than they really are (p. 7). Language difficulties impact not only information gathering skills but also help seeking behaviours. A study, conducted by Liu (1993) revealed the problems that "students from developing countries (mostly Asia) had in using American academic libraries. The study was conducted by interviewing fifty-four students at the University of California, Barkley. Student was doctoral and other graduate and undergraduates with majors in natural science and humanities and social science. The study found that because of language problems students had limited language skills and lacked confidence to ask the librarian for assistance. In addition to the challenge that language creates in help-seeking behaviour, language structure itself can cause problems in search strategies" (p. 27).

Formulating search strategies and selecting appropriate resources requires a vocabulary rich in synonyms and the ability to read and understand complex, specialist languages. Mehra & Bilal (2007) reported that "repeatedly, international students mentioned difficulty in using digital interfaces mainly due to their inadequate level of English language skills. Searching, browsing the hierarchical structure of web directories, understating the relationships between broad, narrow, and related terms, among others, were confusing to them. In addition, recalling keywords from limited vocabulary, and formulating effective search strategies surfaced as major problems". Jacobson (1988) observed that efficient searching in online database depends on the use of truncation, Boolean operators, proximity searching, the use of synonyms, and phrase searching, all of which may be complicated by the structure of the student's native language. If international students are still mentally translating languages as they listen and think, the linguistic pattern of their native language may interfere with their ability to construct effective search statements in English".

Hughes (2005) stated that "linguistic factors tended to have more impact on the international students actual use of online resources, while cultural factors had greater influence on their wide educational experience. Cultural diversity in the academy presents unique benefits and challenges. There is no doubt that international students enrich the learning process through sharing cultural norms and life experiences, differing communication styles and distinct learning styles" (p. 175).

2.6.2 Library anxiety

Bostick (1992) has identified five dimension of theory anxiety, namely, "barriers with staff", "affective barriers", "comfort with the library", "knowledge of the library", and "mechanical barriers. Barriers with staff refer to the perception of students that librarians and other library staff are intimidating and unapproachable." (as Cited in Jiao & Onwuegbuzie (1999a, p. 4). In addition, the librarian is perceived as being too busy to provide assistance in using the library. Affective barriers stem from students feelings of inadequacy about using the library. "Comfort with the library" deals with how safe, welcoming, and non-threatening students perceive the library to be. Jiao & Onwuegbuzie (1999b) stated that "students who are not comfortable in the library tend to have higher levels of library anxiety. "Knowledge of the library" refers to how familiar with the library students feel they are. Finally, "mechanical barriers" refers to feelings which emerge as results of student reliance on mechanical library equipment, including computer indexes, online facilities, computer printers, copy machines and change machines. Students who have difficulty using library technology tend to experience high anxiety levels" (p. 279). According to Ansari (2009) "the concept of library anxiety was first formally recognised and studied in 1986 by Constance A. Mellon who conducted a 2-year qualitative investigation on college students enrolled in beginning composition course" (p. 423). Jiao et al. (1996) stated that library anxiety is "an uncomfortable feeling or emotional disposition, experienced in library setting, which has cognitive, affective, physiological, and behavioural ramifications". (p. 152). Mellon (1986) theorized that feelings of anxiety stem from one or more of the following four sources: (1) the relative size of the library (the most prevalent cause); (2) a lack of knowledge about the location of materials, equipment, and the like; (3) how to initiate their library research, and (4) how to proceed. Her theory states that "students become so anxious about having gather information in a library for their research paper that they are unable to approach the problem logically or effectively. Specific components of this theory are (a) students fears are due to a feeling that other students are competent at library use while they alone are incompetent; (b) this lack of competence is somehow shameful and must be kept hidden and; (c) asking questions reveals their inadequacies" (p. 162). International students need more assistance compared to local students. Library staff must be encouraged and trained to accept and understand the cultural differences of international students. Shaffer, Vardaman & Miller (2010) stated that "the international student is even more at risk to

encounter a negative library experience unless the library staff can take a proactive approach and communicate to the foreign student that the library workers are approachable and available to assist in all their information needs" (p. 110).

2.6.3 Computer anxiety

In addition to facing library anxiety, many students, and particularly foreign students who come from developing countries where libraries are not automated, may suffer from computer anxiety. Three aspects of computer anxiety detected in Bradley & Russell (1997) in their study, which are: "a. Damage anxiety: fear of breaking equipment or losing information; b. Task anxiety: fear of not understanding computer jargon, of getting stuck, or of not knowing where to start; and c. Social anxiety: fear of appearing ignorant to those who are watching" (p. 274). Like library anxiety, nervousness about computer use actually influences the degree of which the technology can be effectively used. Computer uses in the library still pose a special problem to students from foreign countries. International students are often computer literate and computer savvy. However, technology is still not a common phenomenon in libraries throughout the world so that many internationals students have little experience with computer in libraries and do not feel prepared to use libraries. Ogunsola & Okusaga (2006) stated that "the fact still remains that many countries especially the developing countries currently do not have e-mail, fax, telephone and computer based libraries services" (p. 224).   Jacson (2005) mentioned that "many surveys showed that international students lack the necessary exposure to computers, especially to computers in libraries, to effectively utilize the growing online resources in the 21st Century academic university library" (p. 199). Allen (1993) surveyed 750 international graduate student in the university of Illinois, asking , "what was new to you?" in American libraries, and found that "69% had never previously used any type of computer in a library. Of those surveyed 51% had never used an online catalogue, and 61% had no experience with databases" (p. 327).

2.6.4 Educational differences

Educational system differences can be a major issue for international students. Education systems throughout the world are differing from country to country where the student's role is more observational or imitative. In many countries, the predominant teaching method is lecture and recitation; students learn from rote memory and are

expected to recall information rather than analyze, synthesize, critique, or expand on it. Bilal (1988) reaffirms Wayman's (1984) conclusion that "students from developing countries still rely on lecture notes and textbooks..." (as cited in Boers, 1994, p. 93). Hughes (2005) stated that "international students need to adjust to new styles of teaching, learning and assessment, which often involve a shift from teacher-centred models of instruction based on authorised texts to more self-directed learning that draws on virtually unlimited print and online information sources" (p. 170).The working group of SCONUL (2008) mentioned that "the international students may be used to more formal teaching methods and unused to critical thinking, group work and independent learning. It may be inappropriate to argue with or question the professor, thus fostering amore formation relationship between student and teacher that exclude a discussion of feelings or opinion."

2.6.5 Library differences

Just as national education systems and values differ throughout the world, so do libraries, international students faces different barriers as they attempts to understand and efficiently use the library. International students especially from developing countries are used to closed access libraries and to having materials brought to them by library staff, that is why they may need more help in developing as independent learners, finding information for themselves from the shelves and in using self-service systems. Jackson (2005) stated that "students from other countries are accustomed to different library services and varying degrees of access to information…" (p198). Macdonald & Sarkodie-Mensah (1988) stated that "many international students previously learned by lecture and recitation by the teacher; thus it was unnecessary to do research in the library for their studies. Students coming from a wide diversity of cultures have had different experience with libraries in their countries" (p. 426). Many internationals students are unfamiliar with the open shelves in libraries. In a study Spanfelner (1991) asked to the international student to compare libraries in the United States with those in their own countries, he found that "one of the major differences was the concept of open shelves. In their countries student must fill out forms to request to see the books" (p. 72). Despite the fact that most developing countries libraries are closed stacks, non circulating collections are common. Wayman (1984) stated in his study that "their home libraries may have a non-circulating collection, which makes the idea of borrower responsibility a new concept, and international students may even be unfamiliar with the idea that loaned materials must be returned to the library without the library

contacting the student to ask for them back" (p. 338). Students from developing countries are not familiar with online library services, because, in many developing countries libraries are not providing online automated services. The survey of library directors by Goudy and Moushey (1984) revealed that "foreign student do have significantly greater problems in using the library than do most native students particularly in using online catalogs, print indexes. They also mentioned that unfamiliarity with American libraries, cultural differences, difficulties in oral communication, lack of an adequate vocabulary...all combine to make the library a laborious place to accomplish research" (p. 224). Allen (1993) surveyed of international students finds that "online databases and catalogs are new to international students, and that most students have not conducted computerized research in a library in their home country" (p. 327). Patton (2002) stated that "using library specific technology such as online catalogue, electronic databases, microform reader/printers, and self-service photocopies ranked as the greatest anxiety producer both native English and Non-native Speaking English" (p. 32). McKenzie (1995) stated in his study that "a majority of international student did not have any experience using electronic databases, results showed the need for the library to provide more opportunities for the international student to become aware of and use some of the electronic materials that are available at Kent state university library" (p. 27).

Koehler & Swanson (1988) show that "ESL students, even those from within the US, have difficulty conducting library research, and that language, cultural, and social barriers experienced by international students result in an "overall lack of library skills" (p. 149). McKenzie (1995) stated that "at the University of Michigan, Ball & Mahoney reported on the efforts of academic library to increase awareness of the problems international students could have in the library. Helping students to become aware of the services the library has to offer was recommended by building a positive relationship between librarians and students" (p. 10). Since many countries do not have the resources to do independent research, instructions on how to do a research project is important.

2.6.6 Information literacy

Because of the existence of library and computer anxiety librarians should have offer bibliographic instruction sessions to enable students to efficiently use the library's resources. These sessions often included general orientations to the physical facilities the

details of using available resources, and an explanation of services offered. These difficulties may be compounded by limitations in their previous library experience, use of electronic resources and information literacy. Association of College & Research Libraries (ACRL) (2001) stated that "most librarians agree on the concepts they feel are necessary for students to master in order to be information literate: the ability to (a) effectively plan research, (b) to efficiently gather information, (c) to critically evaluate information and sources, (d) to properly use information, and (e) to ethically acknowledge sources."

2.6.7 Library orientation and introduction

Library orientation and guided tour can be helpful for internationals students to use the library effectively. To explain the need of library orientation program Liestman & Wu (1990) noted that success of a multi-language library orientation program that assists non-native speakers in using library resources effectively. Liu (1993) stated that "international students need a physical library tour early in their program, using native language speakers if possible, to avert initial anxiety" (p. 30). Boers (1994) suggested that "library education classes are the favourite solution for many libraries in the United States for the international students to use library effectively, he also recommended that library use instruction classed should be offered to international students fairly soon after their arrival" (p. 95).

2.6.8 Literature reviews on methodology used

In the past many researchers carried out several studies on challenges faced by international students in using the libraries in a foreign country in order to carry out their study. Liu (1993) stated that "previous related studied relied upon questionnaires as the primary means to discover what had been done to orient new foreign students to libraries" (p. 26). Goudy & Moushey (1984) used questionnaire method to conduct a survey of forty-four academic libraries to know the difficulty faced by foreign students in the United States (p. 217). In his case study research Lazarevic (2007) used qualitative methods, with the semi-structured interview as a data collecting instrument. The recorded interviews were transcribed and analysed. The results were validated by triangulation and member checking. Triangulation as a process of "corroborating evidence from different individuals' was applied both within the two populations and between the two populations" (p. 20). Marama (1998) used in his study the descriptive (survey) research method, specifically the

case study approach. He expressed that "the research instrument consisted of a questionnaire and interviews with a random sample of the international students. The questions probed the profiles of the students, services new to them, services they have benefited from, and difficulties encountered in using the library of Abubakar Tafa Balewa University library (ATBUL). One hundred and eight questionnaires were distributed and 103 (95.37%) were returned and analysed" (p. 92)."

The researcher reviewed the several articles related to this study and found that most of the articles are related to facing difficulties in using the library for international students in English speaking countries. But the researcher still thinks that it is valid to investigate these factors outside the English speaking domain.

Chapter 3

Research Design and Methodology

3.1   Introduction

This chapter discusses how the study was conducted and the method used to answer the research questions. It specifically explains the sampling, data collection, and how data analysis techniques are illustrated. In addition, ethical considerations and research limitations are also explained in this chapter.

3.2   Type of research: Qualitative approach

In social science research there are three different research approaches: qualitative, quantitative and mixed. Marvasti (2004) pointed that "on the most basic level, *quantitative research* involves the use of methodological techniques that represent the human experience in numerical categories, sometimes referred to as statistics. On the contrary, *qualitative research* provides detailed description and analysis of the quality, or the substance, of the human experience" (p.8). On the other hand, "*mixed methodology* combines the strengths of both qualitative and quantitative research, providing both an in-depth look at context, processes, and interactions and precise measurement of attitudes and outcomes" (Lodico, 2006, p. 282). Qualitative research is broadly defined, "any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification" (Strauss & Corbin, 1990, p. 17) and instead, the kind of research that produces findings arrived from real-world settings where the "phenomenon of interest unfold naturally" (Patton, 2001, p. 39). Corbin & Strauss (2008, p. 12) argued that "qualitative research allows researchers to get at the inner experience of participants, to determine how meanings are formed through and in culture, and to discover rather than test variables".

This research used a qualitative approach because the collection of in depth information about facing challenges of international students in using the electronic resources in the Oslo University College. As Myers (1997) specified, "Qualitative research methods are designed to help researchers understand people and the social and cultural

contexts within which they live." Moreover, in qualitative research studies researchers will have a chance to interpret and find out meanings from the collected data. In addition, this qualitative approach was taken because of the aim, objectives and the research questions in this study is not easily answered by any other research designs. Qualitative research will allow much 'richer' answers to questions put to the international students by the researcher, and may give valuable insights which might have been missed by any other method.

Therefore, in order to know the challenges of international students in using electronic resources in the Oslo University College, a qualitative research approach was initiated in this research.

3.3   Research strategy: Case study

In this research, case study is chosen as the research strategy. It is usually used when the researcher is attempting to understand the problems which exist in an organisation. Denscombe (2010, p. 56) pointed that "the case study approach generally calls for the researcher to make a choice from among a number of possible events, people, organizations, etc". Pickard (2007, p. 85) quoted Stake (2003) that qualitative case study is characterized by researchers spending extended time, on site, personally in contact with activities and operations of the case, reflecting, and revising meanings of what is going on". Gray (2004, p. 125) mentioned that "... case studies tend to focus on collecting up-to-date information. For this reason, data collection may involve the use of not only contemporary documentation, but also direct observation and systematic interviewing".

A qualitative case study research strategy is believed to be more appropriate in this study to investigate the challenges facing by international students in using electronic resources, because this study was focused on collecting data from one institution, in this case Oslo University College. Furthermore, the study is detailed and intensive.

3.4   Sampling technique

In any research the method of sampling used plays a major role. Sampling is used when it is not possible or practical to include the entire research population in any study.

"Sampling may be defined as the selection of some part of an aggregate or totality on the basis of which, a judgment or inference about the aggregate or totality is made. In other words, it is the process of obtaining information about an entire population by examining only a part of it" (Kothari, 2004:153).

Purposive, a non-probability technique used for sampling technique for this study, there are two approaches to purposive sampling: a priori criteria sampling and snowball sampling. According to Pickard (2007) "A priori criteria sampling is an approach which establishes a sample framework before the sampling begins, whereas the snowball sampling is an approach which takes an inductive approach to 'growing' the sample as the research progress" (p. 64).

The sampling technique for this study is purposive, a non-probability technique where 'units are deliberately selected to reflect particular features of the groups within the sampled population' (Ritchie & Lewis, 2003 p.78). Thus the sample was selected on the basis of criteria-based (purposive) sampling of the population, which is applicable as a first attempt at qualitative research and the research is restricted by time as supported by Pickard (2007, p. 64), and which allows the sample to include the most important characteristics of the group, while at the same time representing an element of diversity. The research population was to be made up of both Library and Information Science (LIS) and Non-LIS background international students; and students from countries closely culturally related to Norway and students from countries culturally distant from Norway.

3.5   Research population and sample

The population for this study was international students of Oslo University College, some of them have LIS background, and majority of the LIS population were from Master in Digital Library Learning (DILL) students, who are currently doing their Master thesis in OUC. DILL is a two-year Master programme in cooperation between Oslo University College, Norway; Tallinn University, Estonia and Parma University, Italy (http://dill.hio.no/). This Master program is funded by the European Union under Erasmus Mundus program.

The size of the sample becomes a prerequisite for timely completion of any social investigation. An optimum sample for a study may be defined as that sample which fulfils the requirements of the efficiency, representative, reliability and flexibility.

The total sample for this study was 28 International students. Out of total 28 informants the largest percentages 71% (20) of informants were from countries culturally distant from Norway (non-European countries), and 29% (8) were from countries closely culturally related to Norway (European countries) and out of total informants 9 (32%) have LIS background [7 Digital Library Learning (DILL) and 2 non DILL], and 19 (68%) non-LIS students; 11 (39%) male and 17 (61%) female students.

3.6   Method of data collection

Research methods are the tools for data collection. Denscombe (2010) pointed that "there are four main methods that social researchers can use: questionnaires, interviews, observation and documents" (p. 4). These are type of equipment that allows relevant data to be collected. In practice, certain methods tend to be associated with certain strategies. For instance, the use of a survey strategy is often linked with the use of questionnaires as the method for data collection. This is because the strategy and the method tend to work well together. The current research used interview method because it aimed to understand the experience of international students in using electronic resources in the OUC. Denscombe (2010) argued that "when the researcher needs to gain insights into things such as people's opinion, feelings, emotions and experiences, then interview will almost certainly provide a more suitable method" (p. 173). A qualitative interview occurs when researchers ask one or more participants general, open-ended questions and record their answers (Creswell 2008, p. 225).

3.6.1 Interview

Myers (1997) stated that "in a case study researcher uses interviews and documentary materials first and foremost, without using participant observation". An interview is a conversation between people in which one person has the role of researcher. A well conducted interview is a powerful tool for eliciting rich data on people's views, attitude and the meanings that underpin their lives and behaviours. As Pickard (2007) mentioned "an interview is a descriptive qualitative and an in-depth data collection

instrument. Interviews are used when the researcher is seeking qualitative, in-depth, descriptive data and when the nature of the data may be too complicated to be asked and answered easily" (p. 172).

The interview method involves questioning or discussing issues with people. Blaxler (2001) stated that "it can be a very useful technique for collecting data which would probably not be accessible using techniques such as observation or questionnaires" (p. 142). Defining the interview Cohen (2007, p. 351) cited (Cannell & Kahn 1968) that the research interview has been defined as ''a two-person conversation initiated by the interviewer for the specific purpose of obtaining research-relevant information, and focused by him on content specified by research objectives of systematic description, prediction, or explanation".

Stake (2010) pointed out that "the interview can serve a number of distinct purposes. First, to obtain unique information or interpretation held by the person interviewed. Secondly, to collects a numerical aggregation of information from many Persons. Thirdly, to finds out about "a thing" that the researchers were unable to observe themselves". Interviews are also useful where it is likely that people may enjoy talking about their work rather than filling in questionnaires" (p. 95). As Gray (2004) mentioned "an interview allows them an opportunity to reflect on events without having to commit them in writing, often because they feel the information may be confidential" (p. 214).

There are several different types of interviews. It could be structured, semi-structured or unstructured. So, the choice of interview technique will depend in large part on the aims and objectives of the research.

Structured Interview

Structure interview involve tight control over the format of the questions and answers. Myers & Newman (2007) stated that "in a structured interview there is a complete script that is prepared beforehand. There is no room for improvisation. This type of interview is often used in surveys where the interviews are not necessarily conducted by the researcher (p. 4). Pickard (2007) pointed that "a structured interview is a type of interview where the questions are pre-defined, and the interviewer is not free to change or alter the questions. It is sometimes referred to as "researchers administered questionnaire"

because it is highly structured. It could include open-ended or closed-ended questions" (p. 175).

Unstructured Interview

Unstructured interviews allow the interviewee to tell their own story in their words. Marvist (2004) stated that "unstructured interview also referred to as open ended interviews, they allow more fluid interaction between the researcher and the respondent." (p. 20). In this format, respondents are not forced to choose from a pre-designed range of answers; instead, they can elaborate on their statements and connect them with other matters of relevance

Semi-Structured Interview

Semi-structured interview are often used in qualitative analysis. The interviewer has a list of issues and questions to be covered, but the order of questions may also change depending on what direction the interview takes. Responses will be documented by note-taking or possibly by tape-recording the interview. Klandermans & Staggenbord (2002) stated that "Semi structured interview provide greater breadth and depth of information, the opportunity to discover the respondents experience and interpretation of reality, and access to peoples' ideas, thoughts, and memories in their own words rather than in the words of the researcher" (p. 92).

In this study the researcher used semi-structured face-to-face interviews as a method for the collection of data, because the researcher wanted to combine the two things, e.g. to verify some previous findings about difficulties in using the library by international students, which were included in the interview questions, and the researcher would also like to collect any suggestions and ideas of informants about their feelings and experiences. It was also assumed that the participants in the interview could bring up some issues which were not asked for in the questions, or could make a really good contribution due to their own experiences of how they face challenges in using electronic resources in the OUC . As Arksey & knight (1999) comments that "the use of semi-structured interviews also allows the researcher to 'probe' for more detailed responses where the respondent is asked to clarify what they have said" (p. 32). The interviews lasted approximately for 30-45 minutes and were recorded for transcription and analysis.

3.7   Pilot study

"The term 'pilot studies' refers to mini versions of a full-scale study (also called 'feasibility' studies), as well as the specific pre-testing of a particular research instrument such as a questionnaire or interview schedule. Pilot studies are a crucial element of a good study design. Conducting a pilot study does not guarantee success in the main study, but it does increase the likelihood of success" (van Teijlingen & Hundley, 2002, p. 33).

It is considered standard practice and advisable to conduct a pilot study before final study is attempted. Specifically, pre-test or pilot surveys can provide useful insight and information on the interview questions.

The Pilot study for this research was arranged with 4 students. The reasons for carrying out pilot study were twofold. *First*, to practice the art of interviewing and to test the recorder this would be used to record the final interviews for transcriptions. *Secondly*, to examine the interview questions whether the questions were understandable or not, and also to know if there any duplications occurred, or any addition needed in the interview questions. The populations involved in the pilot study had freedom to suggest anything they consider relevant in order to improve and properly understand the questions. After pilot study and a discussion with the thesis supervisor the interview questions were modified and the last version of the interview questions contained a total of 30 questions for the final interviews.

3.8   Data processing and analysis

The process of data analysis involves preparing the data for analysis, moving deeper and deeper into understanding the data, representing the data, and making an interpretation of the larger meaning of the data. The method for analyzing data was discourse analysis. In using discourse analysis Pickard (2007) stated that "this approach to analysing qualitative data relies on the assumption that human experience is shaped, transformed and understood through linguistic representation...the major concern with discourse analysis is to understand how individuals represent experiences in a shared form" (p. 241). Phillips and Hardy (2002) mentioned that "the aim of discourse analysis is to identify (some of) the multiple meaning assigned to texts, which means that more systematic, laboursaving forms of analysis (such as traditional content analysis) are

counterproductive because they aim at rapid consolidation of categories" (p. 74). In the "data analysis" section *(see chapter 4, section 4.3)* the researcher has chosen to quote the most significant utterances in unedited form and other utterances have been included in edited form as supportive evidence. All data gathered from respondents' interviews were transcribe as verbatim as possible to get the whole picture of what happened during the interview and thus minimize the chances of the analysis being biased. After transcribing all interviews the researchers tried to group or categorize of issues by inserting code in the text in relation to the research problems. Then all the statements were transferred and structured into a Microsoft Excel file under relevant categories. The categories of description consisted of 8 categories *(see 4.3.2)*. Codes were assigned to include the background information of respondents, which may play an important role in the data analysis. Chapter 4 presents the detail of this analysis. Several generic processes might be used that convey a sense of the overall activities of qualitative data analysis. The following generic steps involves in this research:
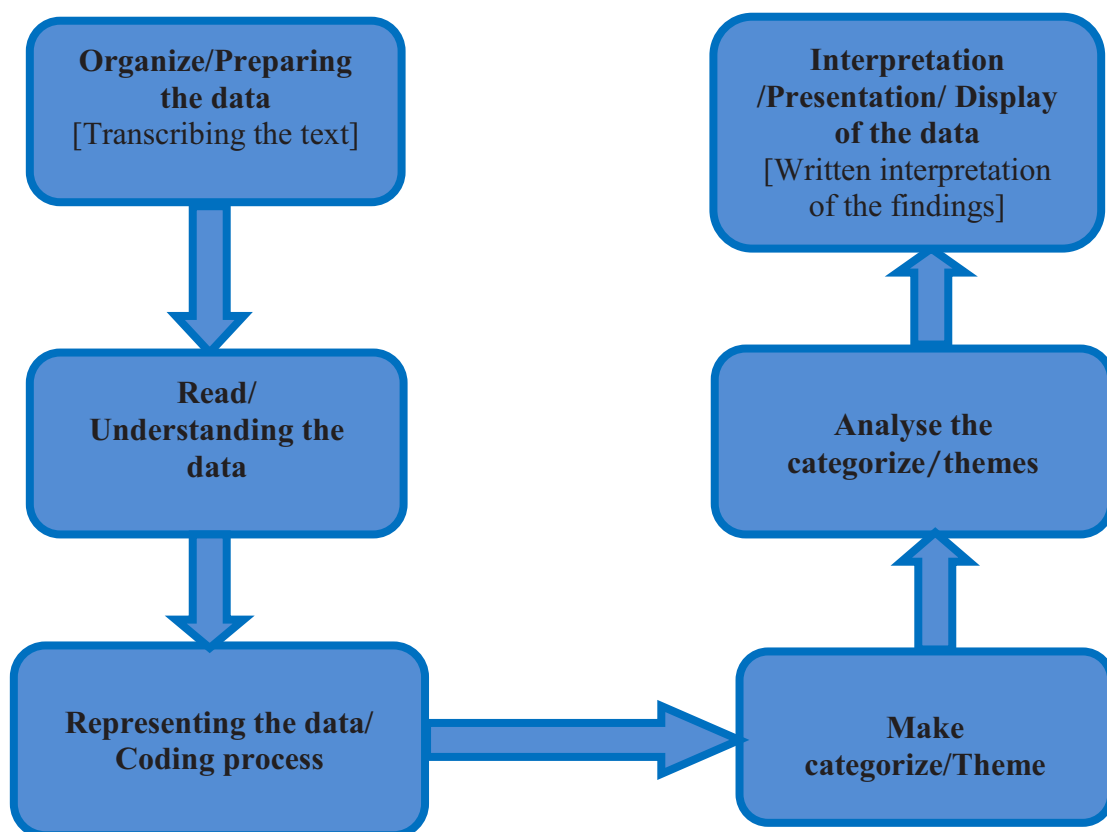
Fig. 3.1 Main stage of data analysis

3.8.1 Transcribing

All data gathered from respondents' interviews were transcribe as verbatim as possible to get the whole picture of what happened during the interview and thus minimize the chances of the analysis being biased. Maykut & Morehouse (1994) stated "that preparing a complete transcript from a recorded interview is especially important when interviews are a main source of data for a qualitative study" (p. 100).

3.8.2 Code the data

The further process of analyzing text in qualitative research begins by coding the data. Codes are tags or labels that are attached to the 'raw' data. Creswell (2008) mentioned that "coding is the process of segmenting and labelling text to form descriptions and broad themes in the data. The object of the coding process is to make sense out of text data, divide it into text or image segments, label the segments with codes, examine codes for overlap and redundancy, and collapse these codes into broad themes. Thus, this is an inductive process of narrowing data into few themes" (p. 251). In this study the researcher did code both significant background data, for instance the cultural distance or the educational background of the informants, which was coded with numeric codes and the researcher also attempted to code the utterances with keywords or labels expressing the view of the utterances.

3.8.3 Categorize/Theme

The next task was to identify categorize of description through repetitive process of immersion in data. Denscombe (2010) stated that "the categories act as an umbrella term under which a number of individual codes can be placed" (p. 285). These categorise/themes are the ones that appear as major findings in qualitative studies and are stated under separate headings in the findings sections of studies. Creswell (2003) stated that "in qualitative research use the coding to generate a small number of themes or categories, perhaps five to seven categories for a research study" (p. 193). The categories of description are an iterative process. In this research the categorize of description were started with some preconceived themes/categorise/issues based on research literature, after that the researcher read through the text and search for themes/categories/issues that recur

in the data. Thus the categories/themes/issues emerged from research literature and data (details in 4.3.2).

3.8.4   Reporting and interpretation

The primary form for representing and reporting findings in qualitative research was a narrative discussion. The most popular approach is to use a narrative passage to convey the findings of the analysis. Creswell (2008) mentioned that "a narrative discussion is a written passage in a qualitative study in which researcher summarize, in detail, the findings, form their data analysis" (p. 262). This might be a discussion that mentions a chronology of events, the detailed discussion of several themes (complete with sub-themes, specific illustrations, multiple perspectives from individuals, and quotations), or a discussion with interconnecting themes (Creswell, 2003, p. 194).

In this stage of data analysis process the researcher presents the report findings of the categorization in narrative form without recource to tabular or statistical presentation. The final step in data analysis involves making an interpretation or meaning of the data. Interpretation could also be a meaning derived from a comparison of the findings with information collected from the literature or extant theories. Creswell (2008) stated that "interpretation in qualitative research means that the researcher steps back and forms some larger meaning about the phenomenon based on personal views, comparisons with past studies, or both" (p. 264).

3.9   Verification and validity of data

Validity and reliability is an important key to effective research. Golafshani (2003) pointed that "although reliability and validity are treated separately in quantitative studies, these terms are not viewed separately in qualitative research. Instead, terminology that encompasses both, such as credibility, transferability, and trustworthiness is used" (p. 600). Patton (2002) stated that "validity and reliability are two factors which any qualitative researcher should be concerned about while designing a study, analysing results and judging the quality of the study".

Validity is used to suggest determining whether the findings are accurate from the standpoint of the researcher. Creswell (2008) suggested that "in qualitative research validity means that the researcher determines the accuracy or credibility of the findings

through strategies such as member checking or triangulation" (p. 266). Cohen (2007) cited Lincoln and Guba (1985) prefer to replace 'reliability' with terms such as 'credibility', 'neutrality', 'conformability', 'dependability', 'consistency', 'applicability', 'trustworthiness' and 'transferability', in particular the notion of 'dependability' (p. 148).

In this research for verification purpose, the researcher revisited the entire collection of data from interviews as many times as possible to cross-check for verify these evolving ideas. In order to achieve reliability at first the participants were presented the interview questions, and after that interviews were conducted to get more feedback on that open ended questions.

3.10   Ethical considerations

The main ethical considerations in this research were connected with conducting interviews. The researcher explained the purpose of the research and interview to all interviewees and all of the participants who took part in the research project were asked to seek their consent for recording their voice. All interviewees got the assurance that the information got from them will be used only for the thesis writing not for any other purposes, and their real names will be replaced with numbers.

3.11   Research limitations

In addition to the limitations that were mentioned in chapter 1, there are certain limitations related to the interpretation of the data and this dealt with English language, amount of data, the limitation of data collections, and the selection of informants.

- Lack of English language proficiency of the international students was a limitation of this research, because of language difficulties in the interview sessions for both parties to understand each other was time consuming and rigorous.

- In this research the data collection method was semi-structured questionnaire, this may be influencing the freedom of the respondents, they may have been influence by the order of the questions, by the formulation of the questions that might have restricted their freedom of opinion.

- The sample used for this study was relatively small. This was mainly due to time constraints of the Master thesis project.

Chapter 4

Data Analysis

4.1 Introduction

In examining the challenges to the use of electronic resources by international students at the Oslo University College, a total of twenty-eight participants were interviewed. This chapter attempts to describe and analyse the data gathered through the interviews and provide explanations of the findings in light of the previous research findings taken from Chapter 2 (literature review), and it starts by presenting some demographic information for the background of data about the informants to make the discussion easy to follow. It continues with categorize of descriptions and consequences of student's background.

4.2 Demographic information

The total sample for this study was 28 International students. Demographic information of the respondents in terms of regional e.g. students from countries closely culturally related to Norway (European students) and students from countries culturally Distant from Norway (Non-European); Library and Information Science (LIS) background and Non-LIS background students.

Out of total 28 informants the largest percentages 71% (20) of informants were from countries culturally distant from Norway (non-European), and 29% (8) were from countries closely culturally related to Norway (European countries) (see table 4.1 and figure 4.1) and out of total 28 informants 9 (32%) have LIS background [7 Digital Library Learning (DILL) and 2 non DILL], and 19 (68%) non-LIS students (see figure 4.2); 11 (39%) male and 17 (61%) female students (see figure 4.3).

From table 4.2 it is evident that the largest number of respondents were 15 (53%) between the age of 22-26 years old and the smallest number of respondents was 1 (4%) in the 40 years above, followed by, 10 (36%) informants found in the 27-39 years age group.
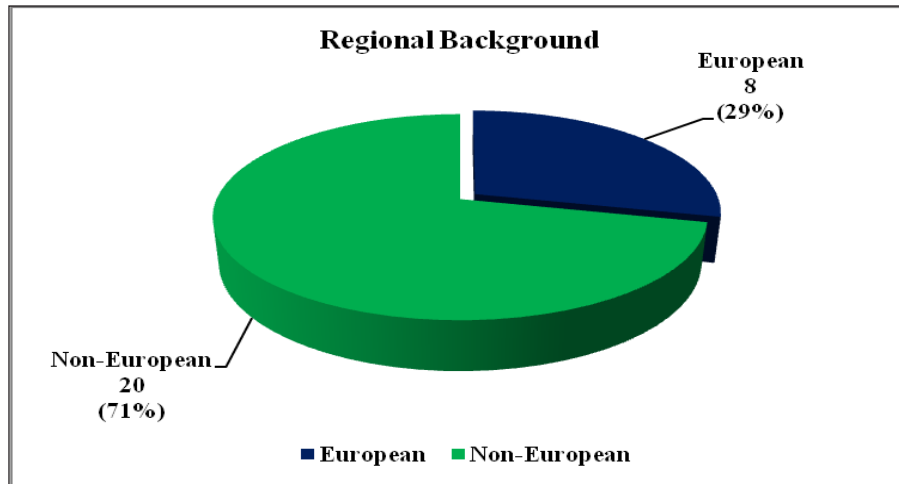
Fig. 4.1 Regional background of informants
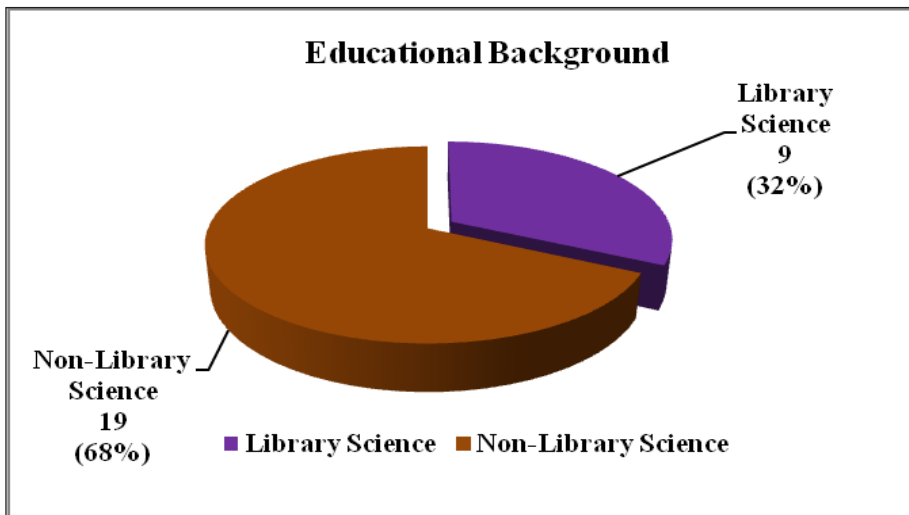
Fig. 4.2 Educational background of informants
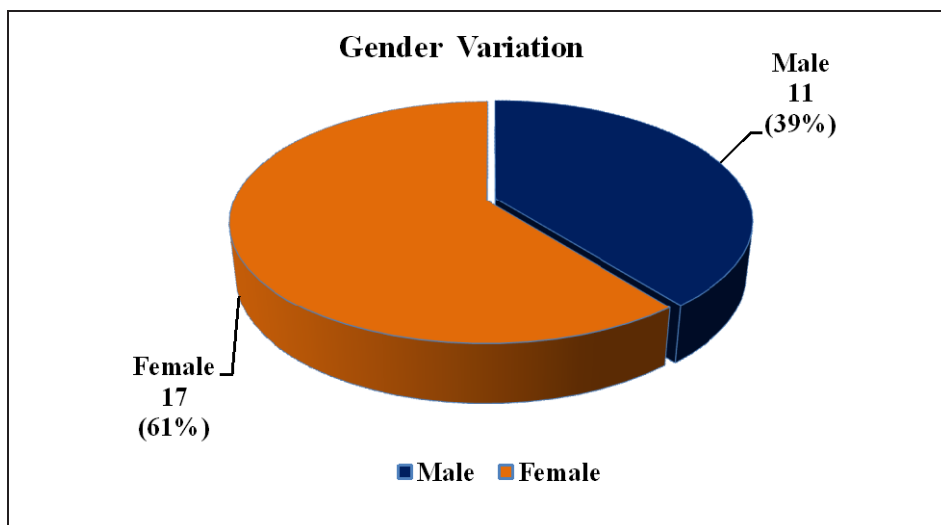
Fig. 4.3 Gender variation of informants

Table 4.1

Distribution of International students by Regional background

Native Country	frequency
Non-European (20)	
Bangladesh	1
China	7
Ethiopia	1
India	1
Indonesia	1
Nepal	2
Taiwan	1
Vietnam	2
Brazil	1
Sudan	2
Uganda	1
European (8)	
Austria	2
Belgium	1
Bulgaria	1
Denmark	1
Germany	1
Holland	1
Hungary	1
Total	28

Table 4.2

Distribution of International students by age

Age (in years)	frequency	%
Under 21	2	7%
22-26	15	53%
27-39	10	36%
40-above	1	4%
Total	28	100

English language proficiency

Lack of English language proficiency is the most significant barrier facing international students and has an impact on the resources they used and on their communication with library staff. Many international students appear to have fundamental communication problems. Although, students are required to meet English language competency test e.g. IELTS or TOEFL before being accepted onto the academic program in the OUC, they remain have lack of understanding the accent and unable to pronounce the word correctly. Several previous studies also have shown that language proficiency has on impact on their use of library resources and services. In order to determine their proficiency with the English language, the informants were asked to give a rating of their English language proficiency on a Likert scale of 1-5, where 1 is lowest and 5 is highest. Figure 4.4 shows that among the 28 participants 9 (32%) rate their proficiency of English as 3, on the other hand, 10 (35%) said 4, while, 1 (4%) said 5. The rest of the participants e.g. 7 (25%) and 1(4%) did not confine themselves to giving the rating 4 and 5, they indicate their proficiency of English as 3.5 and 4.5 respectively.
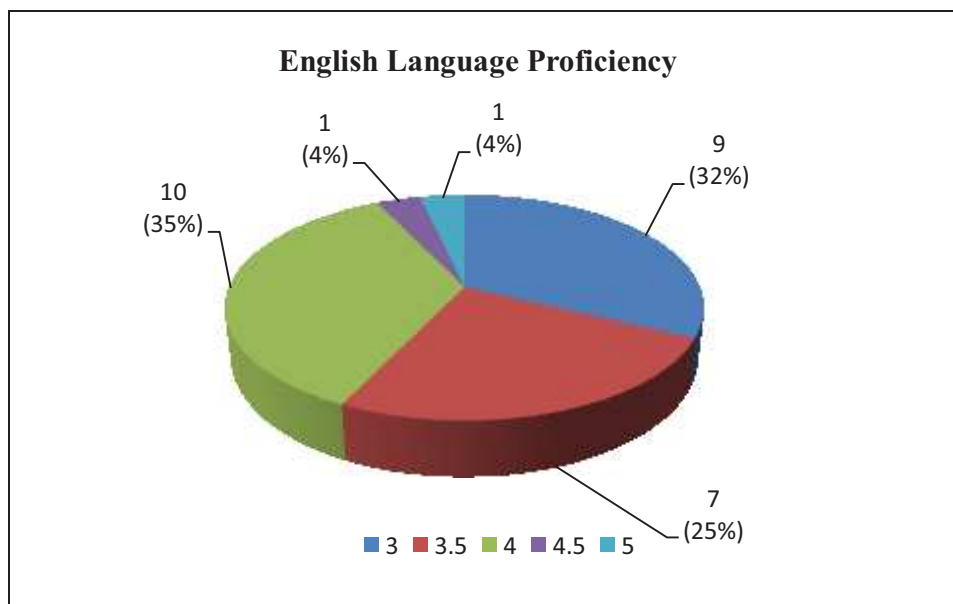
Fig. 4.4 English language proficiency

4.3   Data Analysis

According to the research questions the researcher analyzed data from 28 informants by discourse analysis method.

4.3.1 Understanding of electronic resources (ER)

The informants were asked about their understanding of the concept "electronic resources". The informants' responses indicated different understanding about electronic resources. A large portion of informants 20 (71%) understood electronic resources as a certain types of materials, 7 (25%) informants understood electronic resources as a certain types of access and rest of 1 (4%) informant understood that it is a certain type of equipment.

Electronic resources as certain types of materials

The majority (71%) of informants were of the opinion that electronic resources are certain types of materials. For instance, Informant # 24 said he understood that the electronic resources are the electronic books, electronic journals, which he can download and he can reach on computer. Similar expression noted by informant # 22 (from Indonesia), she mentioned:

> *"For me electronic resources is everything is in electronic format like video, DVD, e-journal, e-book, e-magazine, e-newspaper, e-thesis, e-dissertation, e-article everything in digital or electronic format, ohh...e-medicine may be".*

Electronic resources as access

Out of 28 informants 7 (25%) understood electronic resources as certain types of access. For instance, Informant # 4 (from Sudan) mentioned that according to his understanding electronic resources are all kinds of resources that he gets from the Internet. Informant # 28 (from Uganda) mentioned:

> *"May be electronic resources are those resources we access through the internet, it can also be trough the intranet, it can be compact disc, these offline*

databases like automated libraries where we don't have internet but we can still access".

Electronic resources as technical equipments

Regarding the understanding of electronic resources one informant (from Belgium) understood electronic resources as technical equipments. He mentioned that electronic resources are:

"Computer, music player, audiovisual player, MP3 player, phone everything is electronic that we use. If it is in terms of library or learning then computer databases look for information"

Though the informants' responses indicated different understandings of the concept "electronic resources", the researcher observed and found in this study that these different understandings of the concept "electronic resources" did not impact on informants' practical usage of electronic resources in the OUC learning center.

4.3.2 Categories of description

After having transcribed all interviews the researcher tried to group/categorize the issues by inserting codes in the text in relation to the research problems. The categories of description are arrived at through an iterative process. The categories of description were started with some preconceived themes/categorise/issues based on research literature, after that the researcher read through the text and search for themes/categories/issues that recur in the data. Thus the categories/themes/issues emerged from research literature and data. Some issues are general problems related to international students using the library as such and some issues are particular problems related to the international students' usage of electronic resources in libraries. There are also some issues which are differently expressed by several informants who have LIS background and some issues are substantiated as a particular problem for international students who came from a different cultural background and unknown library environment. In the interview findings some issues were raised because they were particularly asked for in the interviews and some are unexpected, raised by the informants on their own.

The researcher categorize the issues in 8 categories as: General categories (trivial issues related to library use); Difference in Library; Cultural Difference; Language Problem; User Training; User Interface; Unfamiliar Teaching/Learning Style; Access to Electronic Resources

4.3.2.1 Category 1: General categories (Trivial issues related to library uses)

The informants were asked to reflect their opinion about the challenges involved in using electronic resources in the Oslo University College learning center. The answers from the informants are grouped into various categories or issues and sub issues. There are also some issues which are particular to international students in general about using the library in order to pursue their studies. These are not major problems in the sense that these issues can be easily resolved by asking library staff or taking help from their friends. For instance:

Using self check machine;

Using automated photocopy machine;

Map for locating library materials;

Using FRONTER;

Online reservation problem

Log in Problems

These issues are not particularly challenging for international students, but they need to be able to master them in order to pursue their studies. Patton (2002) found in his study that international students encounter the same problem when studying in USA, he mentioned that "using library specific technology such as online catalogue, electronic databases, microform reader/printers, and self-service photocopies ranked as the greatest anxiety producer both native English and Non-native Speaking English" (p. 32). Based on the interviews, how informants feel about these issues in general are presented below.

Using automated photocopy and self check machine

It is found that the students were unfamiliar with technological equipment. Out of 28 informants 8 reported that they have not been using automated photocopy and self check machine before. Informant # 2 (from Sudan) stated that he did not know how to use automatic photocopy and self check machines, but he explain that after few days he learnt this. Informant # 5 (from Hungary) mentioned that "here is self check machine, which is I don't know how to use it. No one explain it to me." Regarding the uses to automated photocopy machine informant # 16 (from China) expressed, *"I cannot use photocopy machine, I learnt it by asking library staff."*

Jiao & Onwuegbuzie (1999b) stated "that students who are not comfortable in the library tend to have higher levels of library anxiety. ... mechanical barriers refers to feelings which emerge as results of student reliance on mechanical library equipment, including computer indexes, online facilities, computer printers, copy machines and change machines. Students who have difficulty using library technology tend to experience high anxiety levels" (p. 279).

This study has not investigated the anxiety level as a particular issue for the informants, but judging from the responses of the interviews there does not seem to be any anxiety connected with using electronic resources, even if they are inexperienced they seem to be mastering these issues after certain period of time.

Map for locating library materials

RFID-enabled system has given the facilities to modern technology based libraries for efficient tracking/locating library materials and identifies which shelf in the library they are on. But this system is new for some students. Informant # 5 (from Hungary) answered that "Figure/Map of locating the material is new here." Informant # 18 (from Holland) mentioned, "When I search I can see where my book is. At first I went to the wrong shelves and then come back, search again and found the right shelf. It is because of one kind of map."

Using FRONTER is new

The FRONTER open learning platform, used by OUC, is on the cutting edge of educational IT development, and used by students and teachers at many educational institutions. In this study it is found that this system is new to some students but after orientation with this system, they do not feel any problem. Two informants reported that they did not use this system before. Informant # 13 (from Austria) mentioned that in his home university he was not familiar with FRONTER, but it was not difficult for him to use, he could share and upload documents. Informant # 21 (from Nepal) indicated that:

> *"Here we use FRONTER for our study purpose. In my country such system is not available ... first time when we use FRONTER I face some problem to use it, because I was not familiar with this, but teachers teach us how to use this, so now no problem at all."*

Online reservation problem

Using online reservation system is the general problem for all students not particularly for international students. Using this systems library patrons can book/reserve library materials which have been loaned out or are currently on hold for someone. Usually this system is integrated with Automated Library Management Systems. But students who are not familiar before with this system in their previous educational institutions or not using the same systems feel problems at first when they attempt to get facilities from this. Out of 28 informants 9 mentioned that they did not have experience to use automated library services. Informant # 5 (from Hungary) stated that he did not have experience in using the online reservation system. Students coming from developing countries who did not have familiarity with this system before, feel a differences in library services between their previous institutions and OUC. Informant # 27 (from Bangladesh) mentioned:

> *"...my university still lacks offering ICT based services like barcode, online reservation which is very important, automated library system. So the difference here is mostly related to ICT."*

Log in problems

Technology is still not a common phenomenon in libraries throughout the world, so that many international students have little experience with computer in libraries and do not feel prepared to use libraries. Informant # 16 (from China) mentioned that "To use the computer in the library I did not know how to log in. I asked library staff and know it how to do that." Jacson (2005) mentioned in his study that "many surveys showed international students lack the necessary exposure to computers, especially to computers in libraries, to effectively utilize the growing online resources in the 21st Century academic university library" (p. 199). Informant # 26 (from Taiwan) indicated:

> *"... I have to say it is some kind of confusing at the beginning. There are two places to log in. So I was confused. There is one log in button in the top, I tried to use it but it did not work, then I figure it out how to solve."*

4.3.2.2 Category 2: Differences in libraries

Jackson (2005) stated that "students from other countries are accustomed to different library services and varying degrees of access to information…" (p.198). In this research the informants were asked to share their experiences on the differences between their home country libraries and the OUC library. Out of 28 informants 19 mentioned about the differences in libraries. The informants' answers were grouped into: organizational differences, usages/service levels and library environment.

Organizational differences: These differences are headed under different classification system and different library location.

Different classification system

During the usages of OUC library out of 28 informants 2 specifically mentioned that they were facing the problems to find the materials due to different classification systems. For instance, Informant # 5 mentioned that "the numbers which mark in the books are different". Likewise, Informant # 4 and Informant # 10 both faced the similar problem. Informant #4 said, the numbering system is difficult for him to search and find the books in shelves. It was also little bit confusing for him. Informant #10 said:

> *"In OUC Book number system are different from my home country library. Yah, each book has a code, but it is very hard to find the book in the shelve by using this code."*

Different library location

The informants had different experiences due to library placed in different locations. In some countries the students were used to use the library in one building, in OUC libraries are located in three different locations, which makes them dissatisfied. For instance, Informant # 9 (from Germany) mentioned that in German he had one library in his institution, here in OUC libraries are in 3 locations. In the other hand *Informant 14 (from China)* mentioned:

> *"In china my library is in one place, here library is in different places. I want to get the books from one place, I do not want to go other place to borrow the books.*

Usage (service level/self service): This difference include the sub-categorise as "forced to use the library" and "closed shelves":

Forced to use the library

Based on the informants responses it is found that the students were facing problems while they use the library in the OUC. It is observed that in their home country students usually depend on the library staff to find the materials from shelves and have it issued to them, but in OUC students are forced to use the library by themselves. For instance, Informant # 2 (from Sudan) mentioned that in OUC locating materials are difficult because in his country he depends on library staff, but here he has to do it by himself. A similar comment was expressed by Informant # 23 (from Ethiopia), he said in his country he has to take help from library staff to find the books but here in OUC there is self service, he has to go to shelf and find books by himself. The informants also reported that in their home country they are not heavily using the library for their study purpose. They bought books rather than borrowed from library. For instance, Informant # 3 (from Nepal) mentioned:

"In my country I did not have direct access to the book in the library. I depend on the person in my previous institution library but here, I have to do all the things. In my country Nepal teacher told us to buy the specific book and we buy and consult this book, here in OUC we are not dependent only few books, need to consult many books and forced to use the library."

It is not surprising that students were also confused first time in using the OUC library. It may be that initial unfamiliarity hindered their effective use of the library. For instance, Informant # 11 (from Bulgaria) indicated that at the beginning the OUC library was little bit tricky to him, he did not go for a week to the library, but when he forced to write his paper then he forced himself to go to the library and learnt how to use the OUC library.

Jiao & Onwuegbuzie (1999b) stated in their study that "students who are not comfortable in the library tend to have higher levels of library anxiety. "Knowledge of the library" refers to how familiar with the library students feel they are. ... Students who have difficulty using library technology tend to experience high anxiety levels" (p. 279).

Closed shelves

Based on the interviews out of 28 informants 3 mentioned that they did not have previous experiences to direct access to the shelves, which makes it problematic to use the OUC library for them. For instance, Informant # 3 (from Nepal) said:

"We did not have direct access to the book in the library in my country. Here the library is big and huge collections, it makes problems to me."

International students especially from developing countries are mostly familiar with using closed access libraries and to having materials brought to them by library staff, that is why they may need more help in developing themselves as independent learners, finding information for themselves from the shelves and in using self-service systems. Informant # 27 (from Bangladesh) mentioned that:

> *"In terms of shelving arrangement I would say it is closed. We have to depend on the staff to get a book, we have to wait sometimes getting that book, not like OUC go to shelve and see where the book is available in the shelve."*

Several studies also showed that many international students are unfamiliar with the open shelves in libraries. In a study Spanfelner (1991) asked to the international student to compare libraries in the United States with those in their own countries, he found that "one of the major differences was the concept of open shelves, and in their countries student must fill out forms to make a request to see the books" (p. 72). In this study the researcher also found similar comments from the informant. For instance, Informant # 27 (from Bangladesh) stated his experience that:

> *"In my university you have to find the classification number and write in a slip and give it to the staff they will bring the book for you if it is in the shelves."*

Unfamiliar digital library services/environment

Several studies also stated that the student, who comes to study in a foreign country, faced the problem of an unknown library environment and unfamiliarity with digital library services. Mehra & Bilal (2007) investigated Asian graduate students' perceptions and experiences in using various ICTs and the expressed "role of the library in the International Students' prior educational experience is that the participants had to physically visit the library holding an item of interest. Additional differences were: a. less frequent computer use and technology-related opportunities , b. lack of systematic training in using ICTs and library services for research, c. smaller collections and limited access to books (non circulating collections), d. less friendly library staff, e. availability of interfaces in native languages".

In this research the informants expressed their unfamiliarity or limited use of large-scale library databases and on line services in their home countries which makes it a problem for them to use the OUC library, For instance, Informant # 2 (from Sudan) mentioned:

> *"I faced problem to use library here in OUC, because in my country I don't have such experience to use automated library system."*

Ogunsola & Okusaga (2006) stated in this study that "the fact still remains that many countries especially the developing countries currently do not have e-mail, fax, telephone and computer based libraries services" (p. 224). In this research, Informant # 6 (from Brazil) said:

> *"I find a problem sometime to use the computer system here because I am not used to this system. So, I always look for someone help, I hardly use the computer system for searching book, when I need a book I bring the book from my friend and ask library people to issue me that book."*

The similar statement is found in the survey conducted by Goudy & Moushey (1984) they revealed that "foreign students do have significantly greater problems in using the library than do most native students particularly in using online catalogs, print indexes" (p. 224).

In a study Jacson (2005) also mentioned that "many surveys showed international students lack the necessary exposure to computers, especially to computers in libraries, to effectively utilize the growing online resources in the 21st Century academic university library" (p. 199). In this research for instance, Informant # 4 (from Sudan) mentioned that in Sudan library was easy for him, there was instructions in his own language how to borrow the books. There was no computerized system in his library. But here in OUC library is a little bit complex; he also mentioned "maybe this library was not familiar to me." Informant # 21 (from Nepal) mentioned the same problem, he said:

> *"In OUC in library everything is computerised, In Nepal my library was manual system. We borrow the books and give back but it was not using computerized system."*

Students from developing countries are not familiar with electronic databases, because, in many developing countries library does not have such facilities. For instance, Informant # 25 (from Vietnam) mentioned:

> *"In my country we don't have such experience on database, For example ebrary, we don't have too much database in my country, which makes me challenges to use."*

The similar findings revealed by McKenzie (1995) in his study he found that "a majority of international students did not have any experience using electronic databases..." (p. 27).

The students also expressed their unfamiliarity with automated library systems and online services. Allen (1993) surveyed of international students finds that "online databases and catalogs are new to international students, and that most students have not conducted computerized research in a library in their home country" (p. 327). For instance, in this study Informant # 28 (from Uganda) mentioned her unfamiliarity with the online library systems. She said that:

> *"We don't have digital library, we don't have online electronic resources like here, so there are different, totally different actually. In my home country the library is totally traditional."*

The students were sometimes unfamiliar with library circulation process. For instance, Informant # 5 (from Hungary) said, "...I issued one book but I don't know when to return this, they did not inform me when to return this." The similar experience commented by Informant # 20 (from china), she stated "they will send email to inform your loaned item, and they have three deadlines for return books. In china we don't get any email services from library to return the books." Informant # 28 (from Uganda) also mentioned:

> *"For return items they will remind you 2 times after 3 times you have to pay, that is different from my country Uganda."*

Wayman (1984) stated in his study that "their home libraries may have a non-circulating collection, which makes the idea of borrower responsibility a new concept, and international students may even be unfamiliar with the idea that loaned materials must be returned to the library without the library contacting the student to ask for them back" (p. 338).

4.3.2.3 Category 3: Cultural differences

International students encounter many problems adjusting to the new environment due to their different backgrounds. These differences influence their expectation of library services and their adjustment of the new academic, cultural and library environment. Several studies found that because of cultural problem students had lacked confidence to ask the librarian for assistance. In this research participants expressed their initial hesitancy and fear to speak with the library staff due to cultural factors. For instance, Informant # 1 (from India) mentioned:

> *"Due to cultural problem like me we are not habitude to ask much information to them."*

A similar problem was expressed by informant # 14 (from China), she mentioned "Chinese are shy to ask questions." Due to cultural differences student have various experience related to information seeking behaviour in the library. It is also found that in a new environment student from many countries cannot use the library effectively by asking many questions. Koehler & Swanson (1988) expressed in their study that "ESL students, even those from within the US, have difficulty conducting library research, and that language, cultural, and social barriers experienced by international students result in an "overall lack of library skills" (p. 149). For instance, in this study Informant # 25 (from Vietnam) mentioned:

> *"In terms of culture, first time I am worried because in my country if I ask many question to the library staff they said...ohh...what happened...what happened...they do not want to help us more." So, I was scare to ask question.*

4.3.2.4 Category 4: Language problems

Out of total 28 informants 24 mentioned that language difficulties are one of the major problems that international students faced on their use of library resources and services. This is not only related to general problems to international students but also connected in using the electronic resources in libraries. The students are always frustrated by the language barrier – due to the language problem they could not able to take the full

advantage of the library facilities. For instance, informant # 17 commented that: "Only I found the language problem to use the library".

This study shows that the language barrier affects the international students' library use in many ways, which include:

Communication problems;

Problems to fill in the forms;

Getting mail from libraries in local language;

Language problems in library webpage;

Language problems in BIBSYS;

Communication problem

Lack of English language proficiency is the most significant barrier facing international students and has an impact on the resources they used and on their communication with library staff. Out of 28 informants 8 mentioned that they have fundamental communication problem.

This study shows that the language barrier affects not only the students' information gathering skills but also their help seeking behaviours. For instance, informant # 24 (from Vietnam) commented:

> *"I think that the language is more problem with foreign students, For example, like me, in some time I want to ask the library staff to help but I cannot express my idea to the staff".*

A study conducted by Liu (1993) revealed the problems that "students from developing countries (mostly Asia) had in using American academic libraries. The study was conducted by interviewing fifty-four students at the University of California, Berkley, the study found that because of the language problem students had limited language skills and lacked confidence to ask the librarian for assistance" (p. 27). In this study informant # 25 (from Vietnam) mentioned that even though Norwegians are very good in English, but sometimes he could not express his ideas to them.

Natowitz (1995) stated that "if students are self-conscious about their English skills, they may avoid the library to avoid asking questions. Because of varying values related to information-seeking behaviour, international students may cloud the issue of what question they really want answered in an effort to seem less needy than they really are" (p. 7). In this study Informant # 28 (from Uganda) commented:

> "I use English language, but somehow it is a little problem to communicate due to accent, sometime they don't understand, then I have to repeat the questions".

Lack of proficiency in English can be a major concern for international students in their library use as it related to asking for and receiving assistance. Hughes (2010) cited McSwine (1995) that "Social, cultural and linguistic uncertainties may also hinder international students' interactions with library staff. Since international students frequently speak English as a second or additional language, they may be reluctant to ask questions due to lack of confidence or embarrassment in speaking English." For instance, in this study informant # 15 (from china) mentioned:

> "May be here the language problem, maybe we do not understand Norwegian and maybe we cannot speak English very well."

Problems to fill in the forms

Language problem is obviously a major difficulty for foreign students to make a full use of the library. In the OUC all library facilities are offered to students through the websites. Sometimes due to unavailability of an English version of various forms the international students can not avail themselves of the facilities. For instance, Informant # 22 (from Indonesia) commented:

> "I faced language problem when I booked AVM, the form is in Norwegian, for international students OUC should have such form in English."

A similar type of problem was faced by Informant # 25 (from Vietnam), she commented: "If you want to reserve the room, some of words are Norwegian, it is not good for International students." In the library website there is a form to seek appointment with librarian, but if it is not available in English then International student cannot get avail this

opportunity. For instance, Informant # 28 (from Uganda) said her experience that "There is a page for seeking help, but it is in Norwegian, you have to fill the questions and send this, you will not get the librarian if you did not filled up the form, I never filled, because it is in Norwegian languages, it is really challenge for international students."

Getting information/mail in Norwegian language

It is difficult for international students to cope up with the local language so quickly when they come to study in a non-English speaking country. The students expect to get all kinds of information and email from the library in English. But in this study two informants commented that they get the mail from the library in Norwegian language which they cannot understand. For instance, Informant # 13 (from Austria) expressed: "Sometimes in FRONTER we are getting mails which is Norwegian languages, and we cannot read it." Similar problem expressed by Informant # 17 (from China), she mentioned: "I did not get such training or introduction how to use library. May be they send email but most are in Norwegian, I expect if they send email in English language it is useful."

Language problems in library webpage

The English version library web site is an important gateway for international students to know and use of library resources and services effectively. It also serves as a web-based platform for virtual learning and interactive communication between the library and users. But this study shows that out of total 28 informants 11 expressed their difficulties about library webpage in using the electronic resources. For instance, Informant # 16 (from China) explained:

> *"Some part of the electronic resources and information in online is in Norwegian this is the problem to use electronic resources."*

Multilingual library webpage indicate international orientation of the educational institutions. But this study shows that international students faced the difficulties in using the OUC library website due to the language problem. For instance, Information # 1 (from India) mentioned:

"Norwegian is the language here, but as an international student when I sign up why it does not appear in English, why do I have to change the language when I look for information in the OUC web site?. One point I should mention this is language. Certain pages are in Norwegian and when I click in English something is disappear which are not similar with Norwegian page. The picture changed, format changed that is totally inconvenient."

A multilingual user interface is important for any educational institution if they want to provide services for foreign students. It is found that due to the languages difficulties international students did not get some facilities from the OUC. For instance, Informant # 6 (from Brazil) mentioned: "In some pages in website it is Norwegian. I wanted to know my printed quota, it always Norwegian. I cannot understand. So, I always ask staff to know that."

OUC have both English and Norwegian versions of library web page. But it is found that all information is not similar both in English and Norwegian page. For instance, Informant # 3 (from Nepal) commented:

"If you click in the English, everything is changed, so it is difficult to locate the materials, English pages are different from Norwegian pages."

Language problems in BIBSYS

BIBSYS library management system provides access to OUC library resources through multiple search capabilities, loan and ordering functions. But out of 28 informants 5 commented that they faced language problem while using BIBSYS system. For instance, Informant # 28 (from Uganda) mentioned:

"When I search BIBSYS sometimes the link it comes in a Norwegian and did not understand, so there is little bit problem, In BIBSYS the main point is language, we have to change in English, the searching inside if you want full text, it will give u another link and sometimes there are instruction may be in Norwegian may be you do not understand. So, sometimes I leave it and go to Google scholar".

A similar problem was faced by Informant # 26 (from Taiwan), she said: "In search result there should be option not to see the Norwegian books in search result. There should be a separate button to choose and see the results in English and Norwegian".

4.3.2.5 Category 5: User training

Because of the new environment international students need library orientation and training sessions for efficient use of the library's resources. This session may include general orientations to the physical facilities, the details of using available resources, and an explanation of services offered. It is found that the informants expressed problems regarding user training. In this study international students' problems related to user training included:

Problems to get information

International students need to enjoy library resources and services effectively equally with local students in order to continue their course of study. But due to unknown library environment international students need library orientation and training program to become familiar with the host institution library. Finding from the research indicates that out of 28 informants 20 did not get any training from OUC library. The informants feel the need to get such a training program to use the library effectively. For instance, Informant # 25 (from Vietnam) said:

> *"Training will help the student, if there is online guide it is better. It is better if the library has a video how to use the library in a good way, there should be online reference servicers and chatting."* Informant # 28 (from Uganda) also expressed the same: *"We need user training. How to search those databases? How to search library catalogue?."*

Boers (1994) suggested that "library education classes are the favourite solution for many libraries in the United States for the international students to use library effectively, he also recommended that library use instruction classed should be offered to international students fairly soon after their arrival" (p. 95).

This research also shows that out of 28 informants 20 mentioned that they did not get any training program. Of them 20 informants, 9 did not know if there were any training program is available or not. For instance, Informant # 9 (from Germany) mentioned: "I did not get any orientation program. Even I did not know there is any". Similar experience expressed by Informant # 27 (from Bangladesh), he mentioned: "I do not know whether they have such program or not. I would say they can make it by department wise, when the semester starts." Informant # 1 mentioned:

> "*For me it is not well circulated. I mean if they have e-alerting system for this program it would be benefited for students*".

Information overload

One informant, who gets the training program arranged by the OUC library, said that the training session was too much informative and theoretical based. They feel for practical training sessions for using the library and electronic resources properly. For instance, Informant # 6 mentioned:

> "*It is too much information for 2 hours class. I want if we have practical, not only show us PPT. May be if it is 3 times, but not theoretically but practical.*"

4.3.2.6 Category 6: User Interface

Library web page or user interface connects the user to the library and library services such as searching the catalog, providing access to databases, electronic reference services, and electronic circulation services. Findings from this research it is indicated that out of 28 informants 23 mentioned that they faced problems using the user interface. The problems related to user interface are grouped into *understanding the interface* and *usages issues*. This problem is not only general problem related to students, but it is a particular problem to international students and in related to the actual fact of using electronic resources.

Understanding the interface

Thong, Hong & Tam (2002) stated that "a well-designed user interface can help users to use the system more easily by reducing the effort to identify a particular object on the screen" (p. 219). Of these 23 informants who expressed they faced problem in library website, 1 informant expressed concerns about the font problem, 5 mentioned that the library icon is unknown; moreover 3 personally felt that this interface is not user friendly. For instance, Informant # 11 (from Bulgaria) said the font is small, it is not eligible to read, the interface needs more colourful and graphics, colour makes a page both attractive and usable. Informant # 19 (from China) expressed:

"More graphical interface needed, I like colourful ... I prefer graphical it is more user friendly. First time I did not find the right place where to log in. I think still they need to organize the architecture for the website, it should be user friendly".

Informant # 27 (from Bangladesh) noted that the Interface is full of information, it is hazy and very complex, the content should be divided into some categories, this is not a user friendly interface. Informant # 20 (from China) expressed:

"The logo in the main page is a logo of library. It is something like book, maybe it is so small, but I think sometimes the word library is more direct than the logo, because student have to recognize what the icon is?".

Usages issue

The interface is an important part in every system because this is the part where the user directly interacts with the system and utilizes services offered by the system. The library should provide different functionalities and services to the users so that users can easily find information according to their educational and research needs. Bao (2000, p. 195) stated that "library home page represents a new platform for the delivery of library services, providing first level access to library resources through links will determine the visibility of a library and will affect the effectiveness use of the library's resources." In this study it is found that the informants faced several problems using the interface, such

as: *problems related to navigation; no user instructions; databases are not well organized; no home button on BIBSYS; searching problem in BIBSYS.*

Navigation problem

Navigation systems in library web pages are very competent and significant tools for the usage of the services by users. In a webpage a well designed navigation systems allow users quickly access to right information. Much research related to user studies on the web advocate that users expect to find information while using the easiest and fastest way. In this study out of 28 informants 7 expressed their problems regarding the navigation of interface. For instance, informant # 9 (from Germany) expressed that OUC library user interface navigation system is very bad, when you search in the system you never get back, it is not navigated well. Informant # 10 (from China) also mentioned that if any one click on the English button the page goes to the main page, not staying in the current page. Informant # 11 (from Bulgaria) mentioned:

"Pages always go to Norwegian, if you click to English it is different page"

Lack of instructions

In this research it is found that out of 28 informants 8 expressed their problems regarding the lack of instructions and said that there is no instructions available in the webpage how to use it and what kind of databases are available in the interface. For instance, Informant # 16 (from China) said OUC library interface is very simple design, there should be need more instructions for international students. Similarly, Informant # 19 (from China) also mentioned:

"May be in home page if there any short of introduction available about how to use it and what kind of database they have, then it would be very easy to find the places, where I can log in, where I can search the database".

Informant # 25 (from Vietnam) expressed that international students use different language, different culture, perhaps a web-based tutorial on how to access and use electronic resources should be placed on the library page, there should be available online reference services and chatting too.

Unorganized databases

Through library interface OUC offers to access a lot of educational sources such as: e-articles, e-journals, e-books, databases depending upon the scenario on which users are searching materials. The informants expressed that the database are not well organized and it is not user friendly to look at. For instance, Informant # 28 (from Uganda) mentioned:

"When you look for databases in alphabetic order and if you click on any alphabet e.g C, you expect that it will start to appear C but it will comes with A—Z, so, it does not work as mentioned, so you have to scroll down to go specific alphabet".

No home button and search problems in BIBSYS

This study shows that international students faced the problem navigating from the BIBSYS pages to the main library page. And they also encountered the search problems in using online library catalog BIBSYS. For instance, Informant # 10 (from China) mentioned when using online library catalog BIBSYS, she cannot come back from that page to the main library page, because there is no home button to back to main library page. The similar problems expressed by Informant # 22 (from Indonesia), she mentioned that when she was searching something in online library catalog BIBSYS, after seeing the search results she wanted to come back to the library main page but she could not, because there was no home button to came back. Similarly, Informant # 23 (from Ethiopia) mentioned:

"Sometimes may not be able to return home when you search online catalogue".

The online library catalog BIBSYS has simple and advanced searches with Boolean search facilities. In this study it is found that Informants faced problem using search system of BIBSYS. Informant # 11 (from Bulgaria) mentioned he did not understand about the search boxes because there was no explanation about the use of such search boxes. Informant # 25 (from Uganda) also mentioned that the BIBSYS search system was so complicated, there is simple and advance search system, but was not easy to use. Informant # 27 (from Bangladesh) expressed the similar problem, he said:

"The BIBSYS is not that user's friendly service so far. They might offer a Google shape search system, categorize services like emerald, when you search emerald you found journals articles, relevant, then books then recommended things".

4.3.2.7 Category 7: Unfamiliar teaching or Learning style

Educational system differences can be a major issue for international students. Education systems throughout the world differ from country to country where the student's role is more observational or imitative. In many countries, the predominant teaching method is lecture and recitation. Due to unfamiliar teaching/learning style students faced problems in using the electronic resources in the OUC learning center. This study shows that out of 28 informants 18 mentioned they were not familiar with the OUC teaching/learning style, which affect them in using electronic resources in the OUC learning center in many ways, which may includes: *Forced to use electronic resources; Forced to make a choice between resources; Lack of searching strategy; No experiences before searching electronic resources.*

Forced to use electronic resources

This study shows that due to different teaching styles out of 28 informants 9 mentioned that they were not familiar with using electronic resources to carry out their course of study. They usually depend on lectures notes and referred books, they do not usually go to the library, as a result when they come to the OUC as a foreign student they feel difficulties to cope with the new teaching style and use of library resources. For instance, informant # 1 (from India) mentioned, in India the professors gave the articles to the student which were taught in the class and the student copied and read those, but here in OUC he has to find the articles by himself which were taught in the class. The informants also reported that they had not previously used a library for study simply because they had not needed to, or in their home country limited library use was often associated with approaches to their learning style, which were teacher-centred and textbook-based. Informant # 3 (from Nepal) stated:

"In my country Nepal we hardly use to go to the library, there was not enough resources for us and teacher told us to buy the specific book and we buy and consult this book, but here student are not depended only few book, they have

to consult many books and e-resources. Furthermore, teacher gave us the notes and we copied this. But here are totally differences, teacher want to get involved us to knowledge process".

Macdonald & Sarkodie-Mensah (1988) stated that "many international students previously learned by lecture and recitation by the teacher; thus it was unnecessary to do research in the library for their studies. Students coming from a wide diversity of culture have had different experience with libraries in their home countries" (p. 426). In a study Bilal (1988) reaffirms Wayman's (1984) conclusion that students from developing countries still rely on lecture notes and textbooks, Library research was not emphasized (as cited in Boers, 1994, p. 93).

Informant # 20 (from China) stated that she rarely used electronic resource in her previous university in China, she usually used more paper books, but here in the OUC she used both paper and electronic resources. In their previous education system the students used only the printed book, so they face the problem to use the e-resources. Informant # 22 (from Indonesia) indicated that:

> *"My previous education system or teaching method was different from here. In my previous education we used a lot of printed material for our course because that time e-resource still limited but here we use almost in e-material. I have difficulty to use learning centre and e-resources here but then I asked my friends, library staff and staff in learning centre how to use, how to find the resources and e-resources then I can did it nicely now".*

Informant # 23 (from Ethiopia) stated that in his country he mostly depend on some books, he went to library to find the printed books as suggested by teacher, but when he come here in the OUC he found that teacher gives him some reference to consult, he forced to go to the library to check online resources, thus he felt the differences in teaching style from his country with the OUC. In a study Hughes (2005) stated that "International students need to adjust to new styles of teaching, learning and assessment, which often involve a shift from teacher-centred models of instruction based on authorised texts to more self-directed learning that draws on virtually unlimited print and online information sources" (p. 170).

Forced to make a choice between resources

Out of 28 informants 3 expressed that they faced problem to select the materials from their search result due to unfamiliarity of learning style. They did not have such experience in their home country. For instance, Informant # 1 (from India) expressed that in his home country he searched specific articles given by professor and most of the time he searched and downloaded this interested articles, but here it was not similar to his previous learning style, he faced information overload especially when he searched e-resources in the library. A similar experience was stated by Informant # 16 (from China), she mentioned there are so many choices electronic resources. A similar experience was faced by Informant # 17 (from China), she expressed:

> *"I do not know how to select, which is more suitable for me ... it is a problem*
> *of my own, I have to choose which is more suitable".*

Lack of searching strategy

This study shows that informants did not possess searching skills due to very limited use of electronic resources in their previous education. For instance, Informant # 9 (from Germany) mentioned:

> *"When I am searching I got a lot but I am not quite sure which I am searching*
> *I got it. May be I did not search properly which I look for".*

No experience before in searching electronic resources

McKenzie (1995) stated in his study that "a majority of international student did not have any experience using electronic databases, results showed the need for the library to provide more opportunities for the international student to become aware of and use some of the electronic materials ..." (p. 27). In this research out of 28 informants 8 mentioned that they did not have experiences before in using electronic resources in their home countries. For instance, informant # 2 (from Sudan) said:

> *"In my country I don't have such experience to use automated library system,*
> *and I did not know how to search electronic resources".*

Informant # 21 (from Nepal) mentioned he was not familiar with this system, so his teacher and friends in hostel teach him how to use these resources. A Similar comment was stated by Informant # 24 (from Vietnam), he mentioned that when he used electronic resources for the first time here in OUC, he did not know the navigation function of website, even he did not know how to reserve and order the books in library. Informant # 25 (from Uganda) mentioned:

> *"In my country we don't have such experience on database, For example* **ebrary***, we don't have too much database in my country, which makes me challenges to use the resources".*

4.3.2.8 Category 8: Access to electronic resources

This study sought to identify the problems that international students faced with the physical aspect of accessing electronic resources in the OUC. These problems are not particularly related to international students, these are general problems related to all students in using electronic resources. However, it is found that Out of 28 informants 18 expressed they faced several problems with access to electronic resources in the OUC, such as: *Problems to set up VPN; Problems to access from outside campus; Problems to access full text.*

Problems to set up VPN

To get access to the OUC electronic resources from outside the campus, students need to set up Virtual Private Network (VPN) in their PC or laptop. 3 informants said that they faced difficulties to set up VPN in their home computers. For instance, Informant # 1 (from India) said that it was not easy to set up VPN, he tried twice to set up but he failed and then he gave up. Similarly, Informant # 10 (from China) expressed:

> *"From home you need to install VPN, it is not oky all the time, it is unstable".*

Informant # 11 (from Bulgaria) mentioned that he has problem to access electronic resources from home, he tried to installed VPN but he could not able to do that, after then he always access from campus if he need something.

Problems to access from outside campus

Apart from the problems of setting up VPN 8 informants faced problem to access electronic resources from outside campus. For instance, Informant # 9 (from Germany) mentioned she had problem to access electronic resources from home, she did not know how to access. Similar comments expressed by Informant 14 (from China), she mentioned:

> *"At home I only face problems, I want to read e-books but I cannot. My User*
> *ID and password does not work. I don't know why".*

Problem to access full text

In this study it is found that out of 28 informants 7 expressed that they faced problem to access full text. For instance, Informant # 27 (from Bangladesh) mentioned that he found 20 articles related to his research topic, but he could not able to download half of them due to the articles ask for purchase, he also noted that he tried to downloaded from Springer but OUC does not purchase Springer, so he could not get full text from Springer. Similar problem faced by Informant # 28 (from Uganda) she mentioned:

> *"I got some articles, but of course the experience was not that nice because*
> *when searching did not find the full text then go through HiO, I have to order*
> *for that article, the articles takes long, it is frustrating actually".*

4.4   Consequences of student background

Among the total sample of 28 International students, 9 (32%) have Library and Information Science (LIS)   background [7 Digital Library Learning (DILL) and 2 non-DILL], and 19 (68%) non-LIS background students and on the other hand, 8 (29%) were from countries closely culturally related to Norway (European students) and 20 (71%) were from countries culturally distant from Norway (Non-European students), and 11(39%) male and 17 (61%) female students.

This study shows that there are some particular issues that have been identified problems for international students which are related to some background factors. For instance, some issues may be general being an international students independent of background but some issues may be a particular problem to these who do not possess an LIS background. Similarly, there are also couple of issues that have identified as particular problem for international students which was related to regional background and where there may be a difference between those were from countries closely culturally related to Norway e.g European countries students, and on the other hand, students who were from countries culturally distant from Norway e.g Non-European countries students. Those issues related to students' background factors are discussed below:

Informants from countries closely culturally related to Norway

Difference in libraries

Though, all European library environments, system and services are similar to the OUC library. The OUC library environment, system and services are not a significant problem to students from countries closely culturally related to Norway (European countries students). For instance, Informant # 7 (from Denmark) mentioned that she is familiar with the environment, facilities and systems of the OUC library, because in Denmark she was familiar with such system. She did not feel any problem to use the library in the OUC. Another Informant # 18 (from Holland) mentioned:

> *"The OUC library is quite similar to my home university library, we also have the same label, alphabetic order and categories of books, we also have the learning spaces and the computers ... all services are similar we have also the self scanner, also the compute you can search books. I think we also have like drop box for return books".*

Cultural differences

Informant # 11 (from Bulgaria) said though his home country is in Eastern Europe but he was quite familiar with the cultural aspects in Norway. So, he did not feel any cultural problem in using the library in the OUC. A similar comment was expressed by informant # 9 (from Germany), she mentioned that Norwegian culture is

same with Germany, so she did not feel any problem in using the OUC library and communicate with library staff.

Language problems

Out of 8 Informants who were from countries closely culturally related to Norway, 4 expressed that they did not face any language problem to use the OUC library. For instance, Informant # 7 (from Denmark) mentioned language is not a problem to her to use the library because she knows little Norwegian language. The similar expression mentioned by Informant # 11 (from Bulgaria), he commented that:

"I did not feel any language problem, because I use English and I know little bit Norwegian".

But, rest of the 4 informants mentioned they faced the language problems in relation to library website, online library catalogue BIBSYS and for study purpose. For instance, informant # 18 (from Holland) mentioned:

"When I was in my home country sometimes I had difficulties to find the faculty, but also because it was sometimes switching to Norwegian again, and I wanted to translate in English and it went wrong."

One informant each faced language problem while they using BIBSYS and conduct their study. For instance, Informant # 18 (from Holland) mentioned:

"A little bit problems regarding language, maybe I could select language while using BIBSYS."

Informant # 9 (from Germany) mentioned:

"...at home I studied in German, not really difficult for me, here it is really difficult to find in German books all are in English".

Unfamiliar teaching or Learning Style

Unfamiliar teaching/learning style can be a major issue for international students. But, out of 8 informants from countries closely culturally related to Norway, The 5

informants which mentioned this issue, all expressed that they did not have any problems with teaching and learning style in the OUC. For instance, Informant # 7 (from Denmark) mentioned that the teaching style is not different from OUC to her country. Another informant # 12 (from Austria) mentioned:

> *"No. I did not found any difference in teaching style, and for using the library*
> *it not makes any problem".*

Informants from countries culturally distant from Norway

Difference in libraries

Out of total 28 informants 19 International students coming from countries culturally distant from Norway mentioned that they found the OUC library systems and services are differences from their home country libraries. For instance, Informant # 20 (from China) mentioned:

> *"Yes, the library is difference. I use very little electronic resources in previous*
> *university in china, but I now use more library service which is specially the*
> *electronic resources in OUC, In chine we use more paper books in library here*
> *we use both paper books and electronic resources. I think people work in OUC*
> *library is more friendly and warm, you can return the books in drop box*
> *outside the library even the library is closed, they send email to inform your*
> *loaned item is expired, and they have three deadlines for return books. In china*
> *we don't get any email services from library to return the books".*

Another informant # 25 from Vietnam mentioned that there are big difference between her university library and OUC library system, she said here in OUC everything is automatic, everything she has to do by herself, here is online catalog, she can reserve book online, check out and return book by herself. Here is computer and internet connection available for study. But in her home country's library she did not have such facilities.

Cultural differences

Due to cultural differences informants from countries culturally distant from Norway faced the problems to ask questions and seeking help from library staff. Informant # 2

(from Sudan) mentioned that in his country library staff will be arrogant when the students asked many questions to the library staff, they do not care about the user needs. Thus, due to different cultural background he feels problem to ask question to the library staff of OUC. Another informant # 24 (from Vietnam) mentioned:

> "Culture may be the little problem because the Norwegian people sometime very strict, so I am afraid to ask the staff".

Language problems

Language problem also impact on the students from counties culturally distant from Norway. Out of total 28 informants 20 students in this group mentioned that language is a major problem to use the library and to communicate with the library staff. Of these 20, 8 informants expressed that due to language difficulties they faced communication problem. For instance, One informant from China mentioned she did not know Norwegian language, at first when she asked something about problems to access computer, the staff answered in Norwegian language, but when she said them, she did not know Norwegian then they communicated with her in English, so she feel little bit shy to go to them again to ask for help (informant # 10).

8 Informants mentioned that when they use the library interface they faced language problem because there are two versions of library interface one is Norwegian and another one is in English, but the informants mentioned that the Norwegian interface and the English interface does not contain the similar information. For instance, informant # 23 (from Ethiopia) mentioned:

> *"When we use the electronic resources we have to go to the website, sometimes website does not directly go to the English page, you need to translate this. It makes problem sometimes. Norwegian website and English translation looks different".*

4 informants mentioned they faced the language difficulties while using the online library catalogue BIBSYS. Informant # 28 from Uganda mentioned:

> *"When I search BIBSYS sometimes the link it comes in a Norwegian and I did not understand, so there is little bit problems in using BIBSYS".*

Unfamiliar teaching or Learning style

Unfamiliar teaching or learning style can be a major issue for international students from countries culturally distant from Norway. Out of total 28 informants 18 faced this problem and all fall within this group of students. For instance, Informant # 2 (from Sudan) mentioned that he found the teaching style is different here in the OUC compare to his home country institutions. In his home country teacher gave him lecture, he has to take notes and revise and prepare for exams. But here in the OUC teacher gave lectures and gave a reference list, he has to consult with books and journals and search in electronic resources and downloaded related materials by himself. Another Informant # 23 (from Ethiopia) mentioned:

"In my country we mostly depend on some books, go to library and find the printed books. When we came here we found teacher gives us the reference to consult, and I must to go to the library and check online resources, so I mean that it makes differences. I was not much expose to use such technology in my country so it makes challenges first time to me".

Informants from library and information science (LIS) educational background

User training

Among total 28 informants 9 (32%) have LIS educational background. Regarding the needs of training to use the electronic resources efficiently, both LIS and Non-LIS educational background students mentioned that they need training for using electronic resources in the OUC library. Though, LIS background informants were relatively experience and knowledgeable library user but they were expressed that they still need more or less training for using the electronic resources in the OUC library. For instance, One LIS background Informant # 22 from Indonesia was expressed that when she came first time at OUC, she wanted to know how to access electronic resources, because she did not know how to access to the OUC e-resources, she expected for short training. Another Informant # 25 (from Vietnam) also mentioned that though she is a librarian, she did not need very formal orientation or training, she just need guidelines, if there was any online guides it could be better for her.

Another LIS background student informant # 28 (from Uganda) mentioned regarding the needs of training, she said:

"Yes, that [user training] is the most important thing actually, they should teach us how to use search, for instance use OR, AND. I am a student of DILL but I may not know all those things. I asked myself for training. This is personal appointed not with others".

The findings of the study revealed the challenges faced by international students in using electronic resources in the OUC learning center. It also discovered some general problems in relation to international students to use the libraries in general, (for instance, different classification system, different library location, closed shelves, no experience using automated library before, not using automated photocopy machine and self check machine before, problems related to login and using FRONTER) and of course some substantial problems which were particularly problematic to international students in connection with the use of electronic resources in the OUC learning center, (which includes: Cultural differences; Language barrier; Lack of training; Problems in user Interface; Unfamiliar teaching or learning style). It is also found in this study that some of the barriers were problematic to the informants for a while, but through asking for help from the library staff or their friends, they resolved them. So, these were not serious problems that need any intervention. But some of the major problems were found to demand intervention from the learning center.

From the findings, valuable information has been obtained about what the international students felt towards electronic resources. It also revealed their actual needs and their expectations for using electronic resources and as well as to use the OUC library. This study also identified how these needs might be met. In addition, in this study it is found that students from countries closely culturally related to Norway are familiar or apt with library environment and teaching style than students from countries culturally distant from Norway. It is significant that library anxiety or barriers with staff from the results of the interviews were absent.

Chapter 5

Discussion and Recommendations

5.1   Introduction

The main purpose of this study, as stated in the first chapter is to investigate the challenges faced by international students in using electronic resources at OUC learning centre. This research used qualitative methods to collect the relevant data. Semi-structured interviews were conducted to gather qualitative data. This chapter integrates the analysis of the interviews as presented in Chapter 4. Then the chapter discusses some of the challenges encountered by the international students and also discusses the findings related to the research questions of this study. Then it provides some recommendations based on the findings of this study and concludes by implications for further research.

5.2   Discussion of findings

The research was undertaken to find the answer to the research questions: what were the challenges international students experienced in relation to use of electronic resources in Oslo University College Learning Center?. These challenges which were found in this study had been reported in detail in chapter 4.

In this study that the researcher found some general problems related to international students about using the libraries in general, and of course some substantial problems which were particularly problematic to international students in connection to using the electronic resources in the OUC learning center. In this study the informants expressed that some of the issues were problematic to the informants for a while and they asked for help from the library staff or their friends and then they resolved it. So, these were not serious problems that need any intervention. But some of the major problems which call for the action by the learning center.

5.2.1 Easily resolvable barriers

In this study it is found that the international students experienced lot of issues which were problematic in general about using the library. They faced these categories of problems for a while, but through asking for help of the library staff or their friends, they resolved them. So, these are not issues that need big intervention from the learning center. Such problems are, for instance, *different classification system, different library location, closed shelves, no experience using automated library before, not using automated photocopy machine and self check machine before, problems related to login and using FRONTER.*

2 informants out of 28 mentioned that due to different classification system while finding the books in the shelves in the OUC library they faced problem initially, but after getting familiarity with the classification system in the OUC library they did not feel such problem anymore. Out of 28 informants 2 expressed that in their home country there was only one library in their previous institution but here OUC library is in three locations, they said sometimes they had to go to different places to borrow books, which makes them dissatisfied.

3 informants mentioned that they did not have previous experience to direct access to the shelves, because in their home countries they were used to closed access libraries and to having materials brought to them by library staff, but it was problematic to use the OUC library for them initially and they seek help from staff to overcome this problem. Out of 28 informants 9 mentioned that they did not have experience to use automated library services and were not familiar with borrowing books with shelf check machines, conducting online catalog search, using automated photocopy machines because previous institution libraries in their home country were traditional, which makes problem initially to use the OUC library. These problems they resolved by asking library staff and by getting help from their fellow students. Out of 28 informants 4 from countries closely culturally related to Norway mentioned that they were familiar with the different library management system but it was similar with OUC, so after all it was not a problem to them.

The findings of this study revealed that the informants felt problem regarding the use of FRONTER and login with the computer system and electronic databases.

6 informants out of total 28 mentioned that initially they faced the login problem but by asking for help from the library staff they solved this problem, another 2 informants specifically mentioned that in their home country they did not use FRONTER for their study purpose, but when they got training from their teacher, how to use it, they were familiar with this system.

5.2.2 Major barriers

Some of the barriers that being an international students faced in connection with using electronic resources in the OUC Learning Center may be considered major barriers. These barriers are, for instance: *Cultural differences; Language barriers; Lack of training; Problems in user Interface; Unfamiliar teaching/learning style.*

One of the barriers experienced by the international students has been cultural differences that have made it difficult for them to adjust to the new environment. Students coming from a wide diversity of cultures have had different experience with libraries in their home countries. Cultural diversity prevents international students from admitting they need help until they are desperate. In this study it is found that out of total 28 informants 5 expressed that they felt cultural differences in new library environment which prevent them often to ask questions for getting help.

It is found in the study that language difficulties were a significant barrier for the international students and had an impact on the resources they used and on their communication with staff. Out of total 28 informants 8 mentioned that they faced problem due to poor accent and lack of English language proficiency which sometimes made communication difficulties with library staff.

If international students do not have facilities to attend library orientation program or library training program, they are putting themselves at a disadvantage as they try to take in academically into a new education and library system. The findings of this study revealed that majority of the respondents felt, library training or library orientation program is needed for better use of library and electronic resources in the OUC learning center. Out of 28 informants, 20 mentioned that they did not receive any training from the OUC learning center on how to use the library or how to search and use electronic databases. Of them 20, 9 did not know if there were any training

program available or not, and 4 informants expressed that it is necessary to better circulated information about the library training program. They also expressed that if they had attended library orientation program or training program then they could use the library and electronic resources effectively and efficiently.

OUC learning center website is a portal for its information to users. All of the OUC digital services and resources are presented through the learning center website. If a web page or interface is not capable of satisfying its users, then it will not be able to be successful in the long run. The findings of this study revealed that regarding the user interface of OUC learning centre, international students expressed that using interface they encountered several difficulties, which are: *Language problems; Unknown icon; Navigation problem; No instructions available in the interface.*

A Multilingual user interface is important for any educational institution if they want to provide services for foreign students. But, in this study it is found that out of total 28 informants, 11 faced the difficulties in using OUC library website due to the language problems. There are two versions of library interface one is Norwegian and the other one is in English, but the informants mentioned that the Norwegian interface and the English interface does not contain similar information, when they click in English some information disappear and it is not similar with the Norwegian page, the picture has changed and the format also changed.

BIBSYS is a library management system which provides access to the OUC library resources through multiple search capabilities: loan, ordering and online reservation functions. From this study it is appeared that out of total 28 informants 5 mentioned language problem while they were using online library catalog BIBSYS. The informants mentioned when they searched BIBSYS sometimes the results comes in Norwegian language and they did not understand. In this study it is also found that out of total 28 informants 7 mentioned about navigation problems in BIBSYS. They mentioned that when they searched in BIBSYS they could not able to come back on the main page because there is no home button. The informants also indicated that the learning center web page is not a well navigated system, the pages always goes to Norwegian page, when click to English it shows the different information. They also expressed that there is an alphabetic list of databases in the library interface but these are not well organized, if

clicked on any alphabet it always starts from A-Z, it needs scroll down to go desired databases. It is not user friendly at all, they mentioned.

Library instruction has been the most beneficial service to the international students. The maximum usefulness of the electronic resources would be ensured by providing instructions in the library Web page, where it should be indicated how to search and use the electronic resources. In this study it is found that out of 28 informants 8 expressed that there are no instructions available in the webpage how to use it and what kinds of database are available in the interface.

In this study it is found that most of the international students came from countries (particularly from Asia and Africa) where the primary method of teaching instructions were lecture based and so-called 'spoon-feeding' or teacher centred style of learning environment, where teachers usually delivered the lecture and gave the notes to the students and students copied and revise this and prepare for exams, they did not consult more books and electronic resources. But in the OUC the study programs seem to place greater emphasis on critical thinking, more involvement in classroom discussions, group work and students are expected to be able to discuss and voice their opinions, and learn to be independent in their quest for knowledge. Teachers want to get them involved in the knowledge generation process. 18 out of total 28 informants mentioned that they faced difficulties with unfamiliar teaching or learning style, which makes it problematic to them to use electronic resources. So, the findings of this study revealed that due to unfamiliar teaching or learning style many informants felt the several difficulties, such as: forced to use electronic resources; lack of experience/no experience using electronic resources before; forced to make a choice between resources. Out of 28 informants 9 mentioned that they were forced to use electronic resources, followed by 8 informants who mentioned that they did not have previous experiences using electronic resources. They also mentioned that they were forced to make a choice between resources, though they have lack of experience. Of the 8 informants who were from countries closely culturally related to Norway, the five who mentioned anything about teaching style, all mentioned that they were experienced with similar teaching style.

5.3   Findings related to the research questions

The main objective of this research study was to find out the challenges faced by international students in using electronic resources in the OUC learning center. This led to some more specific research questions. Below is a brief discussion of the findings related to these research questions.

The first question in this research relates to the challenges in using electronic resources by international students of Oslo University College.

In this study it is found that it is not the case that being an international student was a big problem in using electronic resources and the library systems. It rather seems as if students who come from different educational and cultural background, have such problems. Of course the language problem is shared by anyone who did not have solid foundation in the English language, as long as the resources has not available in English for their national educational system, that is pertaining to any international students. But most of the other barriers are rather related to the students coming from a different educational culture, library culture, technological culture, than to the fact that they are international students.

The second research question relates to the possible improvements and extension to the way the OUC provides access to electronic resources.

Oslo University College learning center has a number of electronic resources and databases that helps students, teachers and the researcher in their academic and research purposes. All these electronic resources are presented through the website of the OUC. In this study it is found that international students have commented on some specific problems regarding of the way the OUC provides access to electronic resources that is related to the user interface of OUC learning center. Basing on the informants comments the researcher has tried to provide some specify recommendations (see 5.4.2) to overcome such problems.

5.4   Consequences for the learning center

5.4.1 Barriers which call for action by the learning center

It is found in the study that international students encountered some barriers using electronic resources in the OUC learning center, which needs intervention by the learning center. Such kinds of barriers are: *Language barriers; User interface; Accessibility to Electronic Resources and Cultural differences.*

Language barriers

In this research it is found that apart from the communication problem in English the language barriers also affects the international students in using electronic resources in many ways: for instance, with regards to user interface; various kinds of forms.

- The findings of the study revealed that due to language problem in user interface informants encountered problem in using electronic resources. The learning center should make sure that the international students do not get confused in Norwegian and English screen.

- It is found in this study that several informants mentioned various forms are in Norwegian language, so that they encountered problems to fill up these forms. The learning centre should take necessary steps to solve this problem.

User Interface

Problems pertaining to user interface necessary action should be taken by the learning center:

- The findings of this study revealed that informants got confused with an icon like "book" after clicking on it, this redirect user to go to the OUC learning center interface.

- In this study informants expressed that the alphabetical list of databases are not well organized.

Accessibility

Several problems and constraints encountered by the informants in accessing electronic resources. The leaning center should take action related to these problems:

- The learning center should make sure that in user interface there should be a short introduction available on how to use electronic resources and what kind of database OUC have, where international students can search the database.

- Out of total 20 informants 9 mentioned that they did not know about the library training program in order to improve their expertise how to use the libraries and how to use electronic databases, and 4 informants also expressed that it is necessary to better circulated about the library training program.

- Two informants mentioned that they get email from learning center in Norwegian language, which they could not understand.

- One informant mentioned that power point presentation in library training session was not effective at all, they need practical instead of power point presentation. They also mentioned that one lecture was not enough, they need 2/3 lectures in beginning and in the middle of the semester.

- This study revealed that international students had lack of experience in using electronic resources. They were forced to make a choice between electronic resources.

Cultural differences

In this study it is found that because of the cultural differences, international students did not feel comfortable for asking assistance from library staff. Cultural differences also emerged as a pedagogical problem for the international students to conduct their study in the OUC. The learning center should take action to solve such difficulties.

- Once the library staff has an appreciation of the cultural differences, they can comprehend the students behaviour and use the opportunity to educate international

students about library use and policy. Library staff members may allow their cultural bias to hinder their service to students who do not speak perfect English.

- It is found that cultural differences also emerged as a pedagogical problem for the international students to conduct their study in the OUC. The teachers, OUC and learning center administrators are professionally responsible to make adaptations to help international students (especially students from Asia and Africa) to cope with these paradoxes of unfamiliar teaching/learning style, and to equip them with adequate knowledge of academic discourses.

5.4.2 Recommendations

Having reviewed the literature and taking into account the results from the interviews, there are some recommendations. The aim of these recommendations is to suggest means of avoiding problems to the uses of electronic resources by international students in the OUC learning center and would make a positive contribution to the international students' experience of the OUC learning center.

Overcoming cultural barriers

- Cultural diversity workshops for the library staff would be necessary in order to provide the tools needed for interaction with a varied community of users.

- Cultural differences also appeared as a pedagogical problem for the international students to conduct their study in the OUC. In the OUC the study programs seem to place greater emphasis on critical thinking, and students are expected to be able to discuss and voice their opinions, and learn to be independent in their quest for knowledge. International students especially students from countries culturally distant from Norway felt a bit lost in the beginning and realising that they can no longer depend on the teacher to spoon-feed them like before. They need to learn how to study by themselves, find and use of electronic resources. It is recommended that the teachers, learning center and OUC administrators will take the responsibility as professionally to make adaptations to help international students (especially students from Asia and Africa) to deal with with these paradoxes of unfamiliar teaching/learning style, and to furnish them with adequate knowledge of academic discourses.

Overcoming language barriers

- To develop the library web pages and make sure that both English and Norwegian versions of web page are compatible, so that the international students do not get confused in Norwegian and English screen.

- It is recommended that all kind of forms, for instance, with regard to reserve audio-visual materials; book a librarian and book a group room for discussion should be available in English language.

Overcoming training barriers

- It was clear from the results of the interviews that international students were often unable to make effective use of the electronic resources which are available as they lacked the necessary skills how to use and search electronic resources. It is recommended that effective library training sessions are vitally important in helping international students to feel comfortable in the library environment for enhancing their learning experience and in helping them to succeed in an academic environment that may be very different to what they are used to. Moreover, Web-based training can be an effective training tool for international students to use electronic resources in the OUC.

- It is recommended that consideration should be given to tailoring the training sessions specifically for international students who came from countries culturally distance from Norway (particularly students from Asia and Africa).

- The method of providing training program should be changed. Practical training is needed instead of power point presentations. It is recommended that the training program should be arranged 2/3 times in beginning and in the middle of the semester.

- OUC Learning center need to make special efforts to provide training information to the international students. All international students should be informed in plenty of time ahead of training courses. This should be done by e-mail in English.

- It is recommended that OUC learning center should evaluate their training program by getting feedback from the international students and about their effectiveness and the extent to which the training objectives were met.

Overcoming user interface problems

- To provide a user-friendly website for international students, it is recommended to conduct a usability test and follow the guidelines provided by the ISO, IBM and Microsoft, so that standard can be achieved for interface design and it will cover the naturalness feature of innovation.

- There should be proper online guides/instructions for both international and local students at the OUC library interface for searching resources in different databases and these guidelines/instructions should be visible to them to get benefit from the OUC electronic resources.

- The findings of this study revealed that informants got confused with an icon like "book". After clicking on this, it redirect user to go to the OUC learning center interface. It is recommended that this icon should be replaced with a suitable link like "*Library*".

- It is recommended that there should be an option to online chat with librarian 24/7.

Overcoming information literacy barriers

- In order to improve library provision for international students, the library should name a liaison librarian to work closely with the International Office and provide the library with necessary information about the incoming international students. Workshops, short courses and discussions on issues relating to library provision for international students should be available to the library staff and especially the teaching group of liaison librarians.

- When the international students first arrive in the OUC campus, a letter of welcome from the library could be inserted into the orientation folders along with brief introduction of the OUC Learning Center and contact address of liaison librarian.

- Library should conduct users' survey to know the usage of e-resources and the needs of the international students and include more electronic resources in various disciplines based on the users' survey.

5.5   Implications for further research

There are many possible implications for further study.

It would be interesting to conduct further study by taking and considering not only international students but also Norwegian students to get more deep and complete information about the challenges using OUC learning centre and to know the differences the challenges that faced by both international and Norwegian students.

Further research would be interesting to look at the barriers in using electronic resources in different groups of international students in the OUC to know whether their educational and cultural background would change the barriers in using electronic resources.

In this study some informants talked about difficulties with the interface or difficulties with the retrieval systems, so further study can be conducted to look at the usability testing for the OUC user interface and also to conduct an in-depth investigation on information retrieval behaviour.

This study employed interview method to explore the extent of which international students faced challenges in using electronic resources. Further study could be carried out by supplementing the current data set with the comments/interview of the OUC library staff. This will provide library staff perceptions about international students' problems in using electronic resources as well as the library in the OUC.

One of the uncertainties in connection with this study was that it was very difficult for the researcher to say which of the observed problems were connected to the fact that the objects were international students, how much to the fact that the object of study were electronic resources and how much was this result of general problems with any kind of library services or any kind of study materials or any kind of student of different experiences of this studies. So, further research can be done to make an investigation whether the challenges the researcher observed were the same with the different group of

students, e.g. Norwegian students or students from one country. So, more focus questions or more distinctively different user groups will be one possible way of further study.

It was not investigated in this study how the international students behaved in relation to the problems, so how much it was a question of the system being problem or how much the question of their idea of the system. How they will perform when they tell the researcher that they have difficulties is another thing that might be interesting to investigate further.

5.6   Concluding remarks

This study examined the challenges faced by international students in using electronic resources in the OUC learning center. It also discovered some general problems related to international students in using the libraries in general and of course some substantial problems which were particularly problematic for international students in connection to use the electronic resources in the OUC learning center. It is also found in this study that some of the barriers were problematic to the informants for a while and they asked for help from the library staff or their friends and then they resolved it, and some of the major problems which call for the action by the learning center.

It is significant that there were no indications of library anxiety or barriers with staff from the results of the interviews. The students overwhelmingly confirmed that they were happy with the assistance of library staff and they were comfortable with using the 24/7 computer availability, printing and drop box facilities to return borrowed items.

Finally, it is hoped that the results of this study would be useful to the OUC learning center administration in particular and OUC administration in general to take necessary actions to increase the usefulness of the library resources to the international students. It is recommended that the learning center needs to be proactive in addressing the problems of the international students in order to provide the learning centers' support required for them to successfully pursue their studies.

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Appendix

Appendix 1

Interview questions for International students

1. What is your home country?

2. Are you a student in undergraduate or postgraduate or other?

3. Which Gender you are?

4. Are you Full time or Part-time student?

5. Which age group do you belong to?

    21 years and under;   22-26 years;   27-39 years;   40- above years

6. Which faculty/department do you belong to?

7. What is your (native) language?   How would you judge your English language proficiency?
    (Lowest)   1   2   3   4   5 (Highest)

8. Did you use computers in the library before coming to OUC?

9. What is your understanding about electronic resources?

10. Did you have any previous experience to use electronic resources in your home country?

11. What type of sources do you look for your need in OUC Library/Learning Centre?

E-Books	☐	E-Journals	☐
ODA (DSpace)	☐	BIBSYS (Online catalogue)	☐
e-thesis	☐	Multidisciplinary Database	☐
e-encyclopaedia	☐	Any other.....................	

12. When was the last time you use the electronic resources in OUC Library/Learning Centre?

13. What was your experience that time?

14. Do you feel library services in OUC are different from your previous institution library in your home country?

15. Do you think previous library experience in your home country makes any problems to use OUC Library/Learning Centre, especially for electronic resources?

16. Do you think your previous education system or teaching method was different from OUC, which makes problem to use OUC Library/Learning Centre, especially for e-resources?

17. Do you feel linguistic and cultural aspect impact on you to ask for help for using electronic resources in OUC Library/Learning Centre?

18. Do you face any problem to accessed electronic resources from campus or hostel?

19. Have you found any difficulties for searching & reserve the materials in online library catalogue (BIBSYS)?

20. Do you feel there is no much instruction in the Library/Learning Centre website which makes problems to you for using/searching electronic resources in OUC Library/Learning Centre?

21. How about the library website/interface of OUC Library/Learning Centre?

22. Do you feel computer anxiety/lack of computer using experience makes any problem to search and use electronic resources in OUC Library/Learning Centre?

23. Did you ever feel that you need help while you are using the electronic resources in the OUC Library/Learning Centre?

24. Do you think user training or library orientation program needs for better using the electronic resources in OUC Library/Learning Centre?

25. Are there any sort of E-resources/databases you would like to access, but it is not available in OUC Library/Learning Centre?

26. Are you satisfied with the overall library services in the OUC Library/Learning Centre, especially electronic resources?

27. Are you satisfied with the staff assistance you get in the Library/Learning Centre?

28. Make comments on most positive aspect(s)

29. Make comments on most negative aspect(s)

30. Do you want to share any other problems/experience you faced to use OUC library, especially electronic resources?

Thank you very much for your time and participation.