INFORMATION NEEDS AND BEHAVIOUR OF HUMANITIES SCHOLARS IN AN ICT-ENRICHED ENVIRONMENT IN JORDAN

MOHAMMAD KHALED ISSA AL SHBOUL

FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY UNIVERSITY OF MALAYA KUALA LUMPUR

2016

INFORMATION NEEDS AND BEHAVIOUR OF HUMANITIES SCHOLARS IN AN ICT-ENRICHED ENVIRONMENT IN JORDAN

MOHAMMAD KHALED ISSA AL SHBOUL

THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY
UNIVERSITY OF MALAYA
KUALA LUMPUR

2016

UNIVERSITY OF MALAYA
ORIGINAL LITERARY WORK DECLARATION

Name of Candidate: Mohammad Khaled Issa Al Shboul

Matric No: WHA 070016

Name of Degree: Doctor of Philosophy

Title of Project Paper/Research Report/Dissertation/Thesis ("this Work"):

Information Needs and Behaviour of Humanities Scholars in an ICT-Enriched Environment in Jordan

Field of Study: Information Sources and Services

I do solemnly and sincerely declare that:

(1) I am the sole author/writer of this Work;
(2) This Work is original;
(3) Any use of any work in which copyright exists was done by way of fair dealing and for permitted purposes and any excerpt or extract from, or reference to or reproduction of any copyright work has been disclosed expressly and sufficiently and the title of the Work and its authorship have been acknowledged in this Work;
(4) I do not have any actual knowledge nor do I ought reasonably to know that the making of this work constitutes an infringement of any copyright work;
(5) I hereby assign all and every rights in the copyright to this Work to the University of Malaya ("UM"), who henceforth shall be owner of the copyright in this Work and that any reproduction or use in any form or by any means whatsoever is prohibited without the written consent of UM having been first had and obtained;
(6) I am fully aware that if in the course of making this Work I have infringed any copyright whether intentionally or otherwise, I may be subject to legal action or any other action as may be determined by UM.

Candidate's Signature   Date:

Subscribed and solemnly declared before,

Witness's Signature   Date:

Name:

Designation:

ABSTRACT

This study investigates information needs and behaviour of humanities scholars in an ICT-enriched environment in Jordan. The study was conducted at Yarmouk University, Jordan, one of the developing nations in the Middle East. Previous researches show that humanities scholars have a significant negative relation with ICT use although they demonstrate significantly higher use of library facilities compared to other academicians. There is also a lack of up-to-date research on information behaviour of humanities scholars that considers the recent rapid increase of ICT infrastructure and the emerging digital environment. Hence, the objectives of this study are to (a) understand the information needs and behaviour of humanities scholars in an ICT-enriched environment, (b) ascertain their information needs and information tasks, (c) identify the barriers they encountered, and (d) investigate the relationship between demographics information and information-seeking processes. The ultimate objective is to produce a model of information behaviour applicable to humanities scholars in the Arab nation. The conceptual model is based on integration of five models of information-seeking behaviour - Ellis, Kuhlthau, Wilson, Niedźwiedzka and Foster, with additional attributes representing the information context such as languages, decision to seek and format of information resources. The mixed-method approach was used where the qualitative approach involves face-to-face interviews with 26 scholars. A "*factious, specific, concrete representations of target users*", known as *Persona* was used as the analysis method. For the quantitative approach, 280 humanities scholars were sampled in questionnaires survey where the descriptive, t-tests and chi-square statistics were used for analysis. The finding indicated that the humanities scholars have passive seeking behaviour which was triggered by information events. They also had different level of awareness regarding the availability of information sources and services in their areas of interest. In addition, the scholars had different motivations to

seek information that could be determined by the use of appropriate format and understandable language. The junior scholars made an increasing use of digital resources while the senior scholars preferred printed materials and informal resources but give attention to digital resources. On the active information-seeking behavior, the humanities scholars had variant decision of information-seeking depending on their computer literacy, types and format of information needs. Furthermore, while they had different priority list on exploring, accessing, categorizing and purifying of information, their satisfaction was the same in all cases. The findings also showed barriers of library resources, university environment and personality had influenced their information-seeking and they reacted accordingly based on their experience and computer literacy. Simultaneously, while they were satisfied with the university library resources and services, they were not satisfied with the Centre of Excellence. Lastly, demographic data such as age, academic position, academic qualification and years of experience that differentiated between the senior and junior scholars showed significant correlation with types of information need and format. This study has provided a clear picture about the reality of humanities scholars' information needs and behavior. This information is pertinent in providing excellent resources and services to reduce the barriers in information-seeking and to optimize the satisfaction level of the library users especially the electronic resources.

ABSTRAK

Penyelidikan ini mengkaji keperluan dan tingkah laku maklumat para ilmuan Sains Kemanusiaan dalam persekitaran Teknologi Maklumat dan Komunikasi di Jordan. Penyelidikan ini telah dijalankan di Universiti Yarmouk, Jordan, salah satu dari negara-negara membangun di Timur Tengah. Penyelidikan terdahulu menunjukkan yang para ilmuan Sains Kemanusiaan mempunyai hubungan negatif yang ketara dalam penggunaan Teknologi Maklumat dan Komunikasi walaupun mereka menunjukkan penggunaan kemudahan perpustakaan yang lebih tinggi berbanding para ilmuan bidang lain. Terdapat juga kekurangan penyelidikan terkini terhadap tingkah laku para ilmuan Sains Kemanusiaan yang mengambil kira peningkatan pesat terkini dalam infrastruktur Teknologi Maklumat dan Komunikasi dan kemunculan persekitaran digital. Justeru, objektif kajian ini adalah untuk (a) memahami keperluan maklumat dan tingkah laku para ilmuan Sains Kemanusiaan dalam persekitaran Teknologi Maklumat dan Komunikasi, (b) memastikan keperluan maklumat dan tugas maklumat, (c) mengenal pasti halangan-halangan yang dihadapi, dan (d) mengkaji hubungan antara maklumat demografi dan proses mencari maklumat. Objektif utama adalah bagi menghasilkan satu model maklumat tingkah laku yang boleh digunakan bagi para ilmuan Sains Kemanusiaan di negara Arab. Model konsep adalah berdasarkan integrasi lima model tingkah laku pencarian maklumat iaitu Ellis, Kuhlthau, Wilson, Niedźwiedzka dan Foster, dengan elemen tambahan baru yang mewakili konteks maklumat, seperti bahasa, keputusan untuk mencari dan format sumber maklumat. Pendekatan metode campuran telah digunakan di mana pendekatan kualitatif melibatkan wawancara bersemuka bersama 26 ilmuwan. "Kumpulan sasaran yang spesifik dan khusus", dikenali sebagai *Persona* telah digunakan sebagai kaedah analisis. Bagi pendekatan kuantitatif, 280 ilmuan sains kemanusiaan telah disampel dalam kajian soal selidik di mana statistik *descriptive, t-tests* dan *chi-square* digunakan untuk analisis. Hasil kajian

menunjukkan bahawa para ilmuan Sains Kemanusiaan mempunyai tingkah laku pencarian maklumat yang pasif yang dicetuskan oleh peristiwa maklumat. Mereka juga mempunyai tahap kesedaran yang berbeza mengenai ketersediaan sumber dan perkhidmatan maklumat dalam bidang yang mereka minati. Di samping itu, mereka mempunyai motivasi yang berbeza untuk mencari maklumat yang boleh ditentukan dengan menggunakan format yang sesuai dan bahasa yang difahami. Ilmuan junior menunjukkan peningkatan penggunaan sumber digital manakala ilmuwan senior lebih mengutamakan bahan bercetak dan sumber tidak rasmi tetapi memberi perhatian kepada bahan digital. Dari segi perilaku pencarian aktif, para ilmuan Sains Kemanusiaan mempunyai kepelbagaian keputusan dalam pencarian maklumat, bergantung kepada tahap celik komputer, jenis dan format keperluan maklumat. Tambahan pula, walaupun mereka mempunyai senarai keutamaan yang berbeza dalam mengeksplorasi, mengakses, mengkategorikan dan menapis maklumat, kepuasan mereka adalah sama dalam semua perkara. Hasil kajian juga menunjukkan halangan sumber perpustakaan, persekitaran universiti dan peribadi telah mempengaruhi pencarian maklumat dan mereka bertindak balas berdasarkan pengalaman dan pengetahuan komputer mereka. Pada masa yang sama, walaupun mereka menunjukkan kepuasan dengan sumber dan perkhidmatan perpustakaan universiti, mereka tidak berpuas hati dengan Pusat Kecemerlangan. Akhir sekali, data demografi megenai umur, kedudukan akademik, kelayakan akademik dan tempoh pengalaman yang membezakan antara ilmuwan senior dan junior menunjukkan hubungan yang signifikan diantara jenis dan format keperluan maklumat. Kajian ini telah memberikan gambaran yang jelas tentang hakikat keperluan maklumat dan tingkah laku para ilmuan Sains Kemanusiaan. Maklumat ini adalah penting dalam menyediakan sumber dan perkhidmatan yang cemerlang untuk mengurangkan halangan dalam pencarian maklumat dan mengoptimumkan tahap kepuasan pengguna perpustakaan terutamanya sumber-sumber elektronik.

ACKNOWLEDGEMENTS

I thank Allah, the Almighty for giving me all the ability and health to successfully accomplish my aim and objectives of this research.

I would like to thank my supervisor Assoc. Prof. Dr. Abrizah Abdullah for her constant support and encouragement, for her stimulating advices and patient guidance. All of these help me a lot in maintaining my confidence to achieve such results in my research.

I am also deeply grateful to my head of department; Assoc. Prof. Dr. Kiran Kaur a/p Gurmit Singh for her constructive comments and support throughout my research.

I express my special thanks to the faculty members of Yarmouk University for giving me their valuable time in participating my interview and questionnaire survey.

Moreover, I dedicated this thesis to my beautiful child, Hla, Al Hareth and Sba whose needed me when I was not there and to my lovely patient wife and parents whose supporting me in my study, and to my family-in-law who take care of my child.

I also dedicated this thesis to all those who has helped to make this thesis a reality.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

YU : Yarmouk University

JU : Jordan University

MOICT : Ministry of Information And Communications Technology

NIC : National Information Center

NITC : National Information Technology Center

KS : Knowledge Station

ICDL : International Computer Driving License

JOPULS : Jordanian Center of Excellence for Public University Library Services

YUL : Yarmouk University Library

IIUM : International Islamic University Malaysia

UM : University of Malaya

UUM : University of Utara Malaysia

LIST OF APPENDICES

CHAPTER 1: INTRODUCTION TO THE STUDY

1.1 Introduction

The rapid growth of the Internet and Web–based technology in recent years has created tremendous impact on how information is being accessed and disseminated. Information and Communication Technology (ICT) has a profound impact on the ways in which information is stored and accessed, and has changed the information environment in which humanities scholars work (Tahir, Mahmood & Shafique, 2008). The abundance of information on the Internet has somehow affected the information-seeking behaviour of humanities scholars, and the way academic libraries are managing their resources and rendering services to the research community. Because of this, the field of information behaviour has changed in several major ways. To a large extent, these changes seem to be simultaneous with the information technology available. Thus, the scenario for information-seeking has been affected by the use of the English language on the Internet and application of the new media through Web-based technology. Consequently, researchers believe that there is an urgent need for a new research on the information behaviour in the 21st century (Buchanan et al., 2005; Tahir, Mahmood & Shafique, 2010). Thus, a study that reflects the real condition of non-English speaking countries such as Jordan, a developing Arab country in the Middle East is required.

This research aims to contribute to the scope of Library and Information Sciences (LIS), by investigating the information needs and information behaviour by humanities scholars in various academic disciplines in the Hashemite Kingdom of Jordan, as an example of a developing Arab nation. This study explores humanities scholars' information needs and behaviour, and the strategies that they believe will address their

information needs. It examines how humanities scholars in an ICT-enriched environment utilize the desired information, particularly the digital resources and services for their academic tasks, the effectiveness of their information-seeking behaviour, and the barriers that impede the scholars' information behaviour. Figure 1.1 presents the overall research structure depicted in Chapter 1.

Background of Study
No study attempt to investigate specifically the information behaviour of humanities scholars (HS) in Arab developing countries & Jordan.
A thoughtful consideration on information behaviour of users is essential in providing excellent library service.
Study the effectiveness of ICT environment of HS at YU & how the HS use the electronic resources.

Statement of Problem
* *Lack of recent study on information needs & information-seeking behaviour of HS in Jordan that takes into account the recent rapid increment in the availability of electronic search systems; Internet.*
* *Lack examination of relationship between information-seeking & socio-demographic.*
* *Prevents library from fully understand & support the HS's needs.*

Aim
To gain insights into the information needs & information behaviour of HS in an ICT-enriched environment in Jordan.

Objectives
a) *To understand the information needs & behaviour of HS in an ICT-enriched environment in Jordan.*
b) *To ascertain the information needs & information tasks performed by HS for teaching & research.*
c) *To identify the barriers encountered by HS while they seek for & use information for teaching & research.*
d) *To investigate the relationship between demographics information & HS information-seeking processes.*

Research Questions
1) What are the information needs of HS in an ICT-enriched environment of Jordan?
  a) *What types of information resources do HS primarily use for research & teaching?*
2) How do humanities scholars fulfill their information needs?
  a) *How do HS identify & locate relevant information for their academic tasks?*
  b) *How do HS obtain relevant information resources?*
3) What are the barriers encountered by HS while seeking for information?
  a) *What are the barriers that influence HS' information seeking behaviour?*
  b) *How satisfied are HS with the library & Centre of Excellence resources?*
4) What is the relationship between demographic information & the information behaviour process?
  a) *What is the relationship between independent variables (gender, age, academic position, country of graduation, department & years of experience) with types of information need?*
  b) *What is the relationship between independent variables (gender, age, academic position, country of graduation, department & years of experience) with format of resources?*

Significance of the Study
Understanding of HS' information need & information-seeking behaviour is fundamentals:
a) *To develop & re-orientate the library collections, upgrade the facilities & to improve the services to efficiently fulfill the information needs of HS.*
b) *Leads to a better structure of information resources.*
c) *Helps to manage the information resources & make them accessible for retention, attains the effective cost in services & encourages the usage of library information resources.*
d) *Investigate the present significance & cross-cultural applicability of determined theories & models of information behaviour.*
e) *Good foundation for further study on information needs & information-seeking behaviour among the HS in Jordan & Arab developing countries.*

Figure 1.1: Organizational Structure of Chapter 1

1.2 Background of Study

Research in information behaviour has a long history. It dated back to the end of the Second World War (Wilson, 1999) when it was recognized within the field of information studies at least in the 1960s (Line, 1969). It roots back to the Royal Society conference in 1948 when Bernal (1948; 1960) and Urquhart (1948) discussed a study on the scientific information. According to Wilson (2000), the terminology "information behaviour" was not used in these studies, it was about the use of document and library, but the origin is obviously there. However, Bisco (1967) cited in Brittain (1970) reported that he was the first researcher known for empirical studies of information needs and uses. The information needs and behaviour of scholars has long provided a fruitful area of inquiry within Library and Information Science (LIS) research (Yi, 2007; Majid & Kassim, 2000). Over decades of investigation, researchers identified and analyzed the information needs, characteristics and attributes of scholars, and determined their similarities and differences, if any, in order to plan for appropriate library user services.

Through the last few decades, many researches particularly in the developed countries were conducted about the needs and seeking behaviours of information in different perspectives on many individuals and user groups (Anwar, Al-Ansari, & Abdullah, 2004). The researches covered numerous perspectives of information-seeking behaviours in the field of social sciences (Msagati, 2014; Kumar, 2013; Al-Suqri, 2007 & 2011; Bhatti, 2010), humanities (Mostofa, 2013; Dahl, 2012; Quan-Haase & Martin, 2012; Khan & Shafique, 2011; Seaman, 2011; Benardou, et al, 2010; Bhatti, 2010; Ocholla & Mostert, 2010; Tahir, Mahmood & Shafique, 2010; Xuemei, 2010), and science and technology (Sarkhel & Khan, 2014; Norbert & Lwoga, 2013; Nor Liyana & Noorhidawati, 2010; Jamali & Asadi, 2009; Rafiq & Ammeen, 2009). Bates (1996)

reported that the previous researches were empirical research of the information-seeking behaviour concentrated on science and/or engineering in the 1960s, on the social science in the 1970s, and on humanities in the 1980s. Since then, studies on the information behaviour start to focus on humanities scholars' information-seeking exclusively. Numerous researches addressed the humanities scholars' information behaviour in general (Bouazza, 1989; Watson-Boone, 1994; Chu, 1999), and the information-seeking behaviour of academicians has been a common research area among the librarian scientists (Majid & Kassim, 2000). Many studies produced theories and models of information-seeking behaviour, which have recognized generic features of the information behaviour. Those studies played a significant role in developing the field of information science. It has been helpful in the delivery of information services, particularly in the context of a university (Al-Suqri, 2007).

Most of the early researchers studied information behaviour based on groups from different perspectives using different approaches and methodologies (Buchanan et al., 2005). In the existing literature, differences are drawn between experienced and inexperienced users, among levels of subject expertise as well as the occupation of users. The previous studies (Siegfried, Bates & Wilde, 1993) showed that the human science scholars had particular characteristics of information-seeking behaviours, which, to a certain extent is different from other disciplines. The humanities scholars quench their thirst for information from the library and personal collections where the academician libraries have been fulfilling the needs of humanities scholars for centuries in a traditional way (Tahir & Shafique, 2010; Baruchson-Arbib & Bronstein, 2007; Tibbo, 2003). However, the last three decades brought revolutionary changes in the library services and the types of information provided (Tahir, Mahmood & Shafique, 2010).

In the ICT environment where the academic libraries offer electronic resources, humanities scholars faced a problem in selecting the appropriate and effective search criteria (Buchanan et al., 2005). They are late and slow in adapting the new technology (Delgadillo & Lynch, 1999; Tahir, Mahmood & Shafique, 2010). They dislike the electronic information technology (Barrett, 2005) and feel pressure to use and deal with it (Massey-Burzio, 1999). This is due to their lack of skill in using ICT compared to other disciplines (Tahir, Mahmood & Shafique, 2010). Most of humanities scholars made little use of online databases (Bates, 1996) and complained about the difficulty of their search language, and lack of availability of primary desired resources (Barrett, 2005). Therefore, they are more likely to use electronic resources as a secondary resource rather than as a primary one (Reed & Tanner, 2001; Palmer & Neumann, 2002). Furthermore, more books and journals are still being used compared to the electronic resources (Baruchson-Arbib & Bronstein, 2007). Talja and Maula (2003) classified them as "low level users" for e-journals and databases particularly.

In general, most of the previous studies of information-seeking behaviours for humanities scholars that were carried out before the growth of the Internet are considered to be irrelevant or out of date. The environment of the information behaviour has changed dramatically in recent years with the increased availability of electronic information resources. This makes probable modernization in teaching, improved the speed in conducting research, and to precipitate the improvement of new fields of inquiry (Renwick, 2005). This point has been taken into account in this study by highlighting the effectiveness of the ICT-enriched environment on the humanities scholars in Jordan and how the humanities scholars use the electronic resources.

1.3 Context of the Study

1.3.1 The Subject: Humanities Scholars

Humanities include disciplines concerning the human beings and their cultures. They include the analytical and critical research methods based on the appropriate human values and the unique ability of human expressions. However, humanities are characterised by the content of their various majors and courses in dealing with natural sciences, biological and social studies. Humanities are related to intellectual, philosophical, religious, creative, aesthetic, linguistic and literary aspects (Bader, 2001). There is no definite meaning for the concept of humanities. Thus, few researchers see that the best way of understanding humanities is by observing their characteristics rather than reading their definition. From the historical point of view, the origin of humanities modern concepts dated back to the Greek word *Paidia* which means "education" or "instruction". It dated back to the mid-fifth century B.C., and it means to prepare young people for the right citizenship in the state. Few researchers refer to it as the Romanian special program in preparing orators so-called humanities (human nature) (Bader, 2001).

At the beginning of the middle age in Europe, the ancient Greek and Romanian concepts were modified to be included in the Christian Education Program entitled free arts. This program includes mathematics and language studies, history, philosophy and science. At the end of the middle age, the word "*Humantas*" was excluded and replaced in the Renaissance age by *Studia Humanitatis* (Human Studies). In the nineteenth century, humanities acquired its identity and distinctive character which is represented by being away from the natural sciences curriculums that have matured to a large extent, and in line with the Greek and Romanian literature (Bader, 2001; Encyclopaedia Britannica, 1998).

The Encyclopaedia of Library and Information Science (ELIS) adds that the concept of humanities was used during the Renaissance period to refer to the current concern with antiques and secular aspects. The concept of humanities was associated with Greek, Romanian and Latin classical studies. While during the past fifty years, the concept of humanities was associated with all branches of knowledge which are not classified either as a natural or social science. This is because humanities are emotional knowledge that cannot be measured, while the logical and scientific knowledge can be measured (Daily, 1990). Webster Dictionary (2008) defined humanities which include branches of knowledge that have cultural sense in use, including language, literature, history, mathematics, and philosophy, including music and fine arts. It is noted here that the Webster Dictionary (2008) defines humanities to include history and mathematics within humanities.

Humanities books contain the following sections - fine arts, history, literature, music, art design, philosophy and religion. It is noted here that humanities include history, but they do not include language, only literature, as the book distinguished between the fine arts (painting, sculpture and design) and performing arts (theatre, dance, radio and others) (Couch & Allen, 1993). However, according to Tahir, Mahmood & Shafique (2010), the disciplines which typically encompassed in the humanities are language, literature, linguistic, philosophy, religion, history, archaeology, music, art, media studies and/or communication studies. However, Mostofa (2013) confined humanities into three departments - Arabic department & Islamic archaeology, fine art, history & philosophy, and psychology.

For this study, humanities are academic fields that include the following disciplines - Arabic Language and Literature, English Language, History, Modern Languages, Political Science, Sociology, Geography, Translation, Archaeology, Anthropology, Tourism, Conservation and Management of Cultural Resources. They also include Drama, Design, Music, Visual Arts, Al Fiqh, Usul Addin, Islamic Economics, Banking, and Islamic Studies. Scholars who are working in the field of the humanities are referred to as "humanists" (Ocholla & Mostert, 2010).

1.3.2 The Setting: Yarmouk University in Jordan

Jordan is located in the Middle East. Border with Palestine to the west, Syria to the north, Iraq and Saudi Arabia to the east, and Saudi Arabia to the south, Jordan encompasses of 89,342 sq km. The population is 6.6 million people. The main language is Arabic while the main religion is Islam. The economy of Jordan mainly comes from services, tourism and foreign aid (British Broadcasting Corporation (BBC), November 2015). The Arab is the largest ethnic in Jordan with 98% from the total population (The World Factbook, February 2016). The World Trade Organization (2015) has classified Jordan as a developing country in economy other than Egypt, State of Kuwait, Oman, Qatar, and Kingdom of Saudi Arabia from the Arab nations. Further, the World Bank Group (2015) has listed Jordan as upper middle income country with Gross National Income (GNI) Per Capita of USD 5,160.

Founded in 1976 by a Royal Decree, Yarmouk University (YU) becomes the second national university in the Kingdom. The University is located in the city of Irbid, which lies on a fertile and temperate terrain, about 400 meters above sea level, and about 80 kilometers to the north of Amman, the capital city. YU has developed in dimensions and stature to turn into one of the best prominent universities not only in Jordan, but also in

the Arab region. Yarmouk University was ranked 3rd in Jordan (www.topuniversities.com, 2016; www.webometrics.info, 2016), 29th in the Arab region (www.topuniversities.com, 2016), and ranked 1969 in the world (www.webometrics.info, 2016) for the university ranking for 2015.

However, the separation of programme made by the college under the name of the University of Science and Technology to focus in pure science, except Hijawi College of Applied Engineering, which now offers a bachelor degree in engineering technology. It is a leading institute of higher learning, and it is recognized for its inventive methods to the educational management, human resource improvement and the quest for excellence in research and teaching in numerous fields such as arts; humanities and social sciences (Refer to http://www.yu.edu.jo). Like a healthy plant, YU has been growing steadily and systematically for thirty two years now. It is a beacon for highly qualified academicians whose research publications have spread all over the world. At the moment, YU has over 25,000 students, approximately half of the university students are female, and at least 1500 of the students come from over 40 countries. The university has nine faculties - Faculty of Sciences, Faculty of Arts, Hijawi Faculty of Technological Engineering, Faculty of Education, Faculty of Physical Education, Faculty of Fine Arts, Faculty of Shari'a & Islamic Studies, and Faculty of Law.

Majority of human science scholars at YU speak only Arabic language and some can speak English as a second language. The majority of the human science resources are published in English language. This was a potential barrier for effective information-seeking, which has an impact on patterns of information, and it influences the outcomes of the information behaviour. For example, the human science scholars who cannot speak English may ignore English language resources, especially if similar material is

available in Arabic language. This also means that humanities scholars may also inclined to use electronic search engines or databases in Arabic language only.

In addition, the Deanship of Research and Graduate Students administer faculty research projects such as Master of Arts (MA), Master of Science (MSc) and Doctoral Degree (PhD) programs offered by various academic departments. Currently, there are 45 Masters and 13 PhD programs. Besides, the Institute of Archaeology and Anthropology is a center in the field of Archaeology, Epigraphy, Anthropology, Cultural resources management, and Tourism and conversation of archaeological sites and materials. The language center offers service course in the English language and supervises a student's-exchange program with American universities for the teaching of Arabic language to non-native speakers.

Additionally, YU has a number of technical and educational centers that offer programs to bolster its academic system, enrich its philosophy, and enhance its mission. This includes expanding and facilitating students' pursuit of knowledge, and offering all kinds of services to the students as well as to the local community at large. YU has recently established distance learning facilities (smart classrooms), International Computer Driving License (ICDL), Microsoft Center and Instructional Software Unit to cope with the rapid development in the computer science. The university has also established links with universities and world agencies which were involved in the research and development of national and regional fronts. For details of the case setting of Yarmouk University Library (Al-Husayniyyah Library), see Appendix A.

1.3.3 The ICT-Enriched Environment of Jordan

Jordanian government has realized the importance of the ICT since the beginning of the era of the information technology, and it has recognized the significant function of the Internet by building a contemporary educational framework which is able to deal with the recent developments in the information technology world. Millions of dollars have been spent in providing the Internet services to Jordanian communities. Moreover, the government of Jordan has declared that the sales tax on the Internet connection and computers are going to be deducted with the purpose to motivate the ICT industry in Jordan (Ministry of Information and Communication Technology, 2012).

In 2004, King Abdullah II told the British Broadcasting Corporation (BBC) news that he hopes to make Jordan as the greatest technological hub in the Middle East. His majesty has provided computers and Internet connection. He introduced ICT syllabus into the education system of Jordanian schools. Besides, the ICT faculties were established in various universities where 15,000 ICT students graduate each year. Furthermore, provision of the Internet access in the rural areas was achieved through the establishment of the information access centers (Arab IP Center, 2013). Information technology is one of the main industries in Jordan (The World Factbook, February 2016) where the total revenue of IT industry in 2014 was USD 546,588,148 (Information and Communications Technology Association of Jordan & Ministry of Information and Communications Technology, 2014).

Nowadays, Jordan has an excellent infrastructure in communication. The infrastructure of telecommunication is rising at a very fast speed, and it is continuously being upgraded and expanded. In fact, telecom industry in Jordan, if compared to the other Middle East countries, is considered as the most competitive. Communication in

Jordan involves various forms of media, including television, radio, telephone and the Internet (Jordan National Competitiveness Observatory, 2009).

The Internet in Jordan was connected for the first time in early 1995. Initial Internet service was provided by the National Information System (NIS) only to provide access for government and academia, according to a policy decision that allows the access for the private sector in 1996 (Ein-Dor, Goodman & Wolcott, 1999). The Jordanian government does not control the supply of the Internet service as what happened in few other Arab countries. In contrast, The Jordanian government is keen on encouraging the private companies to offer the Internet service. As a result, the Internet cost was reduced significantly (Arab IP Center, 2013).

Currently, Jordan is known as the Middle East's "Silicon Valley" because it has more established Internet corporations compared to other Middle East countries (Baker, 2012). Moreover, Jordan was recognized to be the 10th best city in the world to initiate a technology startup - where Jordan has reached to an advanced level on fixing the Internet network performance according to a report in 2012, prepared by Finaventures, a California-based venture-capital company (Cohan, 2012). According to Cisco Systems record, the Internet capacity in Jordan is greater than imagined, at 21 megabytes per second. Moreover, the Jordanian users of mobile broadband network can download and upload with the Internet speed that exceeds the mean rate in the Middle East and Africa (MEA) countries (Leigh, 2011).

The increase in the Internet usage in Jordan will perhaps go on at a faster rate than in other Arab countries as most children have access to the Internet. This is because the Jordanian government is keen to make sure that all schools and universities have

Internet access. The outcome is that most young generations now use the Internet, and they will also have the opportunity in the future to use it. The Internet users in Jordan have increased dramatically from 2,481,940 in 2012 to 5,700,000 in 2015. As of 30 November 2015, the Internet penetration in Jordan was 86.1% from the total population of 6,623,279 (Internet World Stats, November, 2015). The Internet sector has generated USD 186,009,296 to the economy of Jordan in 2014 (Information and Communications Technology Association of Jordan & Ministry of Information and Communications Technology, 2014).

One of the most important factors that contributed to the expansion usage of the Internet in most Jordanian cities is the presence of Internet cafes which attract many people especially the youth. *Al Jami'a Street* (Yarmouk University Avenue) which is located in Irbid City was awarded the Guinness World Record in 2008 as the most popular street with Internet cafes in the world. This street has more than 125 Internet cafes, and it is the most crowded street in the world. This street is dominated by one big computer company, which reflects the evolution of the information technology sector. *Al Jami'a Street* gained its momentum because of its proximity to the second oldest Jordan universities (Yarmouk University) which draws thousands of Arab and foreign students, as well as Jordanians from around the Kingdom (Rihani, 2008).

1.4 Statement of the Problem

The literature indicated that there is lack of recent or up-to-date international research on the information needs and information-seeking behaviour by humanities' scholars. This includes the rapid increment in the availability of electronic search systems, especially the Internet. Humanities scholars are known to be intellectually able seekers who are not technical in orientation (Buchanan et al. 2005). The acceptance of,

and difficulties experienced using electronic resources by humanities scholars was the dominant issue for many studies. Humanities scholars have been considered as being reluctant users of technology (Stone 1982) - they feel the pressure to use and deal with the technology (Massey-Burzio, 1999). They have been confirmed to have low search skills and dissatisfaction with the electronic databases (Bates, 1999; Barrett 2005) and, they are late and slow adopters of new technology in comparison to scientists and social scientists (Tahir, Mahmood & Shafique 2010). Wiberley and Jones (2000) found that the senior humanities scholars adopted new technology at a slow rate compared to their junior colleagues. However, prior research indicates that humanities scholars demonstrate a significantly higher use of library facilities than academicians from other disciplines (Whitmire, 2002). Current works on the information behaviour of humanities scholars predate the wide availability of the Internet (Line, 2000; Buchanan et al. 2005).

The models of information-seeking behaviour such as Ellis (1989), Kuhlthau (1991) and Dervin (1983) give little attention on different factors of contexts and resources, which may influence the information-seeking behaviour. For instance, there have been changes that takes place on the information environments since these models were developed, where information is available electronically via the Internet and could be accessed easily. However, most of the tested models are based on the findings of information-seeking in the developed Western countries, and these models and studies do not reflect the concept of the Middle-Eastern countries and their cultures (Al-Suqri, 2007). Nonetheless, they do not reflect the recent changes in the information environment with the rise in the Internet use, and the availability of the electronic resources, which give the humanities scholars at Yarmouk University (YU) the opportunity to use the Internet, especially after the YU Street was considered as the most crowded Internet street cafes in the world (Rihani, 2008). Besides, Seaman (2011)

highlighted his concern on the rare consideration of humanities scholars' information needs in the planning of library resources that could result in not addressing their exact information need.

Hence, the lack of availability of studies that addressed the seeking behaviour of humanities scholars has induced the important to focus the study on the humanities scholars in general, and in Jordan specifically. The lack of researches in this field may prevent the libraries in Jordan to fully understand and support the humanities scholars and their particular information needs. It is important that humanities scholars are aware of the diverse information that is available on the Internet, and to be educated about the need to assess the information content (Chapman, 2002). It is essential for a new research on information needs and information behaviour among humanities scholars in Jordan to be explored. This will contribute to the development of a new model which reflects the current information environment. Therefore, this study aims at furthering the existing works on information needs of humanities scholars in the Internet age. It focuses on humanities scholars in an ICT-enriched environment in Jordan, a developing country in the Arab World.

1.5 Objectives of the Study

The overall objective of this study is to gain insights into the information needs and information behaviour of humanities scholars in an ICT-enriched environment in Jordan. The specific objectives of this study are:

a) To understand the information needs and behaviour of humanities scholars in an ICT-enriched environment in Jordan.

b) To ascertain the information needs and information-seeking tasks performed by the humanities scholars for teaching and research.

c) To identify the barriers encountered by the humanities scholars while they seek for and use information for teaching and research.

d) To investigate the relationship between demographics information and the humanities scholars' information-seeking processes.

1.6 Research Questions

This study seeks to answer the following specific research questions and sub-questions:

1) What are the information needs of humanities scholars in an ICT-enriched environment in Jordan?

   a) What types of information resources do humanities scholars primarily use for research and teaching?

2) How do humanities scholars fulfil their information needs?

   a) How do humanities scholars identify and locate relevant information for their teaching and research tasks?

   b) How do humanities scholars obtain relevant information resources?

3) What are the barriers encountered by humanities scholars while seeking for information?

   a) What are the barriers that influence humanities scholars' information-seeking behaviour?

   b) How satisfied are humanities scholars with the library and Center of Excellence resources?

4) What is the relationship between demographic information and the information behaviour process?

   a) What is the relationship between independent variables (gender, age, academic position, country of graduation, department and years of experience) with types of information need?

   b) What is the relationship between independent variables variables (gender, age, academic position, country of graduation, department and years of experience) with format of resources?

1.7 Significance of the Study

Information needs and behaviour are important fields in the LIS discipline. They are considered as key areas to study about the scholars, where the scholars are the fundamental components of academic library in any information system. Hence, academic libraries are supposed to strive and raise the number of users by focusing on meeting their users' expectation needs, and to provide a quality services for its users than as a physical place (Adeniran, 2011). Profound understandings on information behaviour of humanities scholars are crucial to meet their information needs (Xuemei, 2010).

The understanding of humanities scholars' information need and information behaviour is fundamental to develop and re-orientate the library collections, upgrade the facilities and improve the services, to efficiently fulfill the information needs of the humanities scholars. It leads to a better structure of information resources especially in the cost of material. It also helps to manage the information resources and make them accessible for retention. This will help attain the effective cost management in Al-Husayniyyah services and encourages the usage of library information resources. After the librarians at Al-Husayniyyah have understood the humanities scholars' usual information behaviour and preference, they ought to facilitate the services and resources of the library to follow the information behaviour patterns. Thus, improve the service of the users' needs. Not only that, this will help in improving the efficiency and outcomes of the humanities scholars' work. The result of this study can offer a clear vision for libraries managers in understanding the ways they can support the humanities scholars from an administrative point of views.

According to Devadason and Lingman (1997), the understanding of information needs and information behaviour of professional group like the humanities scholars is essential as it helps in planning, implementation, operation of the information system and services in work settings. Therefore, if Al-Husayniyyah library realistically wants to serve the humanities scholars, it should recognize the changing needs and variations in the information gathering and supplying services that would be very helpful. Zhang (2001) and Anwar (2007) emphasized that an in-depth of a user's information behaviour is vital to the provision of efficient information services.

Hence, in order to meet the information needs of the humanities scholars, we should first - as librarians - understand the nature of the humanities scholars and become familiar with their information behaviour and practice (Pinelli, 1991). Therefore, when investigating and examining their information gathering behaviours, it would be helpful for the librarians to provide high quality services that meet their exact needs and to provide an applicable system in accordance with the exact skills and strategies which lead the humanities scholars to search and use information very well (Ansari, 2008). This can be done by deeply understanding the abilities and expectations of the humanities scholars in guiding the changes of service provision of the library (Buchanan et al., 2005).

This study investigates the current significance and cross-cultural applicability of selected theories and models of information behaviour, and to recognize the components that are required to be modified or remained. It reflects deeply on the Arab information behaviour in practical manner, as an example of developing the Arab countries, and how to consider the non-English speaking communities. This is very useful for ongoing development of the library services towards these communities.

This study also provides a good foundation for further research about the information needs and information behaviour among the humanities scholars at the YU, Jordan. The researcher hopes that the YU will be able to use the result to enhance its current collection of information resources and to streamline information delivery through traditional printed resources, as well as electronic resources. The study is also expected to make a contribution in understanding the context of Jordan. In this way, it will enable the ongoing development and refinement of theories and models of the information behaviour to enhance the field of the LIS. Information service providers will discover the outcomes of this research to be remarkable because the identification of the humanities scholars' perceptions of the information environment can provide a direction for the information system improvement that will diligently reflect or facilitate the information-seeking activities of the humanities scholars.

1.8 Operational Definitions

The following terms are operationally defined for the purpose of this study:

Information needs: Any piece of information that a scholar may need in connection with his or her academician tasks (Rowley & Turner, 1978).

Information behaviour: Activities which a scholar may get involved with, to identify their needs for information, search for desired information in several means, using or transferring that information (Wilson, 1999). Information behaviour includes active information-seeking behaviour along with other unintentional behaviours, including passive or purposive information-seeking (Case, 2002). Thus, information-seeking behaviour constitutes part of the total research field of information behaviours (Wilson & Allen, 1999).

Information-seeking behaviour: A consequence from the recognition of certain need (Wilson, 1981) is described by Krikelas (1983, p. 6) as "*any activity of an individual that is undertaken to identify a message that satisfies a perceived need. In other words, information-seeking begins when someone perceives that the current state of possessed knowledge is less than that needed to deal with some issue (or problem)*". In addition, (Fairer–Wessels, 1990, p. 360) "*the way people search for and utilize the information*". Similarly, King, Casto and Jones (1994, p. 4) defined it as "*identifying, locating and acquiring needed information*". It is a process in which human purposefully engage in order to change their state of knowledge, and which is closely related to learning and problem solving (Marchionini, 1995). While, Wilson (2000, p. 49) defined it as "*the purposive seeking for information as a consequence of a need to satisfy some goal*". Also, Meho and Haas (2001) and (Mostofa, 2013) referred it to those activities a person engages with when identifying his or her own need for information, searching for such information in any way and using or transferring of information. In other words, it is the totality of human behaviour in relation to the sources and channels of the information, including both active and passive information-seeking and use.

Information use: Physical and mental acts which human employ to incorporate found information into their knowledge base or knowledge structure (Wilson, 2000). It may involve physical acts such as marking sections in a text to note their importance or significance, as well as mental acts that involve comparing new information with the existing knowledge. Dervin (1992) stated that information use is a process where the user tries to make sense of discontinuous reality in a series of information use behaviours. There are internal use behaviour (comparing, categorizing, polarizing, and others) and external use behaviour (listening, agreeing, disagreeing, and others). A problem solving definition of information use is the incorporation of found information

into their pre-existing knowledge base, by thinking, by taking notes, or in some ways by cognitively processing or acquiring the information (Ford, 2004; Todd, 1999). In addition, Meho and Haas (2001) commented that the information use involves the actual use of information to meet the information need. An example of such behaviour includes borrowing and reading a certain book from the library.

Barriers to information: Any obstacles that prevent scholars from accessing or reaching information, e-resources or services (Ibrahim, 2004). This condition can make information-seeking behaviour difficult for the humanities scholars to make progress or to achieve their objective, or it affects their information behaviour (Al-Suqri, 2007).

Electronic information resources: Any resources and services of electronic information which the users access electronically using a computing network from inside or outside the library such as online database, Online Public Access Catalogues (OPACs) and the Internet recourses (Ibrahim, 2004). In addition, Reitz (2004, http://www.abc-clio.com/ODLIS/odlis_e.aspx) defined it 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. The category includes software applications, electronic texts, bibliographic databases, institutional repositories, Web sites, e-books, collections of e-journals*".

ICT-enriched: Information and Communications Technology (ICT) is a technology of applications and communication devices such as computer and Internet which is used to transmit mass of information through types and formats of communications (www.techopedia.com, n.d.; searchcio.techtarget.com, 2005). ICT facilitates users to

handle information more efficiently and effectively by enabling the users to record, store, process, as well as to retrieve and transmit information (Adebayo, 2012). Thus, ICT-enriched refers to a massive use of ICT facilities and application to optimize the information-seeking process.

Digital resources: A collection of digitally stored information, usually by computerized catalogue in the library (Witten, 2005).

Technology in library: The use of computer system and Internet network in collecting, organizing, archiving and in making the resources and services available to the users in a digital format. The format of the library resources and services change from printed to electronic where the users can access and use online through Internet system such as cloud and mobile application (Witten, 2005; Kroski, 2013; Mattern, 2014).

Invisible colleague: Groups of collaborators in a research area, linked together through their leaders, who informally communicate with one another and transmit information on new research findings before the publication (Young, 1983).

1.9 Organization of the Thesis

This thesis is organized into seven chapters. The first chapter consists of an introduction and a background of the study, outlining the objectives of the study and explaining its importance. It also presents the research questions, problem statement, and the significance of the study. The second chapter contains a broad overview of relevant literature on the topic of study. This includes information behaviour of humanities scholars in both developing and developed countries. Furthermore, the use

and effectiveness of the ICT environment among humanities scholars at the YU has influenced the choice of information resources and the methods that humanities scholars use when seeking or retrieving the information were discussed.

The third chapter presents the conceptual framework and a synthesis of information-seeking models of Ellis (1989); model of information-seeking, Kuhlthau (1991); model of information search process, Wilson and Walsh (1996); model of information-seeking behaviour, Niedźwiedzka (2003); general models of information behaviour, and Foster (2005); non-linear model information-seeking behaviour. In addition, new elements representing the information context are languages and format of information resources. This study seeks to provide understanding of the humanities scholars' information behaviours and not merely their information needs.

The fourth chapter presents the research methods of the study, which consist of qualitative and quantitative approaches. The fifth chapter discusses the qualitative findings of the study. It analyzes the qualitative data gathered from semi-structured face-to-face interview using Persona analysis technique. The analysis of the quantitative data was analyzed using descriptive and inferential statistics. Lastly, the seventh chapter presents the results of this study, and it outlines the recommendations and suggestions for further research.

1.10 Summary of Chapter 1

This chapter has presented a broad introduction of this study, which is to examine the information needs and information-seeking behaviours of humanities scholars at the Yarmouk University, Jordan. The study employed integration models of Ellis (1989); model of information-seeking, Kuhlthau (1991); model of information search process,

Wilson (1996); model of information-seeking behaviour, Niedźwiedzka (2003); a new model of information behaviour, and Foster (2005); non-linear model of information-seeking behaviour as a theoretical framework. Both qualitative and quantitative methods were used for data gathering. Through the use of a conceptual model of information behaviour, it provides a real knowledge base of library and information science. It also portrays a deep understanding of information in assisting the delivery of the precise development of information services and resources that meet the needs of the humanities scholars in Jordan and other developing countries.

CHAPTER 2: REVIEW OF THE EMPIRICAL LITERATURE

2.1 Introduction

This chapter provides a review of relevant literature of the study with the aim of outlining the topics that are related to the information need and behaviour research. This includes literature on information-seeking behaviours, in particular by the humanities scholars in both developed and developing countries. This chapter also provides an overview of the use and the effectiveness of the ICT environment to address the information need of the humanities scholars.

The core findings of the earlier research are discussed within a number of main themes, including the use of informal and formal sources of information, the use of electronic resources, barriers faced by the scholars while seeking information and lastly, the satisfaction derived from information resources and services. By reviewing some studies that were related to this study, it gives the researcher the chance to provide contextual background information on the current research of the humanities scholars in Jordan, and to identify which issues to focus on in order to fill some of the current information gaps.

The key findings of the previous research were used in the development of the conceptual model of the humanities scholars' information-seeking in the developing countries, which form the framework of this study. The knowledge gaps, which were identified in the literature review, are used in the design of the research instruments in order to provide results that would enable refinement of the model and the theory development of the information-seeking activities in the developing countries. The strengths and limitations of the previous works in this area were also considered, and

the chapter was concluded by identifying the main gaps in the literature, which need to be addressed, either in this study or in future research.

Despite the focus on the humanities scholars at the YU in Jordan, the finding of this study is expected to be applicable to other humanities scholars in any developing countries, particularly the Arab nations. In order to demonstrate how this study relates to previous research and how the previous researches give rise to particular issues, problems, and ideas. This chapter provides a review of related literature, Figure 2.1 presents the organizational structure of chapter two.
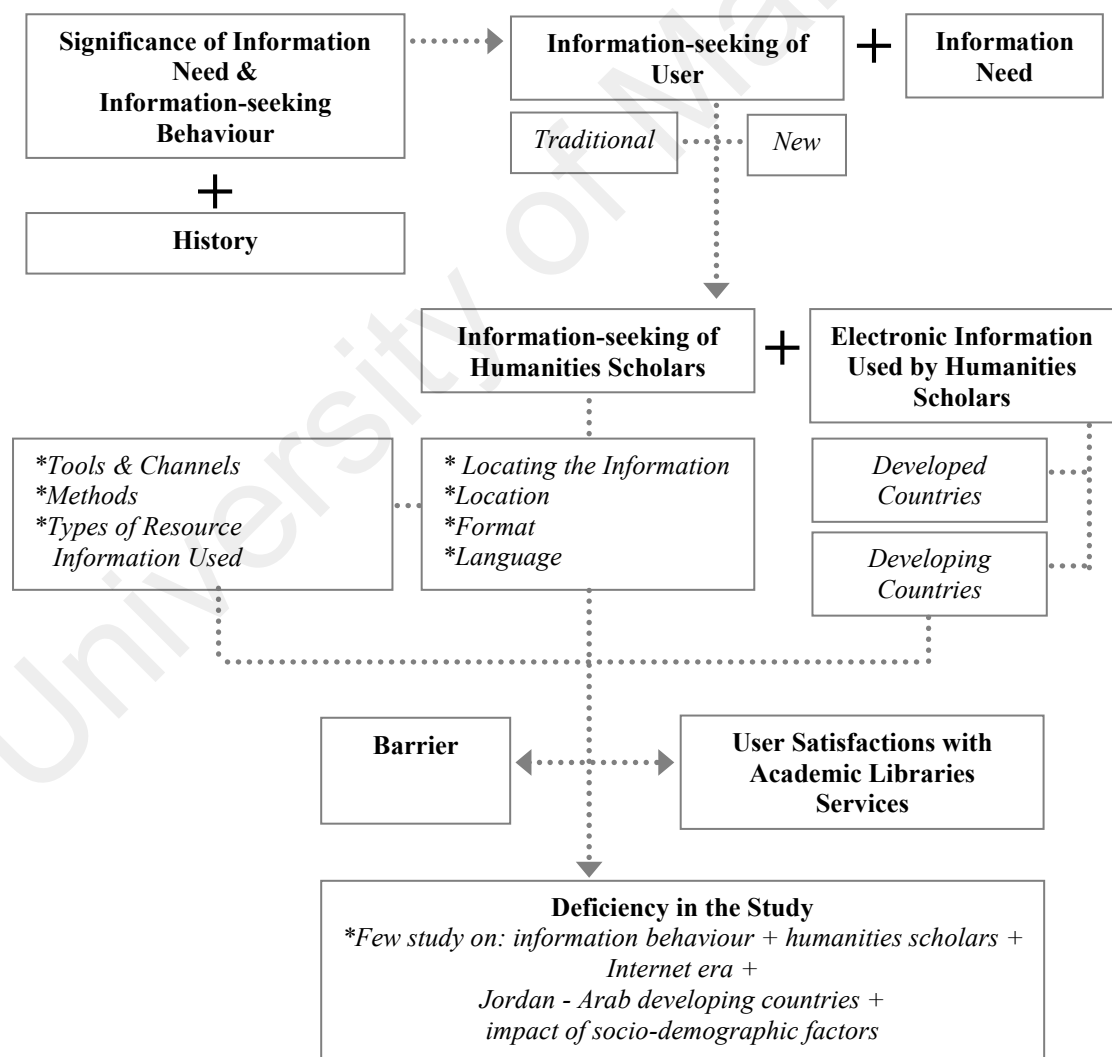
Figure 2.1: Organizational Structure of Chapter 2

2.2 The Significance of Information Needs and Information-seeking Behaviour

Devadason and Lingman (1997) pointed out that the comprehension about information needs and information-seeking behaviour from different groups of professional is crucial because it assists the systems and services of information in work settings in terms of planning, implementation and operation. Meanwhile, Ucak and Kurbanoglu (1998) in their study acknowledged that two areas of user studies which are information need and information-seeking behaviour of scholars are not similar for each field of studies. The studies in these areas can help librarians to develop and manage information systems and/or information services. However, variation of information needs and information-seeking behaviour among scholars from different fields of studies will give the librarians the need to offer different services. It is also important for the librarians to have some flexibility in their services to adapt and manage the new emerging information needs.

According to Majid and Kassim (2000), information scientists carried out many researches for decades about academicians' information needs and information-seeking behaviour which played a major role for developing libraries and information sources or services. An understanding of users' information behaviour is fundamental to the provision of high quality library service. Once librarians and other designers of information services understand the users (academicians) natural information-seeking behaviours and preferences, they might mold their services and resources to conform to these patterns, thereby better serving the users' needs (Shenton & Dixon, 2004). However, Tahir, Mahmood and Shafique (2008) asserted that in the development of library collections, facilities upgrade and improvement of services to efficiently fulfill the information needs of library users, the understanding of library users' information needs and information-seeking behaviour must be comprehended.

Bass et al. (2005), in their decades of study on the information behaviour of humanities and social science scholars, discovered that it is important to support the need of scholars by understanding their information behaviour. The examples of the support are preparing the scholars to access and/or use IT resources and integrate its literacy in the scholar's training.

In another study, Ansari (2008) concluded that information-seeking behaviour is stimulated by the information needs of the individual. It is a mental process, which occurs in the mind of these individuals, and they perceive the necessity to satisfy the information needs or to fulfill the need to accomplish a task through what is called "information-seeking behaviour". They searched for information through channels such as libraries, information centers, online services or other individuals. Ansari (2008) also argued that the study of the information-seeking behaviour is essential for the development of the information system. This includes the design of library services, either for general or specific users.

2.3 History and Development of Research on Information-seeking Behaviour

Researches about information need and information-seeking behaviour have been studied before the term "information science" was even created. Historically, the root started in the year 1948 when Bernal (1948) Urquhart (1948) and others conferred their research about scientific information at the Royal Society Conference (Bernal, 1960; Wilson, 2000). At that time, the term "information behaviour" was not used, but rather about the use of document. However, the roots are undoubtedly from the conference.

Bisco (1967), (cited in Brittain, 1970), reported that he is the first researcher who did empirical studies on information needs and uses, in contrast to the recorded uses of stored materials that were conducted by Bernal (1948) and Urquhart (1948). This was seven years before the ASLIB conference invented the word "information science" and nine years before the establishing of the Institute of Information Scientists in the United Kingdom, the first professional society which was devoted to the field of information science. According to Wilson (1999), thousands of research papers and reports were written on user needs, information needs, and information-seeking behaviour since the Royal Society Conference in 1948. Wilson (1999), Hagstrom (1965), and Crane (1972) (cited in Al-Suqri, 2007), stated that within this period, the theories developed were "invisible colleges" and reward systems, which acknowledged linear models of information science research in particular.

The theories were more concerned with the use of information resources and systems, not the information use from human aspects (Wilson, 2000). Since then, the field of Library and Information Science (LIS) research has evolved which is focused on users' needs and seeking behaviour which is intended to inform the design of library and information resources and/or services delivery (Baruchson-Arbib & Bronstein, 2007; Tahir, Mahmood & Shafique, 2008). This fact is also supported by Al-Suqri (2007) who argued that the main intention of the information need and information-seeking behaviour in the field of the LIS is to enlighten the design of library and information resources, and service delivery.

Meanwhile, according to Anwar, Al-Ansari and Abdullah (2004), in the past 40 years, many researches were conducted about people or groups in various contexts on information need and information-seeking behaviour. Case (2002) reported that in

1990s, there were more than ten thousands publications on information-seeking behaviour. The researchers examined the library users' information-seeking behaviour in terms of subject interest, information environment, occupation, and geographical position. In addition, Majid and Kassim (2000) specified that information need and information-seeking behaviour in academic field became a famous research topic for decades among the information scientists.

However, as pointed out by Line (1969), Hopkins (1989), Blazek & Aversa (1994) and Challener (1999), the studies of information need and information-seeking behaviour of humanities and natural sciences scholars were still fewer than social scientists. Thus, the availability of literature about information seeking behaviour of humanities scholars were quite inadequate (Buchanan et al., 2005).

2.4 Users' Information-seeking Behaviour

Since the inception days of information recovery research, there has been a constant interest in the challenges that users faced in getting information. An ordinary theme in this study has been the study of the selections users make while dealing with search engines - what expressions they make, how many, and so on (e.g. Boolean logic or phrase search) that they eventually use.

One main difference that can be inferred between consumers is their stage of involvement, which is regarding the interactive investigation of the subject matter. Lucas and Topi (2002) discovered that skilled and competent researchers use further query expressions and use Boolean logic more often. Hsieh-Yee (1993) and Wildemuth (2004) researched the influence of domain knowledge. They discovered that essential search skills have a more important consequence on query configuration than domain

knowledge. Whereas, the wider behaviours that seek for information do change significantly (for example search strategy were adjusted less frequently while subject knowledge was higher). In terms of humanities scholars, we can expect a comparable relationship. The findings from researches about the selection patterns were mainly user queries, on the web (Jansen, Spink & Saracevic, 2000; Bussert, 2011). It shows that users utilized few terms, and rarely used Boolean logic or other advanced search conditions. Most users preferred simple searches using short phrases. The previous user studies mentioned that the reliable image of interactive investigation is that few specialist users exist, and most users utilize easy two or three term queries.

Mostofa (2013) revealed that information is required as it affects publics' lives. People need information to find answers to particular inquiries. Information can be described as current knowledge from cognitive experience. While, a need is described as observable signs or indicators of psychological construct in relation with other constructs like motivations, beliefs and values. Therefore, information only takes place in the mind of the seeker and is intrinsically subjective when the seeker knows and wants to resolve a gap or anomaly of his knowledge.

The information-seeking behaviour is about engaged activities during identification of the information need which includes search, use, or transfer of the information. The term information-seeking behaviour has been utilized since the 1950's. Several significant studies about information-seeking behaviour are: a) behavioural model of information-seeking strategies by Ellis 1989, b) information-seeking process by Kuhlthau 1991, and c) problem-solving model by Wilson 1996. Information-seeking behaviour involves the reason to seek for information, types of information being sought, and the sources of needed information. Thus, information-seeking behaviour

can be in many forms, such as printed documents - encyclopaedias, journals and electronic media (Mostofa, 2013). Whereas, information behaviour is about the entirety of human behaviours on the sources and mediums of the information, active and passive information-seeking, and the use of personal and online communication as passive reaction to information (Mostofa, 2013).

Abels (2004) pointed out that between 1998 and 2000, the use of the Internet and monograph showed a significant and steady increment which makes the library as the most used source for   information seeking. Hence, to deliver and sustain competent library services, especially with the growing rate of procuring and archiving electronic media and printed journals, the librarians need to be attentive about what type of information is being sought and how the information can be found.

2.5 Traditional and Emerging Information-seeking Behaviour

The literature review about the difference between traditional and new information-seeking behaviour is important to mark the transition and alteration of information-seeking behaviour before and after the influence of the Internet and the digital library.

2.5.1 Traditional Information-seeking Behaviour

There were many studies conducted in 1980s and early 1990s (Wilson, 1981; Stone, 1982; Sievert & Sievert, 1988; Wiberley & Jones, 1989; Gould & Pearce, 1991) that showed the preference of humanities scholars for the use of physical library by browsing and reading collection of books and journals. A study conducted by Broadbent (1986) also showed the preference of humanities scholars for consulting with reference librarians, electronic and utilizing bibliographic instruments as their informal channels. Stone (1982) predicted the influence and importance of computer and the Internet

towards the humanities scholars in their information behaviour, Tibbo (1991) and Watson-Boone (1994) explained the focus of research among humanities scholars on the increased use of information from the Internet.

In addition, Watson-Boone (1994) identified major characteristics of the information behaviour of humanities scholars before the use of the Internet. The characteristics are that humanities scholars like to work alone, and they like to interpret information personally. They also use various sources of information such as monographs, and rarely discuss general bibliographic works, indexes, and other secondary services. On the contrary, the humanities scholars find the primary sources of information from the references and ask their colleagues. Furthermore, they always ask archivists and special librarians, but they rarely ask general reference librarians. Moreover, Watson-Boone (1994, p. 207) found out that the humanities scholars "*graze*" within texts and their colleagues' minds, not "*browse*" through collections or catalogues as found out by Stone (1982, p. 295). Watson-Boone concluded that librarians should ask directly the need of humanities scholars to find the right tools to fulfill the needs, not by providing more training regarding online databases and catalogues.

Blazek and Aversa (1994) affirmed in their books that humanities scholars still prefer the monograph than the periodical article. This was confirmed by the previous study carried out by Stone (1982), he stated that books and journals were cited as the most frequently used research materials, noting that there was conflicting evidence as to which is used more heavily. On this point, Watson–Boone (1994, p.212) concluded that:

> *"Although the assumption holds true that books play a greater role than journals, it needs to be tempered: the subjects and periods covered by the research topic determine whether the scholar will use a greater or lesser percentage of articles, and whether the monographic material will be the primary work of the individual(s) under study or the critical (secondary) literature."*

Humanities scholars are likely to be interested in older works - dating back 20, 40, or 50 years. Of course, if one considers the "classics" in each field, interest can extend to items dating back 2,000 or 3,000 years in time (Blazek & Aversa, 1994). Stone (1982, p. 296) mentioned, *"Having retrospective coverage may be more important to the humanist than having access to current material."* However, Watson–Boone (1994) stated that most of the citations of primary and secondary references have to do with material proceeding for the past 20 or 30 years of the research. This does not imply that older items are not used, but rather that a large proportion generally falls within this period. In other words, the theme of the research will dictate the exact time span (for example, the older the subject is, and the further back in time the citation is likely to be).

2.5.2 Emerging Information-seeking Behaviour

1990s sets the beginning of important change on information-seeking behaviour especially to the library users. From printed periodical indexes, library users start to alter their search to library OPAC system for CD-ROM workstation of databases. Later, many studies about digital library have been conducted involving information-seeking behaviour related to electronic indexes, full-text access and other internet-electronic resources (Duff & Johnson, 2002). In the late 1990s, the studies go further about the user's navigation, user modelling and sense-making of interface design in the digital context (Kilker & Gay, 1998). Another important study regarding information-seeking behaviour is the emphasis of "in context" (Case, 2002). As stated by Dervin (1997, p. 112), *"context has the potential to be virtually anything that is not defined as the phenomenon of interest"*. While, Talja, Keso and Pietilainen (1999, p. 754) stated context as *"the site where a phenomenon is constitutes as an object to use, any factors or variables that are seen to affect individual's information-seeking behaviour:*

socioeconomic conditions, work roles, tasks, problem situations, communities and organizations with their structures and cultures".

Moreover, Wiberley and Jones (2000) discovered that the most used electronic information technology is word processing. It is because that it can work faster, and it saves time. Those who used notes from archives, manuscripts and other non-circulating materials like to use word processing. They do not write notes on paper anymore. They now print their notes from word processing or store them in the computer disk. The second most used electronic information technology is electronic mail. Regarding the use of e-mail, due to little collaboration with scholars other than from their universities, the use of e-mail has become limited. It is not because of technology phobic, but rather there is a limited function of the e-mail in the advancement of humanities scholars' research and teaching. For senior scholars, the use of the e-mail is mostly for administrative work. While, the third most used is Online Public Access Catalog (OPAC). Most humanities scholars conducted OPAC by themselves and few ask general reference librarians for help.

There were also humanities scholars who used web-based guide and bibliographic databases. The analysis of the study showed that in order to increase the use of electronic information technology among humanities scholars, the librarians have to assist humanities scholars to use and apply different technologies into their information-seeking behaviour. The adoption to electronic information technology among humanities scholars actually depends on the technology, whether it can save time and/or contain relevant information or not. If it can, the humanities scholars will adopt it for long term run. Besides, because humanities scholars depend heavily on primary sources

of information from others, they need to read a lot of reading sources, which is the reason why they depend on qualitative more than quantitative.

However, in quantitative research, electronic information technology is used more than qualitative research. Through time, humanities scholars will use more electronic information technology if it can save their working time and help librarians adapt to the technology. This is similar to a finding by Covi and Kling (1996) when they mentioned the importance of time to humanities scholars. Also, the library should provide more printed materials as humanities scholars depend on them more than the electronic materials.

Bates (2001) discovered that information technology did not happen independently of people. People developed and shaped information technology according to their needs. Based on the usual 10 years of experience at graduate school, humanities scholars have developed research skills that they achieved by working with their supervisor in research. Hence, they have a skill to conduct and manage their research. The skills that the humanities scholars acquired gave values and norms in their behaviour; the criteria of quality research, legitimate of source of information, adequate research of a question and contribution of new knowledge to previous studies. All of these norms will not be changed by a new medium, but the new medium will be shaped according to the norms.

However, Friedlander (2002) mentioned that humanities scholars still remain as the largest group who used printed books and journals (physical access). This is based on a study conducted by Research Support Libraries Group (RSLG) of 250 humanities and arts scholars in the UK's universities in 2002 and several universities in Illinois, USA.

The study by RSLG also revealed that humanities scholars rarely relied on electronic books and librarians as their main resources for information. Besides, Delgadillo and Lynch (1999) and Green (2000) added that the identified and located information which have been cited in articles was the most precious source of reference for humanities scholars. While, the electronic journals was more useful for humanities scholars with the spread usage of the Internet according to RSLG study (Brockman, Neumann, Palmer & Tidline, 2001).

Ellis and Oldman (2004) discovered that the behaviour of information-seeking among humanities scholars changed significantly in terms of more pleasant, easy, accessible and up-to-date especially in the use of online catalogue and the internet. Besides, the ability of the Internet material to be downloaded and converted into preference or printed forms, this was the reason why many humanities scholars prefer to use the Internet. For communication with their colleagues, they frequently used electronic mail. Most of the humanities scholars from overseas universities used the Internet to seek for information to do their research and as additional materials for their teaching. Also, many of the humanities scholars used and preferred electronic resources such as on-line abstract services, CD-ROMs and databases that were searchable and modifiable at the end results based on their needs. Those were the reasons why the Internet resources were favored.

However, there were also several constraints regarding the use of electronic resources. Even though it is fast to search information electronically, but, the user must have a good knowledge or training about the search engine and the Internet. Another constraint was the abundant results which were not related to the desired information needed. Specifically, the user needs to do a lot of filtration on materials and need to use

the exact keywords for precise searching. Besides, uncertain sources and low credential quality of electronic resources other than broken or changing of address were other concerns on the electronic resources.

Bass et al. (2005) showed that scholars need information regarding a broad and diverse topics and methodologies compared to a conventional one. The result was based on analysis of the information needs, sources, seeking and gathering, use and management. A conclusion revealed that the need of information from other disciplines was vital for scholars of interdisciplinary and also scholars of clear defined disciplines.

In addition, a study by Mahajan (2006) revealed that all 40 humanities scholars in the survey at the Punjab University, Chandigarh, India did not agreed that the electronic resources increase the productivity of their research. Therefore, the majority of them still prefer printed resources in the library than the electronic resources. Also, a study by Vakkari (2008) showed that there was no relation between publication productivity and perceived influence regarding to the access to the electronic resources among 149 humanities scholars from 22 Finnish universities. Further, a questionnaire survey posted on HUMANIST listservs which were answered by 169 humanities scholars in Canada revealed that humanities scholars used various types and techniques of research. They depended on low-cost and reliable electronic resources for their research. The availability of electronic resources for primary sources influenced the type of research conducted. They have switched from library catalogue to search engines to search for information (Toms & O'Brien, 2008), and they also prefer to work alone (Toms & O'Brien, 2008; Given & Willson, 2015).

Moreover, a research by Nicholas, Williams, Rowlands and Jamali (2010) showed that 58% of 22 humanities scholars from 9 universities in the United Kingdom used electronic journal most of the days. In a more recent research, Ani, Ngulube and Onyancha (2015) found no substantial apparent consequence of accessibility and usage of electronic resources by all disciplines among 324 (33 are from faculty of art – humanities) academic staff in University of Calabar and University of Ibadan, Nigeria. However, Zha, et al. (2015) found there was a substantial consequence on efficiency in information-seeking among 285 respondents of academic staff and students in a university situated in central China whose library is the central China regional centre. Additionally, Grădinaru (2015) found that the humanities scholars in using electronic resources were creating their own database by choosing references and writing in new resources. The senior humanities scholars have various styles in information seeking and they access the database with exact information on what they want to search.

2.6 Information, Information Needs and Information-seeking Behaviour

There are several definitions for the term a) information, b) information need, and c) information-seeking behaviour. This is because similar terms can refer to different definitions. It can also refer to similar definition - there are various means to use the terms according to various contexts.

In the context of user studies, as defined by Rohde (1986, p. 50-51), information is referred to as "*to denote factual data or advice or opinion, a physical object, such as a book or journal, or the channel through which a message is conveyed, for example, oral or written communication*". While in the context of library and information science, Krikelas (1983, p. 6) defined information as "*any stimulus that reduces uncertainty*". Meanwhile, for information need, Wilson and Streatfield (1981, p. 173) referred to it as

"*a subjective, relative concept only in the mind of the experiencing individual*". However, Krikelas (1983, p. 6) defined the information need as "*recognition of the existence of uncertainty*".

Additionally, information-seeking behaviour is consequences from recognition of certain need (Wilson, 1981) is defined by Krikelas (1983, p. 6-7) as "*any activity of an individual that is undertaken to identify a message that satisfies a perceived need. In other words, information seeking begins when someone perceives that the current state of possessed knowledge is less than that needed to deal with some issue (or problem)*". Factors that influenced information-seeking behaviour include personal reasons for seeking information, the kinds of information being sought, and the ways and sources with which needed information is being sought (Leckie, Pettigrew & Sylvain, 1996).

2.7 Information Needs

The literature review of the information need covers the definition, characteristics, category and the information need in library system. Scholars have presented numerous definitions for information need. For instance, Brittain (1970) defined it as a general term used similarly with information requirements to signify uses, demands and needs stated by the user. According to Rowley and Turner (1978), information need is any part of information, either recorded or unrecorded, which a scholar might need (as different from want, demand, and use) in relation to his study, teaching and research undertakings. When a scholar has information need, he or she seeks an answer to a question as a solution to problem.

Similarly, Krikelas (cited in Forsetlund & Bjørndal, 2001, p. 2) had highlighted information need as "*the recognition of the existence of uncertainty*". Whereas, Case (2002, p. 5) presents information need as "*recognition that your knowledge is inadequate to satisfy a goal that you have*". Similarly Braun, Wiesman, Van den Herik, Hasman and Korsten (2007, p. 912) stated information need as "*formulation of missing information needed to perform a particular task*". Moreover, Case (2002) and Reitz (2004) stressed on the word "*inadequate or gap*" of personal knowledge which raises question for an answer which leads a search for answer to be satisfied or fulfilled. Meanwhile, Braun et al. (2007) described information need as expression of missing information needed to execute a certain duty, while Alzougool, Shanton and Gray (2007) defined it as any sort of information which is vital to any person as an outcome of the context that they act in. In addition, Norbert and Lwoga (2013) added that information need is a requirement that may drive scholars into an information-seeking process to meet their information gaps. Meanwhile, seeking answers, uncertainty decrease, linking gaps, solving issues, understanding (making sense), and stress and managing are the causes that induced information need (Case, 2002).

Moreover, Rowley and Turner (1978) highlighted the distinction between the information need and want, demand, and use. Alzougool, Shanton and Gray (2007) also had discussed about the difference between the demand and need of information. Table 2.1 defines the key concepts of the information need and demand. This includes the demand, information need, and the available information and their respective definitions.

Table 2.1: Differences of Definition between Information Needs, Information Demands, Demands of Information Needs and Demands of the Available Information

Key Concept	Definition
Information needs	Any form of information that is essential for an individual as a result of the context that he/she acts in.
Information demands	*"The request made to an information system"* (Case 2002; p. 67) to satisfy the lack of information.
Demands of information needs	The availability of some characteristics in the information need context that make an individual has the willingness to get this essential information.
Demands of the available Information	The actual request made by an individual for the available information that fulfils this essential information.

(Source: Alzougool, Shanton & Gray, 2007)

Furthermore, as stated by Wilson (2000), the information need may be divided into three parts: i) physiological need (like need for shelter, food, others), ii) affective or emotional need, and iii) cognitive need (such as need to learn a skill). Based on Wilson (2000) category of information need, it is clear that the information need in this research is under the cognitive need category.

There are few characteristics of the information need that have been identified by several scholars. Tibbo and Meho (2001) believed that the notion of information need is influenced by the types of materials the scholars believe is related to their research. Hiller (2001), King (2005) and Yoo-Seong (2009) added that the information need, seeking behaviour and expectation of the scholars is continuously changing due to rapidly changing information scenario. However, Case et al. (2005) argued that the information need does not necessarily turns into information-seeking behaviour. This is because several personal and contextual aspects may improve how an individual reacts to their information need.

Additionally, Alzougool, Shanton and Gray (2007) specified that there were two assumptions in information need. First, the information is available. Second, the information seekers are accountable for knowing their shortage of the information and will consequently request for the information. There was important information which is not provided, not recognized and not demanded. Nonetheless, it is still important. This proposed that there was a form of information that is important whether the information is provided or not, recognized or not, and demanded or not by end-users. Besides, the information need exists, and it is necessary for scholars whether it is recognized or not, demanded or not (Alzougool, Shanton & Gray, 2007). Hence, librarians should recognize these needs to reorient their collections, services and facilities to keep pace with these advancements in providing the most useful service to the library users.

The significance about the identification of the information need of the library users was stressed by White (1975) when he indicated that if academic librarians were to convincingly oblige the scholars, the former must identify the altering needs and disparities in information gathering and offer services that would be at greatest beneficial. An in-depth thought of the users' information need and information-seeking behaviour is central to the delivery of effective information services (Zhang, 1998). Also, Anwar (2007) stated that librarians are ought to realize the standards of the information-seeking and information need used by users to provide information services, planning new information systems, interceding in the procedure of existing systems, or planning service programmes.

2.8 Information-seeking among the Humanities Scholars

Within the LIS researchers, majority of studies focused on the physical science or related academic areas (Al-Suqri, 2007), where the researches concentrated on information-seeking behaviours and the need of the humanities scholars are still less than other discipliners (Line, 1969; Hopkins, 1989; Blazek & Aversa, 1994; Challener, 1999). Thus, the availability of literature on information-seeking behaviour of humanities scholars is comparatively inadequate (Stone, 1982; Guest, 1987; Wiberley & Jones, 2000; Buchanan et al., 2005).

Wiberley and Jones (1989) argued on the well-acknowledged perception that humanities investigation terms were regularly general vague. He recognized the recurrent usage of variables like the names of places and people. This study was later improved by Bates (1996). The finding showed that humanists were regularly using explicit, very careful and discriminating query terms.

In recent time, collations have come up with other academic areas. Whitmire (2002) found that humanities scholars displayed a considerably greater usage of library amenities than scholars from other fields. They always used catalogues, asked librarians to help with browsing, used stored collections and journal indexes, and others.

The collaborative area of information-seeking has consistently confirmed substantial, and then Watson-Boone (1994) found the significance of the professional system of neighbouring and far-away colleagues in the information request of humanities scholars. As a result, humanities scholars' data collection showed a strong utilization of human support and a more thorough utilisation of printed or mechanised seeking equipment.

Though, humanities scholars did often meet the librarians, this was done with some reluctance (Wiberley & Jones, 2000).

The influence of the digital data gathering setting in the workplace is not well understood. Tibbo (2002) asserted in her research of the data collection about historians that there is no insight if the historians succeeded in bringing out the resources based on the web searches, as well as for the electronic catalogues. Wiberley and Jones (2000) reported that, they faced the challenges of being retrospectives since the last ten years. The accessibility of electronic materials on the researchers' job table was simply becoming an aspect at that time.

Nevertheless, this electronic material is supportive in creating library assistance for humanists; the situation is far from completing. For instance, few has come up regarding the use of novel electronic sources of data such as the Web, and some current developments like the prevalent introduction of journals online, also have not be methodically studied. In the aspect of technical development of the Digital Library (DL) systems, the disparity made by Wiberley and Jones (1989) as well as Bates (1996) between diverse queries expressions did not suit well with investigation indexes for text, at point of differentiating the function of a certain word was very challenging. For this reason, there is a vacuum between the information quest understandings and our information recovery technologies. Furthermore, Wiberley and Jones (2000) mentioned that the adaptation of the ICT among humanities scholars was slow compared to the rapid change of information technology. The humanities scholars were seen as anti-computer or anti-technology scholars and unfortunately, the humanities scholars with computer skills and information technology were being suspected and taken aback by other humanities scholars.

Tahir, Mahmood and Shafique (2008) in their study (scale of 1 to 5) found that most of the humanities scholars mentioned "teaching or lecturing preparation" (mean=4.27) as a purpose of information seeking, followed by "to guide researchers and students" (mean=4.14) and "to support research work" (mean=4.09). While, "to develop competence" (mean=4.08) and "to keep up with current developments" (mean=4.02) were ranked 4th and 5th.

Most recently, Mostofa (2013) revealed that through his survey, 23 humanities scholars at Darul Ihsan University, Bangladesh used library resources more for teaching (56.4%). 30% used library resources for research and the rest, for journal purposes. While, (Kumar 2015) mentioned that the majority of humanities scholars seek information for general awareness of new knowledge and to prepare classroom for teaching.

When it comes to monitoring or keeping new and/or updated information, Tahir, Mahmood and Shafique (2008) mentioned in their studies that "consulting with subject experts" was the most common method (mean=4.32), followed by "reading the latest books" (mean=4.29) and "newspapers" (mean=3.80). "Discussion with colleagues" (mean=3.75) and "participation in professional seminars" (mean=3.58) was ranked 4th and 5th. However, Mostofa (2013) indicated that the telephone and email were the main methods to obtain the latest information. Moreover, Suriya, Sangeetha and Nambi (2004) concluded that the type of search made by majority of the humanities scholars was "search by subject" (57%).

2.8.1 Locating the Information

For locating the source of information, Watson-Boone (1994) discovered that the humanities scholars preferred to use library catalog to locate past information. Hence, the humanities scholars rarely use secondary information service and bibliographic tools. This finding was similar to Romanos di Tiratel's (2000) study. He also affirmed that most of the humanities scholars at the Universidad de Buenos Aires, Argentina visited library regularly for information. The humanities scholars also like to consult with their academic colleagues and experts, read publications and use citations from articles, books and journals. This means that humanities scholars prefer informal and semi-formal channels to locate their desired information.

Likewise, Suriya, Sangeetha and Nambi (2004) ascertained that most of the humanities scholars (38.12%) went to the library several times in a week to search for information. Although Bronstein (2007) found that the humanities scholars did not rely on libraries bibliographic databases, they relied on informal network of colleagues. Conversely, a different result was found by Tahir, Mahmood and Shafique (2008) where the use of departmental library was ranked first (mean=4.17), use of personal collection was ranked second (mean=4.14) and purchase from bookstores was ranked third (mean=3.58). The use of university library was ranked fourth (mean=3.48) as a source of information. There are many sources or locations for information among humanities scholars because of wide topics and materials needed, Stone (1982) suggested that inter-library lending is vital as it is impossible for one collection or library to satisfy the total needs of humanities scholars. In addition, Mostofa (2013) discovered that humanities scholars preferred the Internet (47.8%) in finding their general information, followed by bookshops and/or colleagues, all at 22%, and the rest of the percentage was about using their own experiences. Most recently, Kumar (2015) analyzed the information-seeking

behaviours of the members of faculty of Arts, Chaudhary Charan Singh University, India. The majority of faculty members prefer to seek information in library, where they visit the library once in a week followed by daily visit.

2.8.2 Location of Information-seeking

When it comes to the location or place where humanities scholars conducted their information-seeking activities, Wenderoth (2007) mentioned several places such as Lutheran School of Theology and McCormick Theological Seminary in Chicago that they preferred to conduct their research at inaccessible location - not in the seminary library. Additionally, Tahir, Mahmood and Shafique (2008) claimed that in their study, most of the humanities scholars at the University of the Punjab, Pakistan, conducted their information-seeking activities at their home (mean=3.78) and very few went to the university library to seek for information (mean=2.75). Comparable finding was also learned by Mostofa (2013) where most of the faculty members at Darul Ihsan University, Bangladesh preferred to conduct information-seeking activities at their homes compared to their departmental library and offices.

Bhatti (2010) mentioned in his study at the Islamic University Bahawalpur that majority of the faculty members in the Faculty of Arts, Islamic Learning, Education, and Faculty of Science preferred to seek information at their offices and homes rather than at libraries for their academic and research work. In addition, Dalton and Charnigo (2004) discovered that the high speed Internet in the office was considered as the main reason why the historians at history departments of universities in the United States preferred to seek information from their offices. However, Sukovic (2008) found that the reason why humanities scholars prefer to access materials at their homes and offices is because they feel convenient and ease to access and manage the printed and electronic

there. Likewise, Tahir, Mahmood and Shafique (2010) found that majority of the humanities scholars at the University of the Punjab, Lahore, Pakistan have computer and Internet access at their homes and offices. Thus, most of them seek information and access the computer and Internet at their offices and homes. On the contrary, Patitungkho and Deshpande (2005) found that the scholars at Rajabhat University, Bangkok preferred to use the Internet at their homes to seek information for their educational tasks.

2.8.3 Format of Information Sources

The format of the information comes in many forms, from printed materials to electronic materials (Bhatti, 2009). The use of different formats reflects the difference in preference especially among humanities scholars. For electronic materials or electronic texts, it has been used by humanities scholars since Index Thomisticus was introduced in 1949 by Roberto Busa (Hockey, 1994). The electronic texts were widely used in parallel with the introduction of the Internet, and. the library started to gather and offer scholars access to electronic texts. Romanos di Tiratel (2000) revealed that 43.1% of the humanities scholars preferred printed books to journals, 23% preferred journals and 33.9% showed equal preference. Besides, high percentage of preference for citation was from books compared to journals. It was also acknowledged that the humanities scholars wanted to write their research paper from the same sources.

However, Romanos di Tiratel (2000) stressed that the humanities scholars preferred journals over books to satisfy their information needs in finding citations and to be updated with the latest information. The preference did not reflect the favored format. Besides providing journals (updated periodicals than monographs), many humanities scholars had to acquire books by themselves or by research subsidies. Also, printed

journals were the preferred publication for research compared to electronic journals which were preferred for informal exchange of information with colleagues as stated by Ellis and Oldman (2004).

Likewise, Tahir, Mahmood and Shafique (2008) revealed that most of the humanities scholars preferred printed materials (77%), while electronic materials only comprised of (39%.) and audiovisual materials mentioned as the last preference. Xuemei (2010) also found that humanities scholars depended on printed book format as their primary resources but at the same time their use of electronic sources is increasing. Humanities scholars are less favored to use the electronic resources because they had difficulties in organizing the collected electronic resources. When compared with junior and senior scholars, findings showed that the junior scholars have the tendency to use electronic resources more than the senior scholars. The reason for the low usage of the electronic resources was because of the perception of usability and availability of information in this format. Ellis and Oldman (2004) mentioned that many humanities scholars preferred to use both printed and electronic format for a better outcome for their research. The scholars also did not believe that the printed format will be completely replaced by electronic format.

Most recently, Nicholas and Williams (2010) showed that even though the monograph was the major conduit of research information for historians, they are embracing e-journal databases with some alacrity, albeit as part of a much wider array of information seeking behaviours than those adopted by the scientists. Thus, the old scholarly communication textbook mantras (scientists primarily communicate through articles, historians through monographs) are rapidly breaking down. Kumar (2015) found that the humanities scholars preferred to use various types of formal, informal and

electronic information sources. Internet services/resources and e-mail used by most of the faculty scholars, followed by e-journals, and eBooks. They preferred CD-ROM Database, E-thesis, Online database as an electronic information resources.

2.8.4 Language of Information Sources

Language plays an important role in information-seeking activities as it contributes to the understanding of the information-seeking. In 1987, Broadus indicated that the English materials got higher notification (82.3%) by humanities scholars compared to other languages according to their citation at National Humanities Center, North Carolina, USA. Moreover, a study conducted by Cullars (1989) in the library of the University of Illinois showed the highest percentage for French and German languages, in French and German literary monograph citations.

Alike result was also shown in another study by Cullars (1992), where English language was the highest percentage, and was preferred by the American researchers in the citations of monograph in the fine arts. Similarly, Romanos de Tiratel (2000) stressed the importance of language, especially the mother tongue language as preference language for their material of information-seeking. The result from Romanos study towards Argentine humanities and social science scholars at the Universidad de Buenos Aires, Argentina showed their preference for mother tongue language (Spanish) as their sources of materials. Although the humanities scholars are fluent in two to four of other languages (English and French), they preferred the materials which used or translated into their native language. The libraries were urged to buy the main sources in their native language or if available, the bilingual source, as suggested by Romanos de Tiratel (2000).

However, Tahir, Mahmood and Shafique (2008) showed that the native language Urdu, ranked the second highest preferred languages as (37%) were for research and teaching materials compared to English language which was (45%) ranked as first, followed by other languages (11.3%) such as Arabic language. This is not a surprise because several staffs graduated from English speaking countries. They are therefore considered native speakers of English.

2.8.5 Tools or Channels of Information

Romanos de Tiratel (2000) identified the tools or channels for obtaining the desired information among humanities scholars in the United States and Great Britain. They were limited to the use of bibliographic tools and secondary information services, consultations with colleagues and experts, tracing of citations found in the books and journals, and the use of library catalogues to locate previous identified materials. Whereas, in his study on the information-seeking behaviour of Argentine humanities scholars, he found that most of them used library services as formal channels, like using catalogues, consultation with librarian and bibliographies. They used specialized journals, publishers, and bookshops as semiformal channels. Also, they made consultations with their colleagues as informal channels. Meanwhile, for their current awareness, they used bibliographies, selective dissemination of information and libraries as formal channels. Whereas, they used specialized journals, publishers, bookshops, meetings or congresses, and courses that represented their semi-formal channels. However, consultations with colleagues represented their access as informal channel.

In 2008, Tahir, Mahmood and Shafique discovered that most of the humanities scholars preferred "personal meetings or face-to-face discussions" (mean=3.98). Other channels of communication mentioned were electronic mail (mean=3.13) and telephone (mean=2.96). Most recently, Mostofa (2013) showed that contact with experts, telephone and email were the main channels for obtaining the latest information. Romanos de Tiratel (2000) also indicated that all humanities scholars used library as the main method to obtain information especially materials that are unavailable elsewhere. He also found that most of the humanities scholars consulted colleagues and specialized literature without bibliographies. Humanities scholars preferred to examine journals and then consult with colleagues for current awareness purposes. Bibliographies played intermediate role in the current awareness process. They preferred to consult citations in books or journals, and were not used as formal accessing tools for specialized literature. Moreover, the humanities scholars went to the library for materials recommended by colleagues or cited in journals, but generally ignored the library catalogues or available bibliographic tools for a subject search. Tahir, Mahmood and Shafique (2008) also showed that "consulting with experts in the subject field" was the highly preferred method by the humanities scholars, followed by "conversation with colleagues". "Library catalogues" and "attending conferences, seminars, and workshops" were given equal preference. Recently, Kumar (2015) emphasized that the humanities scholars used internet searching method for keeping abreast of current development, followed by e-journals, e-mail, and scanning of current literature.

2.8.6 Types of Information Resources Used

There are two categories of information resources used for teaching and for research. For teaching, Tahir, Mahmood and Shafique (2008) mentioned that humanities scholars preferred to "use books" where books were ranked as the most important resource for

teaching. This was followed by "consultation with knowledgeable people or experts in the subject field", and "discussion with colleagues", while, "general books" and "textbooks" were ranked as 4th and 5th. Besides, journals, research reports, bibliographies, newspapers, proceedings, theses, and dissertations were considered as less important.

In addition, Mostofa (2013) mentioned in his study that half of the humanities scholars preferred to use formal information frequently. Half of the respondents fulfilled their research and academic needs by books, 30% did so by periodicals and the rest fulfilled their demands through online resources. For the type of information resource used for research, Tahir, Mahmood and Shafique (2008) stated that "consultation with knowledgeable persons or experts in the field" was ranked as the most important, followed by "reference books", and "discussion with colleagues". "General books" was ranked 4th, while, "journals" and "textbooks" were ranked 5th and 6th. It is clear that the humanities scholars had given a similar importance to many of the resources used for both teaching and research.

Education for Change Ltd, SIRU (University of Brighton) and The Research Partnership (2002) found that majority of the humanities and art scholars ranked books (93%), and paper refereed journals (84%) as the important sources of research. While, Tibbo (2003) found out that the most used methodologies among the historians were the traditional methods which were used for finding primary sources. 98% of the historians revealed that they located the resources by succeeding citations from printed materials.

2.9 Electronic Resources Used by Humanities Scholars

Studies about electronic resources users persist to be a central topic of library investigation, because by studying the information-seeking behaviour of definite groups of users, it leads to the improvement of many services in the library. Various studies regarding the information-seeking model of the humanities scholars were discovered from the literatures of library and information science. The Internet and other current facilities in this field are well known. The subsequent evaluation of literatures available throughout the past ten to twelve years is enough to comprehend the usage blueprint and behaviour of humanities scholars concerning contemporary electronic information technology.

2.9.1 Electronic Resources Used in Developed Countries

In the early advancement of the Internet era, Bates (1996) found that online databases were not used by the humanities scholars at Getty Research Institute in Los Angeles as expected because of the complex search language and the deficiency of existing variables and desired information. A fascinating note was taken about the scholars - they thought nothing will be gained from databases, and they are experts in their fields and did not need anything to help them learn more. McCann (1997) found that sum total of 63% of humanities scholars and social science scholars at the University of South California (USA) showed some usage of electronic publications, whereas 74% revealed that they believed electronic publications will be essential to their discipline in the subsequent five years.

In addition, Delgadillo and Lynch (1999) stated that most researches were conducted before the prevalent impact of the Internet in the 1990s. Libraries had databases, catalogues, as well as abstracts online in the 1980s. However, the sudden increase in the

use of the Internet and the quick growth of textual resources online had not happened until then. In the earlier explanations of materials and formats used by humanities scholars, there was little use of online texts. Humanities scholars utilized computers for word processing from the middle of the 1980s. However, the accessibility of advanced computer technologies is yet to change their behaviours, even though the technologies have altered the methods at which most scholars generated the result of their research, such as academic monograph. Even though humanities scholars got used to the new technologies, they got used to it very slowly. Delgadillo & Lynch (1999, p. 248) mentioned "*They have yet to confront the issues raised by digital collections, electronic journals, and the changing nature of research libraries within the context of a global digital society*".

Massey-Burzio (1999, p. 637) searched on the degree to which faculty of humanities at John Hopkins University, Baltimore (USA) cherished information technology and saw its connection to their study and teaching. She generalized that they "*definitely feel the pressure to use and deal with technology*". Although the humanities scholars did not feel comfortable reading from a computer screen for a long period, they acknowledged the benefits of computer searchers. In addition, a citation investigation of the United States publications in history published between 1997 and 2000 indicated *"Although librarians and archivists continue to provide electronic access to scholarly online journals, primary sources, and rare secondary materials, these efforts do not play a significant role in the cited research of the History community. .... found only eight historians, in a pool of over 192, who cited electronic resources in U.S. publications between 1997 and 2000"* (Graham, 2000, p. 3).

Ten years longitudinal research of a collection of humanist's scholars at Carnegie Research University I, USA by Wiberley and Jones (2000, p. 429) showed that the older scholars adopted the latest technology at a slow pace. *"They normally began with the OPAC in their home library; then adopted word processing; next, while on administrative assignment, became regular e-mail users; and finally, did their own (occasional) searches on bibliographic databases"*. However, younger scholars used electronic information technology easily compared to older scholars. The usage of digital media is considered as secondary sources rather than as primary sources by humanities scholars. Moreover, Wiberley and Jones (2000) mentioned that humanities scholars tend to work alone, they did not have enough time to learn about information technology. The lack of time among humanities scholars to learn information technology was also stressed out in the earlier studies.

In 1995, Adams and Bonk mentioned that the obstacle to use the electronic information among humanities scholars at the State University of New York was due to lack of time. Also, a study towards humanities scholars of Modern Language Association of America by Shaw and Davis (1996) reported that more time was needed to learn computer skills. Correspondingly, Andersen (1998) discovered that the main obstacles to using the electronic information are lack of time and the concern of spending more time to learn and use computer and/or electronic technology. Another related concern between working alone and lack of time was highlighted by Thorngate (1988) when he pointed out that even though the scholar can do two tasks concurrently, it is always impossible, difficult and counterproductive in academic tasks. Therefore, most humanities scholars preferred to talk with other scholars for their primary sources and literature reference (Wiberley & Jones, 2000). Reed and Tanner (2001) discovered that the humanities scholars in Faculty of Fine Arts at Tech University, Texas (USA)

persisted to use the common paper products despite the remote access to the electronic edition of similar products were obtainable. Majority of them believed that books (75%) were essential for their study in relation to the electronic databases (20%). The main sources of data were libraries (90%), individual library (81%), colleagues and friends (69%), Internet (65%) and bookstores (44%).

Humanities scholars thought of the digital media as secondary sources rather than primary sources. Humanities scholars were more likely to utilize digital media in secondary sources than they did it in primary sources. Humanities scholars regularly searched the online library catalogues, repository web sites bibliographic databases, and general search engines in the pursuit for secondary sources (Palmer & Neumann, 2002).

Education for Change Ltd, SIRU (University of Brighton) and The Research Partnership (2002) found that only 22% of researchers in the United Kingdom, Wales and Northern Ireland saw electronic journals as well as other electronic information activities were important. However, 43% always used them and 57% anticipated to make use of the electronic journals more, together with 12% who did not use them. 72% of the arts and humanities scholars perceived that physical contact to the sources of information was very essential, and of those, 12% agreed that such contact would boost their importance in the future.

While, Rose (2002) did a research on the technology's influence on the way art historians' use the information. The research showed that 40% of the humanities respondents used the electronic journals. The computer was frequently used for CD-ROM, e-mail, drawing programs for creating maps and plans, resources analysis, and

images storing. This means that online catalogues were very important sources used by the respondents especially to locate the information.

Tibbo (2003) carried out a study from 68 United States universities comprised of 700 historians, to discover how they gather primary resource in the digital period found out that 80% of the historians used their personal university's OPAC; 67% used other institutions' OPACs through the Internet; 58% utilized bibliographic utilities like RLIN and OCLC; 63% searched for information directly on the depository web sites; 44% surfed the web to find primary sources through a search engine. Tibbo finalized that it was a necessity to educate users about using the electronic search procedures. A research differentiated the usage of the databases and e-journals among scholars in diverse disciplines by Talja and Maula (2003), they had categorized humanities scholars as "low level users."

Dalton and Charnigo (2004) discovered that the casual methods of gathering information, particularly references in the studies of other scholars as well as book reviews, persisted to be important for the historians. Internet surfing was still significant, and paper source was still the primary format of information that was utilized. Although majority of the historians equally utilized electronic sources, only 16% said they never used them. The scope and indexing of the source and software were the barriers that they faced when they used electronic sources. One-third of the dissatisfactions were about the scope and sources. They did not include the information need or materials. The sources did not also include the dates needed; they were not deliberately ample, nor did it present the full text. On the other hand, a third of them were not satisfied with the indexing terms or the indexing in the overall problems. They

were correlated to the software or equipment that comprised of slow response time, poor search engines, trouble in navigation, and recurrent format or interface alterations.

Ellis and Oldman (2004) conducted a study on humanities scholars at 14 selected UK universities (46 respondents) and few overseas universities (14 respondents), they learned that when it comes to using the electronic information, humanities scholars preferred the electronic journals and electronic media. The electronic journals and media were cheaper, easy to gather and distributed to all scholars and also faster to publish compared to printed journal. It is also believed that many humanities scholars used the electronic media not only to publish their research, but for faster exchange of information and bibliographic particulars and for the informal networking with other scholars. But few humanities scholars did not use the electronic media because of low proficiency of the Internet Technology knowledge. Likewise, the electronic publication was not preferred due to the copyright concern, uncertain ownership of articles and plagiarism. Moreover, it was reported that over half of the humanities scholars used the Internet, the World Wide Web and the electronic library to seek for information because of the possibility to get more materials. But there is a concern for those who were not computer literate got stress while using the electronic library. Furthermore, the humanities scholars did not prefer the electronic library fully, but digitization of some materials was encouraged due to the accessibility. The disadvantages of the electronic information discovered were lack of mobility of the electronic texts, expensive to buy, inability to browse and not enough self-confidence in using the information technology.

In a study by Buchanan et al. (2005) at the University of Waikato, New Zealand, found that many different experiences with the web were reported by all the humanities scholars with the digital libraries, catalogues as well as the web mostly. There was a

connection between strong search skills, high utilization and a higher level of satisfaction in the aspect of the digital library systems. Furthermore, Xuemei (2005) conducted a study at Tennessee State University that claimed that in the process of information-seeking, an important role was played by the Internet resources. The World Wide Web was the mainly utilized Internet resource. The scholars of social sciences utilized more electronic materials compared to the humanities scholars. Bass et al. (2005) stated that the improved usage of the electronic sources and the partial usage of the individual reference and monograph collections. Prescribed information resources utilized by the scholars at the University of Washington (USA) comprised of books, journals, databases, library catalogs, articles in well-known and scholarly press, as well as the Internet. Many Internet search engines - Google They also used many respondents in their research. After conducting interviews with 25 humanities scholars, Rimmer, et al. (2006) asserted that they regularly called for the context and complete text of the real documents. However; other disciplines were focused more on the content, despite of the structure. In addition, humanities scholars progressively utilized the digital materials as a way to boost their information-seeking practices in addition to utilizing the digitized artifacts.

Harley (2007) in his study of 831 social sciences and humanities scholars in the US higher education institutions, mentioned that the social-science and humanities scholars employed digital materials in their teaching in order to boost their students' learning. as primary sources, and the faculty personal collections as second sources. The incorporation of primary materials into their instruction were to enhance their teaching strategies. Most of them usually employed Google-type search engines to search for resources, together with the images. Private collections owned by the faculty were the second most regular source of materials. Unrestricted or free image databases online

journals were high on the list of favorite methods to search for wanted resources. However, several concerns were raised on the use of digital materials such as the issue of availability and reliability. Also the issues of how to use, manage, and reuse the digital resources for academic teaching.

In another survey at the University College of London (UK), Warwick et al. (2008) studied information materials like libraries, archives, museums and research centers, and the web pages that give information about the information need that are important for humanities scholars. Humanities scholars saw the website of university library as the best essential resource compared to Google. Besides, continuous funding to both digital and printed materials was still required since the digital materials did not replace the demand of printed materials.

In the work of Sukovic (2008), humanities scholars who worked in universities in a major Australian city used "netchaining" to search information, to support access to a physical compilation, to verify information and for current awareness. Netchaining merges the areas of networking, browsing, chaining, as well as web surfing in a novel pattern. It is all about shaping and establishing online information system that connect sources and individuals. Based on a web-based study of 169 humanities scholars in North America, Toms and O'Brien (2008) discovered a noteworthy dissimilarity from earlier studies that practical reticence within humanities scholars to utilize electronic sources. It was reported that web search tools were utilized as frequently as library catalogues, as well as finding helps for citing both primary and secondary resources.

2.9.2 Electronic Resources Used in Developing Countries

Anjum (1978) discovered in his study on humanities scholars at University of Punjab, Pakistan, the following: a) informal sources of information were less fascinating for humanities scholars; b) most of the humanities scholars were vigorously involved in research (68.42% had published papers and 45% had published books); c) more time were spent on individual study and research by humanities scholars compared to social scientists and scientists; d) original texts (78.94%), textbooks (63.15%), journals (60.25%), and edited books (57.89%) were the most sources of information used; e) humanities scholars used more library sources and staff services compared to the social scientists and scientists; f) the sources of the documents were from bibliographies (92.11%), catalogues (84.22%), and librarians (78.95%); g) most of the humanities scholars (80.9%) had their own personal collections; and h) generally, the services offered by the university library and the librarians were not completely satisfied with the humanities scholars.

Romanos de Tiratel (2000) found that there were three channels to access the information for research and current awareness - formal, semi-formal and informal. In accessing information for research, most of the humanities and social-science scholars at the Universidad de Buenos Aires, Argentina went to the library to use catalogues, bibliographies and to consult with the librarian as their formal channel. For semi-formal channel, they preferred specialized journals, publishers and bookshops. For informal channels, consultation with their colleagues became their choice. However, in accessing information for current awareness, the preferred formal channels were bibliographies, selective dissemination of information and libraries. Though, specialized journals, publishers and bookshops, meetings or congresses, and courses were the channels for semi-formal. For informal channels, similar answer was given - consultation with

colleagues. In addition, the means used to access information for research among the humanities scholars showed a preference towards consultations with colleagues, and reading and scanning journals. For current awareness, reading and scanning journals were more preferred than consultations with colleagues.

Moreover, Romanos de Tiratel (2000) found out that the main reason why humanities scholars went to the library was to find previously identified materials, where 66% of them visited the library once or twice in a week. Additionally, 27% of the humanities scholars used the bibliographies and secondary services. The study also showed that the humanities scholars preferred books (62%) as their formats of materials used. Articles in journals with 22.2% were ranked second, newspapers (5.5%), other (5.4%), reports (3%), and lastly, conference presentations with 1.9%. For the citation of source-biographic relationship of the materials, the cited sources were 35.7% of the total references cited. Lastly, even though there were differences in terms of the quantity and quality of the resources and working environment between the developed and developing countries, there were still similarities. The similarities comprised of preferences in information needs, information access behaviour, and availability of the materials. Subsequently, the finding and suggestion about the information-seeking behaviour from the developed countries can be applied in the developing countries.

Furthermore, Ileperuma (2002) found that the arts scholars at six Sri Lankan universities collected information for three essential categories of activities such as research, teaching and administration. Most of the arts scholars tried to be updated with the IT resources by seeking information from the computer, but at the same time they allocated 40% to 45% of their time at the library. Likewise, Baruchson-Arbib and Bronstein (2007) discovered that the electronic resources were used less than the books,

and 136 journals of Jewish humanities scholars in occupied Palestine. The research summarized that the humanities scholars on one aspect were disinclined to discard their conventional methods. They did their study on printed materials and search new information through surfing the library stacks and chaining citation. On another aspect, they utilized their works and practices of new information technologies that can help their study. They would not utilize information technology materials because of the availability. The sources of the electronic information and the information technologies have immense possibility to improve their research. It would be an advantageous method for the libraries to plan information services and materials that assists the research operations and the information behaviours of the humanities scholars.

Additionally, Pakistani scholars, Tahir, Mahmood and Shafique (2008) discovered that the preferred method of attaining information was consulting with the experts on the subject. This is followed by discussion with colleagues, library catalogues, and attending conferences, seminars and workshops. Furthermore, the finding for the most important information resources for teaching was reference books, followed by consultation with experienced individuals or experts on the subject, and discussion with colleagues. The most important information resource for research was consulting with the experts on the subject, followed by reference books, and discussion with colleagues. English was the most preferred language as 45% of the samplings chose English as the preferred language for teaching and for research materials. Urdu was the second (37%) preferred language, followed by other language (11.3%) such as Arabic. In addition, most of the humanities scholars acquired their information from departmental sources such as libraries, and uphold their own collection or library. Printed information materials were more favored than audio-visual information materials which were least favored. Moreover, majority of the humanities scholars chose home as a place to do

certain information-seeking activities, followed by departmental library, offices and a university library.

The most used medium of communication was the face-to-face or meeting personally, followed by e-mail. Consultation with experts on the subject was the most frequent way to keep up-to-date with recent knowledge in their subject, followed by reading the latest books, reading newspapers, discussion with colleagues and participated in professional seminars. Also, the main purpose of information-seeking was for teaching or lecture preparation. This was followed by other reasons which were to guide researchers, students and to support research work. Lastly, the most common barrier in information-seeking was that the required material was not available, the information was dispersed in vast sources and the information sources were very costly.

Bhatti (2009) revealed that most of the scholars (88%) at the Islamia University of Bahawalpur, Pakistan went to the library for its reading resources 68% for literature search or reference collection and 54% for research. For types of material, 56% reported that the book in the library was inadequate, the Internet inadequacy (40%), non-book material inadequacy (36%), other reference materials inadequacy (34%), and periodical inadequacy (32%). A total of 54% regarded discussion with seniors and colleagues as their main informal channel for information-seeking. 27% referred to specialists and expert on the subject matter. 22% referred to informal channels of seminars, conferences, and workshops. Only 8% referred to librarian. Majority of the available materials in the library were in English language (75%), followed by Arabic, Persian, Urdu and other languages. 81of the respondents were not satisfied with the subscription of the journals and periodicals which were inadequate. Moreover, 90% were not satisfied with the indexing and abstracting services and interlibrary loan services.

Hence, majority of the scholars requested for more current international journals, books, other reference materials, electronic books and Internet access. Most of the scholars preferred to seek information at their offices and homes compared to the library.

In terms of the barriers faced during information-seeking at the library, the highest percentage (76%) mentioned was deficiency of computers, 73% said that there was lack of time (overworked), 64% for unavailable materials on the library shelf, and 61% for shortage of latest journals. While, majority of the scholars reported that they were satisfied with the validity and reliability of the information sources provided. Consequently, majority showed that they were satisfied to some extent, 36% showed total satisfaction and more than one quarter showed dissatisfaction.

Mostofa (2013) revealed that 43.5% of the humanities scholars at Darul Ihsan University in Bangladesh frequently used formal information resources, 34.8% used them sometimes, and 21.7% used them very frequently. In fulfilling their information needs for research and academic, 47.8% said that they referred to books, 30.4% referred to periodicals and 21.7% referred to online information. Their seeking behaviour for information portrayed that they used the library resources for teaching (56.5%), for research (30.4%), and the rest is for seeking journals purposes. For communication channel, 39.1% used telephone to communicate with the expert, 30.4% communicated via e-mail and another 30.4% by visiting other scholars. Besides, the preference sources for seeking general information showed that 47.8% used the Internet, 21.7% went to bookshops, 21.7% referred to colleagues, and 8.7% used their own experience.

The barriers faced by the humanities scholars showed that 47.8% of them did not have enough time, 13.3% could not locate the identified resources, 13% did not have enough time to search, and 8.7% used the wrong keyword search. In addition, 47.8% responded that they preferred to seek information at home, 39.1% at departmental library, 8.7% at offices or at other places and 4.3% at the public library. In conclusion, there are differences between the information-seeking behaviour between the developed and developing countries. The differences are listed below:

Table 2.2: Electronic Resources Used in Developing and Developed Countries

N	Author	Electronic Resources Used in Developing Countries.
1	Anjum (1978) (Pakistan); Bhatti (2009) (Pakistan)	Humanities scholars still prefer informal resources than other resources.
2	Anjum (1978) (Pakistan); Bhatti (2009) (Pakistan)	Humanities scholars use the library resources and the librarian's services more than other disciplines.
3	Anjum (1978) (Pakistan); Tahir, Mahmood & Shafique (2008) (Pakistan)	Most of the humanities scholars have their own personal collections.
4	Anjum (1978) (Pakistan)	The services offered by the university library and the librarians are not completely satisfied.
5	Romanos de Tiratel (2000) (Argentina); Baruchson-Arbib & Bronstein (2007) (Palestine); Tahir, Mahmood & Shafique (2008) (Pakistan); Mostofa (2013) (Bangladesh)	Humanities scholars prefer books as their format of material used.
6	Ileperuma (2002) (Sri Lanka)	Humanities scholars tried to be updated with the Information Technology resources.
7	Baruchson-Arbib & Bronstein (2007) (Palestine); Tahir, Mahmood & Shafique (2008) (Pakistan)	Humanities scholars used electronic resources less than books and journals because humanities scholars still depend on the printed materials.
8	Bhatti (2009) (Pakistan); Mostofa (2013) (Bangladesh)	Humanities scholars complain that they do not have enough time to seek for information.
9	Baruchson-Arbib & Bronstein (2007) (Palestine); Tahir, Mahmood & Shafique (2008) (Pakistan); Bhatti (2009) (Pakistan)	Humanities scholar complained about the lack of availability of preferred resources remains the great obstacle in their use of electronic technology.
N	Author	Electronic Resources Used in Developed Countries.
1	Wiberley & Jones (2000) (USA)	The junior humanities scholars use electronic resources more than the senior scholars.
2	Delgadillo & Lynch (1999) (USA); Wiberley & Jones (2000) (USA); Talja & Maula (2003) (Finland)	Humanities scholars get used to new technologies with very slow rate.

Table 2.2, continued

3	Bates (1996) (USA); Massey-Burzio (1999) (USA); Talja & Maula (2003) (Finland); Ellis & Oldman (2004) (UK); Buchanan et al. (2005) (New Zealand)	Humanities scholars feel the pressure to use and deal with technology.
4	Thorngate (1988) (Canada); Adams & Bonk (1995) (USA); Shaw & Davis (1996) (USA); Andersen (1998) (USA); Wiberley & Jones (2000) (USA)	Humanities scholars tend to work alone - do not have enough time to learn about the Information Technology.
5	Wiberley & Jones (2000) (USA)	Humanities scholars prefer to talk with other scholars for their primary resources and literature reference.
6	Reed & Tanner (2001) (USA)	The library persists to use common paper products despite that the remote access to the electronic edition of the similar products were obtainable.
7	Bates (1996) (USA); Wiberley & Jones (2000) (USA); Palmer & Neumann (2002) (USA)	Humanities scholars think about the digital media as secondary resources to be used than as primary resources.
8	Bates (1996) (USA); Graham, (2000) (USA); Reed & Tanner (2001) (USA); Dalton & Charnigo (2004) (USA)	Humanities scholars prefer books as their format of material used.
9	Dalton & Charnigo (2004) (USA)	Since 2004, humanities scholars start using the electronic resources equally with the printed materials because of the significance of the electronic resources in their information-seeking.
10	Rimmer, et al. (2006) (UK)	Humanities scholars start using the digital materials to boost their information-seeking practice and to utilize the digitized materials.
11	Harley (2007) (USA)	Humanities scholars employed digital materials in their teaching in order to boost their students' learning, as a primary resource and the faculty personal collections as a second resource.
12	Dalton & Charnigo (2004) (USA); Ellis & Oldman (2004) (UK); Harley (2007) (USA)	The main difficulty in using the electronic resources is the reliability, availability and the expenditure of the required materials.
13	McCann (1997) (USA)	Humanities scholars believe that the electronic technology will be helpful in future research.
14	Xuemei (2005) (USA)	Humanities scholars have inadequate skill in using the ICT compared to other scholars and they need training.

2.10 Barriers to Information-seeking

There are many barriers or obstacles to information-seeking which prevent humanities scholars from getting their information need. The main barrier was lack of availability and accessibility of sources, materials and services of information as highlighted by Bates (1996), Romanos de Tiratel (2000), Meho and Haas (2001), Quigley et al. (2002), Buchanan et al. (2005), Tahir, Mahmood and Shafique (2010),

Xuemei (2010) and Adeniran (2011). There were also lack of access to certain older and foreign literature, CD-ROMs, online citation indexes, library instructions, state and/or government publications, and networking connection problem (Starkweather & Wallin, 1999; Quigley et al., 2002). Not only was there deficiency of the sources, there was difficulty in identifying, locating, and obtaining or retrieving. This confusion or inadequacy of search systems and indexing of materials also became the first encountered barriers as stressed by Romanos de Tiratel (2000), Quigley et al. (2002) and Buchanan et al. (2005). Bates (1996) and Buchanan et al. (2005) identified barriers in the search language that prevented humanities scholars from obtaining information need, especially words or terms that are vague or intangible in other languages and indexing terms. Bates (1996) specifically found that online databases were not to be used by the humanities scholars because of the hardness of the search language and the deficiency of existing and variable desired information. A fascinating note was taken by the scholars which they thought was gained from databases and they are experts in their fields and did not need anything to help them to know more.

Ucak and Kurbanoglu (1998) presented clear example regarding this matter in their research. They found that in the field of science and engineering defined terminology in the databases, handbooks, indices and abstracts made the search much easier. However, in the humanities domain, ambiguities and uncertainties in the terminology used, made the information-seeking more difficult. Besides, Romanos de Tiratel (2000) found that the loss cases such as theft, mutilation, destruction of materials and also long delay of time from requesting and receiving desired materials contributed to the barrier in information-seeking. Other than deficiency, Xuemei (2010) also identified that the overload of information sometimes made information-seeking difficult in finding specific and accurate information need.

The humanities scholars also faced difficulties and barriers in their information-seeking using the electronic resources, which were common to scholars generally. For example, Adams and Bonk (1995), Starkweather and Wallin (1999), Quigley et al. (2002), Ibrahim (2004) and Xuemei (2010) reported that there was a lack of time was the main barrier that limited their use of library collections. Other barriers reported in these studies included lack of awareness and knowledge low-level skills about the electronic resources, especially unfamiliarity with the use of a library information system, contents, interface and databases (Williams, 2004; Xuemei, 2005).

There was also difficulty in managing and organizing manually the collected electronic sources (Xuemei, 2010; Mostofa, 2013) identified in contributing to the barriers. Moreover, Wiberley and Jones (2000) and Xuemei (2010) mentioned that the difficulty (inferiority of readability) in reading the electronic sources and materials. There was more preference for printed materials than the electronic ones, because humanities scholars could easily access, browse, and manage the printed materials. In addition, Lee (2005) stated that the inability to modify the printed material according to the needs of individual particularly to concurrently seek numerous sub-disciplinary library collections. Lastly, Xuemei (2010) pointed out that the individual constraint such as too busy, too old (age) or too difficult to effectively learn how to use the electronic information resources was one of the obstacles in information-seeking, and/or using the electronic sources. Table 2.3 tabulates the barriers as highlighted by the respective researchers.

Table 2.3: Barriers to Information-seeking

Author	Barriers
Lack of Access and Availability	
Bates (1996); Buchanan, Cunningham, Blandford, Rimmer & Warwick (2005); Adeniran (2011)	Difficult to obtain materials that were not in the library.
Starkweather & Wallin (1999)	Lack of access to some CD-ROMs, online citation indexes, library instructions, problems with network connections.
Romanos de Tiratel (2000)	Lack of a sufficient stock of books and journals.
Meho & Haas (2001); Tahir, Mahmood & Shafique (2010),	Lack of availability of desired resources and services.
Quigley, Peck, Rutter & Williams (2002)	Lack of electronic access to older literature and foreign literature, insufficient coverage by indexes of journals in certain fields, poor control of government and state publications.
Xuemei (2010)	Perceptions of availability, accessibility and usability.
Loss of Material	
Romanos de Tiratel (2000)	Loss of material (e.g., theft, mutilation, and destruction).
Delay of Request	
Romanos de Tiratel (2000)	Lengthy delay between request and reception of material the amount of time between the request for material and its reception.
Difficulty of Locate and Obtain	
Romanos de Tiratel (2000)	Difficulties in locating and obtaining material like books and journals.
Quigley, Peck, Rutter & Williams (2002)	Information retrieval difficulties; confusing or inadequate search systems, indexing of material.
Buchanan, Cunningham, Blandford, Rimmer & Warwick (2005)	Difficulties early in their use of digital resources in identifying appropriate sources for their areas of interest.
Lack of Time	
Adams & Bonk (1995); Starkweather & Wallin (1999)	Lack of time was a notable obstacle to use of electronic information and resources for humanists and other scholars.
Quigley, et. al (2002)	Lack of time to go to distant library from department.
Lack of Knowledge and Awareness	
Adams & Bonk (1995)	Lack of knowledge.
Starkweather & Wallin (1999); Quigley, Peck, Rutter & Williams (2002); Ibrahim (2004)	Lack of awareness, low skill.
Williams (2004)	Unfamiliar with the databases and contents.
Xuemei (2010)	Usability issue; content organization, interface, and computer system.
Overload of Information	
Xuemei (2010)	Uneven source quality; information overload and were in need of specific and accurate information for their research.
Difficulty of Organizing the Resources	
Xuemei (2010)	Facing difficulties to organize the collected electronic resources.
Mostofa (2013)	Difficult to manage the information manually due to exponential growth of literature and publication programme. The problem of providing timely information is not due to lack of information, but the way in which it is handled to enable the user to fulfill his needs.
Difficulty of Language	
Bates (1996)	Difficulty of search language.
Ucak & Kurbanoglu (1998)	Ambiguities and uncertainties in the terminology used in the databases, handbooks, indices and abstracts.
Buchanan, Cunningham, Blandford, Rimmer & Warwick (2005)	Reluctant to delegate literature searching because of intangible or vague topics which are difficult to express in concise language or indexing terms.

Table 2.3, continued

Lack of Readability	
Wiberley & Jones (2000); Xuemei (2010)	Screen display is normally far inferior in readability to almost any print or handwriting on paper. Humanists would not be making good use of their time if they spent it digitizing sources so that they could read the digitized versions with more difficulty than they read the originals. Reading source material on paper, then, is better than reading it on a screen.
No Modification of Resource	
Lee (2005)	Cannot modify physical collection of resources in the library to meet individual needs especially the need to be able to simultaneously search several sub-disciplinary library collections.
Personal Constraint	
Xuemei (2010)	Personal Constraints; too busy or "too old" or too difficult to effectively learn how to use electronic information resources.

2.11 User Satisfactions with the Academic Libraries Services

Libraries are service-based organizations established to provide relevant information resources as well as quality services for their users' satisfaction. However, Stone (1982) had already warned that it is impossible for only one collection or library to satisfy totally the needs of the humanities studies. Thus, the breadth of topics and the materials a researcher needs through interlibrary lending is essential to the humanities scholars.

According to Jayasundara (2008), user perceptions and expectation studies have become one of the most popular studies in the area of service quality in many academic libraries. The user expectations and satisfaction has been used to determine the service quality which is been seen as critical for service organizations to position themselves strongly in a competitive environment.

Besides, Adeniran (2011) claimed that academic libraries are libraries attached to academic institutions of learning to serve teaching and research needs of students and staff. In process, the library plays a key role in the nation building process. Academic libraries should strive to survive and grow their user base focusing on meeting their users' expectations. Hence, libraries must improve the quality of their services to enable

them face the challenges of information explosion in the 21st century. For assessment of service quality to be effectively carried out in academic libraries, it is imperative to investigate what service quality is to users.

Also, Mohindra and Kumar (2015) stated, the basic philosophy of the library is to meet the variety of information needs of the users' engagement in the academic pursuit and research. Therefore, it is necessary to assess the quality of library services rendered and user satisfaction because the success of any library depends upon how well a service satisfies the demands placed upon by the users. Hence, user satisfaction and library service quality are the ultimate goals of libraries as service organisations. Delivering quality service means conforming to customer expectations on a consistent basis. User satisfaction is related to matching the expectations of the users. Satisfaction of users with the services means that library as a service organisation is successful in rendering good quality services. In the age of information revolution, university library has to play a vital role in formal education environment by providing its advance and quality services to students, researchers, and faculties. Moreover, considering the dynamic nature of library services, it is very important to know the user expectations and their satisfaction towards library services so that quality of library services can be improved and ultimate objectives of the library are met. Therefore, high level of service quality is vital for the success of organisations.

Additionally, Verma and Parang (2015) stressed that one of the most important components of library is library users. To satisfy the user's needs in an academic library is a primary objective of that particular library and its librarian. In an academic library, every year new users came to the university with different aim and expectations and their information gathering habit are also differ from each other.

Sowole (1995) noted that users were portrayed as the raison (reason for survival) of the library. Meeting the information needs of the users entails the provision of the real information materials and services that will fulfill the needs of the users. Simmonds and Andaleeb (2001) stated many factors that may influence the users' satisfaction-competence responsiveness, assurances, resources and tangibles. Sowole (1995) advised the librarians to make the utmost efforts to ensure that their library consumers achieve the best likely satisfaction from the services they gave. Resources are made available by the libraries in order to support the teaching, learning and research procedures, and to give assistance to the users. Simmonds and Andaleeb (2001) posited that, providing excellence services in educational libraries is presently a major issue among academic librarians - they counted the library more in aspect of the provision of contact to quality services than as an ordinary physical place.

Hence, the duties of the libraries and librarians were reassessed as shown in many literatures. They highlighted the provision of quality library services as more significant to the consumers than the ordinary physical library building. From this perspective, Simmonds and Andaleeb (2001) discussed the role of service quality, resources, and users' characteristics in several studies. It was emphasized that gaining access to the information given by the libraries was perceived as more essential than the physical existence of the library. Good service was a competitive requirement for businesses and service establishments. Therefore, assessing service quality is the primary step in retaining the users in the present competitive environment.

When library users are faced with different kinds of alternative avenues of information delivery, some of which are easier, competitive, and cost-effective, the libraries need to reassess the range and superiority of services they offer. This includes developing systems for discussion and cooperation in line with their users' needs and expectations to the highest level. Abagai (1993) stated that the usage of library by the users and their satisfaction with services provided depended on the accessibility of suitable learning resources, accommodation and capable staffs. In additional comment, Abagai (1993) posited that the main aim of many libraries is to support the main institution; such an objective is acclaimed through systematic organization and attainment from all forms of stored information in all fields related to the objectives of the institution, as well as making such information obtainable to the members in the institution.

Simmonds and Andaleeb (2001) argued that by offering quality services and fulfillment to the users, research and academic libraries can differentiate their services through helpful, friendly, and knowledgeable counsels. This includes the best technological materials available because academic libraries users have varying needs and prospect, and it is the duty of the library workers to know these requests and expectations and make effort to fulfill them. Igben (1993) stated that in order for a library to be more efficient, the services it provides should be closely related to the needs of its consumers, ensuring that applicable information resources are offered and/or made available to the users. This will encourage them to pay visit to the library more frequently. Simmonds and Andaleeb (2001) explained that the usefulness of the libraries has always been measured by the available amount of library resources to the users, the quantity of the use of services and materials, and the obvious or quantified satisfaction of the users.

In addition, Yoo-Seong (2009) studied library services based on the users' needs. He noted that users' needs changed constantly, and he recognized the demand to reach out to the users with the latest services. Nnadozie (2006) assessed the services and collected works from the Federal Medical Centre's Library, in Owerri, Nigeria. His finding showed that the library workers were not very active, and there was absent of personalized information services. He generalized that the basic facilities and tools for offering good library services were either obtainable in inadequate quantities or absolutely non-existent - most of the users were not contented with the library.

Martensen and Gronholdt (2003) studied different literatures and surveyed focused groups demonstrating that the key pointer for a library service quality were the collections of printed publications, electronic resources, other library services, technical facilities, human side of user service and library environment. Majid, Anwar and Eisenchitz (2001) revealed that collections, tools and physical facilities were seen as the most vital issues or factors that had large impact on the library activities.

Sureshchandar, Rajendran and Kamalanabhan (2002) discovered that, service quality and clients satisfaction were very related. Users' expectations have improved because of the rapid development of modern information technology, growing generation of innovative knowledge and information accessibility from both printed and online media. The users' satisfaction and optimization of materials have become vital areas for the libraries to increase their awareness particularly the university libraries which focused on the assessment of the users' demands and satisfaction with their services. Users' surveys could provide valuable perceptions of quality service of the libraries. For instance, Texas University libraries carried out focused group qualitative studies in 2001 with the graduate and undergraduate students in order to collect specific information

associated with their satisfaction and confidence in the aid provided at the points of service in the library. The sessions discovered that the users were generally satisfied with the assistance given to them by the professional library workers at reference desks. Equally, they found librarians to be always patient and helpful; however, there were some dissatisfaction pointed out by the respondents.

The results of such studies were being utilized to improve library directional materials and to develop staff training for civic service among the staff (Sureshchandar, Rajendran & Kamalanabhan, 2002). Similarly, King (2005) and Hiller (2001) mentioned that the information demands and expectations are constantly changing in the rapidly altering information scenario. Libraries are required to reorient their services, collections and facilities to maintain pace with these modern trends.

Adeniran (2011) found that the scholars' satisfaction at Redeemer's University in Nigeria was based on the function of the quality of the librarian and library services. It is necessary for the library to advance its services and/or provides high quality services for their users if it wants to face the challenges of the information explosion in the 21st century. Libraries and information oriented services have recognized the users as the most decisive voice in evaluating the quality of services. Therefore, it is inevitable to investigate what service quality is to the scholars. Most of the scholars faced difficulties to obtain materials that were not available in the library. While 58.3% of them agreed that the librarians offered relevant and personalized services. This implied that the scholars' perception of the services of the librarians was satisfactory. The study also showed that the provision of desired information materials, access point, and conducive environment for learning, teaching, and research were important to expand the use of a library. The study confirmed the previous findings of Simmonds and Andaleeb (2001),

Abagai (1993), Martensen and Gronholdt (2003), King (2005) and Hiller (2001). These studies perceived that with qualified and experienced librarians, quality services were given to the scholars who would continually be exhilarated to come to the library again. These studies also showed that if the services introduced to the scholars matched with their needs, provided conducive learning environment to make teaching and research activities convenient, the scholars would be motivated to come back and use the library resources regularly.

In addition, users' feedback is seen as a more consistent factor in testing the usefulness and efficiency of any library. This is the rationale why library client surveys became prevalent in academic libraries throughout the past two decades. Surveys have always been utilized as a tool to evaluate the quality of services and users' satisfaction.

2.12 The Research Gap (Deficiencies in the Study)

Most of the studies on humanities information behaviour showed that there was "relative neglect" of research that focused on the humanities scholars (Stone, 1982), where many authors pointed out there was a little early studies about humanities information behaviour (Xuemei, 2005) and considered fewer than any other disciplines (Line, 1969; Hopkins, 1989; Blazek & Aversa, 1994; Challener, 1999). Thus, the availability of humanities literature is relatively limited (Buchanan et al., 2005).

As long as the information world and the LIS environment were dramatically changing by the ICT revelation via increasing availability of the electronic information such as the internet, it is fundamental to conduct new studies on information behaviour (Line, 2000). Especially, if we know that, most studies of the humanities information behaviours were carried out before the ICT revelation particularly the Internet, which

makes the studies out of date. Researchers believed that these changes may have resulted in significantly changing the patterns of humanities information behaviour at the YU, if we keep in our mind the tremendous development of the ICT environment at the YU.

Moreover, the mainstream of literature search in information-seeking behaviour reflects the Western trends, problems and attitudes. This is due mainly to the fact that there are few studies which have investigated information behaviour in the developing countries. While there is no study conducted in Jordan or in the Middle East. It can be expected that portray of information behaviour for Jordanian humanities scholars would be significantly different from those in the Western countries. Furthermore, most models of the information behaviour conducted in the English-speaking Western countries also did not reflect the Jordanians' information behaviours who speak Arabic and have their own cultures.

However, few previous studies on information behaviour investigated the influence of socio-demographic factors. Accordingly, it is important to investigate the relationship between socio-demographic factors and the information behaviour of the humanities scholars, especially within the ICT-enriched environment in Jordan as an example of the Arab developing countries. On the other hand, the researcher notes that most of the studies of the information behaviour were conducted from diverse perspectives using different approaches and methodologies. The studies concerns were drawn from experienced and inexperienced users. There is a clear gap between the skills of expert librarians and typical users, like the humanities scholars. Hence, there is a current gap between the skills of the humanities scholars and the technologies that they used, which is still not clear on how to improve their lower-level of skills.

2.13 Summary of Chapter 2

This chapter has presented the outline of the relevant literature related to this study. It starts with an introduction and significance of the information behaviour and it has highlighted the traditional and modern information behaviour among the humanities scholars. Geographically, the review is based on the information behaviour studies conducted in the developed countries such as the USA and the UK, and in the developing countries such as Argentina, Pakistan, Sri Lanka and others. Lastly, the barriers faced by the humanities scholars while seeking information were also reviewed. Finally, the chapter highlighted the humanities scholars' perceptions and satisfaction with libraries services.

The reviews show that in the developing countries, local conditions did appear to have a significant impact on the humanities scholars' information-seeking behaviour. It shows that there are various contextual factors that give impact to the information-seeking behaviours and its outcomes. Furthermore, due to the advancement of the ICT, the information-seeking methods of scholars are becoming more effective. Unfortunately, the lack of computer skills among the humanities scholars made them unable to grasp the full advantage of the ICT. Besides, the presented reviews have confirmed that very little attention was given to the humanities' information needs in the Arab countries and in Jordan particularly. Hence, there is a critical need to study the conceptual model of information behaviour in the ICT-enriched environment that reflects the information-seeking behaviour of the humanities scholars in Jordan, as an example.

CHAPTER 3: A REVIEW OF THEORETICAL LITERATURE

3.1 Introduction

Library and information scientists have long been interested in how people behave when finding and using information that they need in their daily work. As a result, they have produced several models of information-seeking behaviour. Among those models are by Aguilar (1967), Wilson (1981; 1996; 1999), Dervin (1983; 2003), Ellis (1989; 1993), Ellis and Haugan (1997), Kuhlthau (1991), Marchionini (1995), Leckie, Pettigrew and Sylvain (1996), Choo, Detlor and Turnbull (2000), Bates (2002), Niedźwiedzka (2003) and Foster (2005).

Further, much of the analysis of literature on the information-seeking behaviour is based upon some general models, which is called "information behaviour" (Wilson, 1996). A model serves as a conceptual tool; a road map to a complex process. Model, however, is a systematic description of the main elements of any structure or process, and it describes the relationship between the elements of a graphic form. In this regard, Ansari (2008) claimed that model helps to understand the intricacy of systems or events, to study intricate skills and to provide a framework within which experiments are conducted and theories are tested.

Wilson (1999) has described the information-seeking behaviour model as a framework for reasoning an issue that might develop into an assertion of the correlation between theoretical recommendations and provide a certain component or an entire flow of tasks that leads to attaining information. Besides, the information behaviour is about activities that individuals may involve when ascertaining their own needs for

information, searching for such information in various ways, and employing or transferring that information (Wilson, 1999) as elaborated in chapter 2.

According to Wilson (1996), there are at least three elements that must be included into a model of information behaviour needs, which are:

a) Information need and its drivers (the aspects that cause rise to a person's perception of need).
b) The aspects that influence the person's reaction to the perception of need.
c) The procedures or actions encompassed in that reaction.

Meanwhile, Taylor (1991) explained that information behaviour is the result of particular elements relating to the use and context of the information. The elements involved are:

a) The assumptions formally learned or not, produced by a defined set of persons regarding the essence of their work.
b) The types and structure of the issues deemed essential and usual by this set of persons.
c) The restraints and opportunities of usual environments within which any group or subgroup of this set of persons functions and works.
d) The conscious, and perhaps unconscious, assumptions made, as to what creates an explanation, or, better explained, a resolution of issues, and what composes information beneficial and valuable in their contexts.

Furthermore, different groups of people may have variations and differences on their information behaviour as clarified by previous literature models. The models of information-seeking behaviour, such as Kuhlthau (1991), Wilson (1996; 1999), Niedźwiedzka (2003) and Foster (2005) are mainly focusing on the personal context and personal cognition of users' information needs; their description of information-seeking behaviour may be understood by their usage of terminology in giving confirmation to their concept. For instance, Foster (2005) addressed the collection of a particular action

which interacts with each other and the incorporation offers the basic drive for other desired following stages of his model such as "judgement" and "consolidation". While, Wilson (1996; 1999), and Niedźwiedzka (2003) have demonstrated the process in a very simplified manner where Wilson focused on the context of information needs which is activated and triggered by users' attention and strong feeling that should do something.

Thus, the growing and nurturing feeling of seeking information turns and motivates the users to satisfy their needs. Consequently, the users are activated and triggered to seek information, where a mixture of factors could affect the seeking process like "psychological, demographic, role oriented, environmental elements, source characteristics and the expectation of reward and others". Despite of her incomplete model, Niedźwiedzka (2003) has embraced the theory on the importance of intermediates role, which work on behalf of the users during the seeking process.

In addition, Wilson (1996) developed a model that has been considered as one of the most prominent and referred models in information-seeking behaviour. The model describes the totality of passive and active sequences of users' behaviour activities which relates to the channels and sources of information. In one hand, the passive sequence of mental activities is made before users decide their needs for information to solve a problem, including passive reception of information like watching television advertisements without any plan to respond to the information received. This type of mental activity is involved in making a decision on the relationship between theoretical propositions. On the other hand, the active sequence of real seeking takes place after users decide their information needs, which leads to obtain the information. This activity includes a face to face communication with others (Wilson, 2000).

The importance of information-seeking behaviour models emanates from its regular function as a main indispensable conceptual tool; a road map to understand the complex process of scholars' information-seeking behaviour. Therefore, understanding scholars' information behaviour is considered as a first indispensable step for designing and building an effective information system.

Numerous models of information behaviour have been formulated as a result of numerous studies in this area which focuses primarily on the general processes of information-seeking behaviour (Ansari, 2008). Few of the models are general, and the remaining are designed for particular groups of users, for example, engineers, scientists, lawyers and others. However, most of the models do not focus on the context of (i) how the information is searched, (ii) the types (format) of information, and (iii) the availability of information in the required language. In fact, this is not necessarily a weakness of such studies; since it is considered as common models (Al-Suqri, 2007), which can be applied to existing models based on various types of information seekers and their information contexts during information-seeking process.

Other models of information-seeking behaviour, such as Ellis (1989), Kuhlthau (1991) and Dervin (1983), gave a little attention to different factors of contexts and resources, which may influence the information-seeking behaviour. For instance, there have been great changes taking place on the information environments since these models were developed, where information is electronically available via the Internet and is easily accessible.

Thus, the researcher found out that there is a necessity to review the impact of this new information context on behaviour, particularly, in advanced Information and Communications Technology (ICT) context, such as Yarmouk University (YU), and to re-evaluate the continuous relevance of the existing models. Nevertheless, most of the information-seeking behaviour models were developed in Western developed countries where the availability of the information is vast in terms of resources compared to developing countries, such as Jordan. In fact, there is a greater need to keep it in mind that the impact of new information environment and specific sources of information have a consequence effect on scholars' behaviour and on the processes of acquiring the information. Figure 3.1 presents the organizational structure of chapter three.

```
                    ┌──────────────────────┐
                    │   Reviewed Models    │
                    └──────────────────────┘

┌──────────────────────────────┐      ┌──────────────────────────────┐
│ Wilson's General Model of 1996 │      │ Process Model Based on Ellis's │
│      (Wilson, 1999)            │      │      'Characteristics'         │
│                                │      │       (Wilson, 1999)           │
└──────────────────────────────┘      └──────────────────────────────┘

┌──────────────────────────────┐      ┌──────────────────────────────┐
│ Model of Information Behaviour │      │ Kuhlthau's 1991 Information Search │
│     (Niedźwiedzka, 2003)       │      │       Process Model            │
│                                │      │      (Kuhlthau, 2004)          │
└──────────────────────────────┘      └──────────────────────────────┘

┌──────────────────────────────┐
│     Non-linear Model of        │
│ Information-Seeking Behaviour   │
│       (Foster, 2004)           │
└──────────────────────────────┘

                    ┌──────────────────────────────────────────┐
                    │            Proposed Model                 │
                    │ Humanities Scholars Information Behaviour Model │
                    └──────────────────────────────────────────┘

┌──────────────────────────────────────────────────────────────────┐
│                   Context of Information Need                        │
│                          *Attention                                 │
│                        *Passive Seeking                             │
│ Availability of information needed + Identification of Information   │
│       needs process + Language + Format + Locations                 │
│                        *Active Seeking                              │
│ Decision to Seek Information + Exploration + Monitoring + Accessing  │
│ + Categorization + Purification + Satisfaction (No/Yes) +           │
│                    Archiving & Storing                              │
└──────────────────────────────────────────────────────────────────┘
```

Figure 3.1: Organisational Structure of Chapter 3

3.2 Reviewed Models

Foster (2005) grouped the information-seeking activities into three classes: opening, orientation and consolidation. These classes define the interaction between the information seekers' cognitive approach and their internal and external context. Foster (2005) also acknowledged the scholars' information behaviour as not being isolated from the context and intervening variables; where external and internal factors influence seekers' seeking process. In one hand, external context includes social and organisational, time, project, and cognitive approaches, among others. On the other hand, internal influence includes the levels of experience, prior knowledge, self-precision and self-efficiency. Cognitive approach means the mode of thinking and willingness to identify the use of information. According to this model, there are three factors: external context, internal context and cognitive approach interacting with the information-seeking process. It reflects the seekers' information experience, which are:

    a) Identification of 'context' with the intervening variables.

    b) The indication of the context variables influence behaviour at all stages of the process.

    c) The activating mechanisms can occur at all stages of the information acquisition process.

    d) Introduction of two basic strategies of looking for information: personally and/or using various intermediaries.

Foster's (2005) conceptual framework (Figure 3.2) shows that the seeking process is totally considered in the context. The conceptual model used in this study where the scholars' recognised information behaviour is not isolated from the context and intervening variables; the seeking process is totally considered in the context as a wary of sources offering information needs, identification of needs, the languages used for seeking information format and the seeking location.
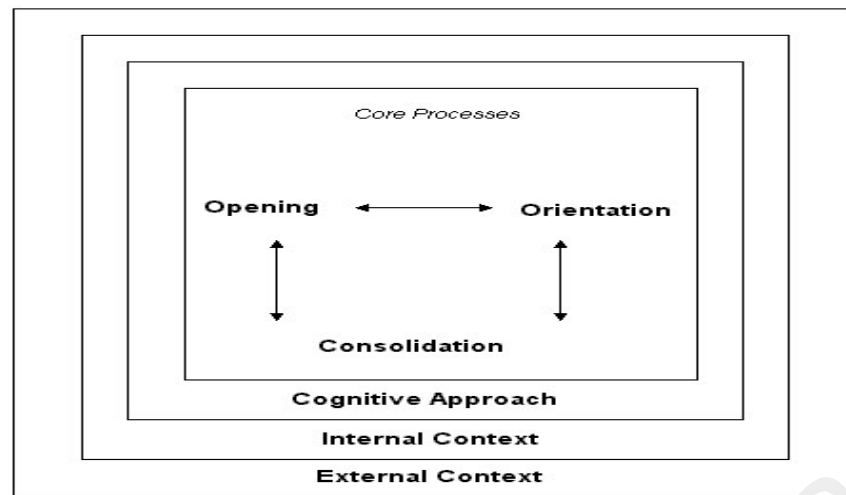
Figure 3.2: Non-linear Model of Information-Seeking Behaviour
(Source: Foster, 2004, p. 232)

However, Wilson (1996) developed a model that has been considered as one of the most prominent and referred models in information-seeking behaviour. He pointed out the need to study information-seeking behaviour, instead of just information needs. The conceptual model suggests how the information needs arise and what may prevent the real search for information. Two main propositions made up for the core of the model, such as Wilson's model: first that the "*information need is not a primary need, but a secondary need that arises out of needs of more basic kind*", and second that "*in the effort to discover information to satisfy a need, the enquirer is likely to meet with barriers of different kinds*" (Wilson, 1999, p. 252). He called attention to the significance of contextual factors, which contain information seekers' own characteristics and the roles and features of the external environment. The seekers in context remain the focus of information needs. The barriers in this model are recognised as intervening variables, whose influence seeking process might be "supportive" or "preventive" active or passive seeking. The theories of information behaviour are concerned about encouraging information-seeking behaviour that demonstrates the factors stimulating information-seeking behaviour (Ansari, 2008).

Following Wilson's 1996 conceptual framework (Figure 3.3), the model used in this study simply presupposes that information-seeking is carried out in order to satisfy a perceived need, which has to be adapted in response to contextual factors or 'barriers', such as the nature of the information environment and the available sources. The stages of information-seeking to be used in the current study are then added to this basic conceptual framework.
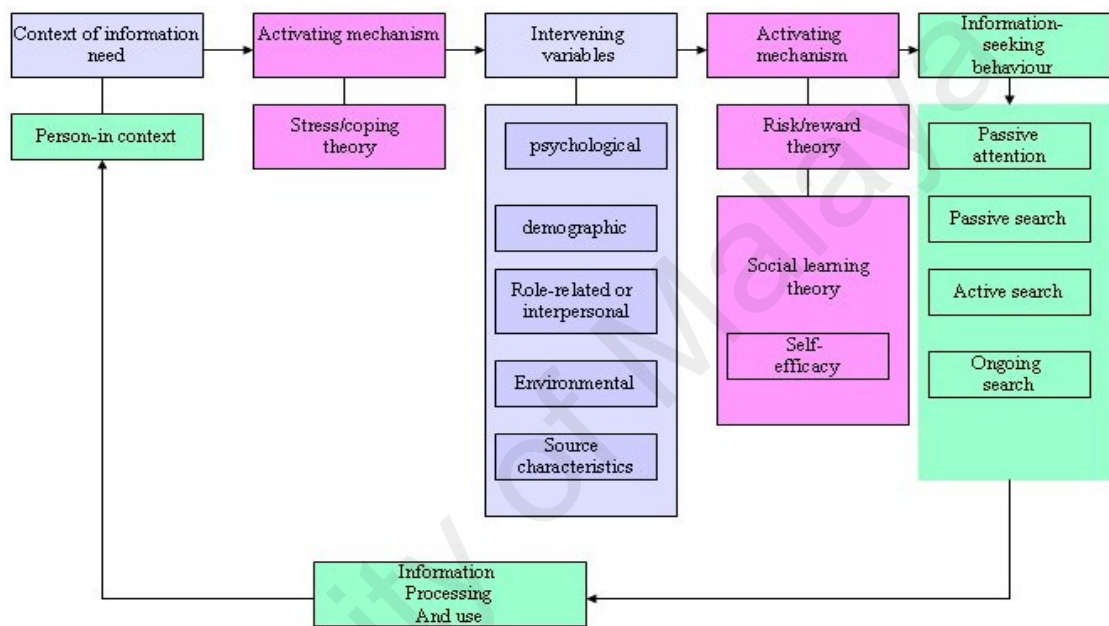
Figure 3.3: Wilson's General Model of 1996
(Source: Wilson, 1999)

Furthermore, the conceptual model used in this study triggers mind seekers and brings their attention to seek information and describe the totality of passive and active sequences of users' behaviour activities in relation to the sources and channels of information. The passive sequence of mental activities is made before users decide their needs for the information to solve a problem, including passive reception of information, such as watching television advertisements without any intention to act on the information given. This type of mental activity is involved in making a decision on the relationship between theoretical propositions for each other. While, the active sequence of real seeking takes place after users decide their information needs, where it

leads them to obtain the information. Thus, this activity includes a face-to-face communication with others (Wilson, 2000).

Despite her incomplete model (Figure 3.4), Niedźwiedzka (2003) made her model on the backbone of Wilson's 1996 model of information behaviour where seekers identify their needs and then take decision to seek information. Either seeking by themselves independently or by intermediaries, Niedźwiedzka embraced the theory on the importance of intermediates role, which works on behalf of the users during the seeking process.
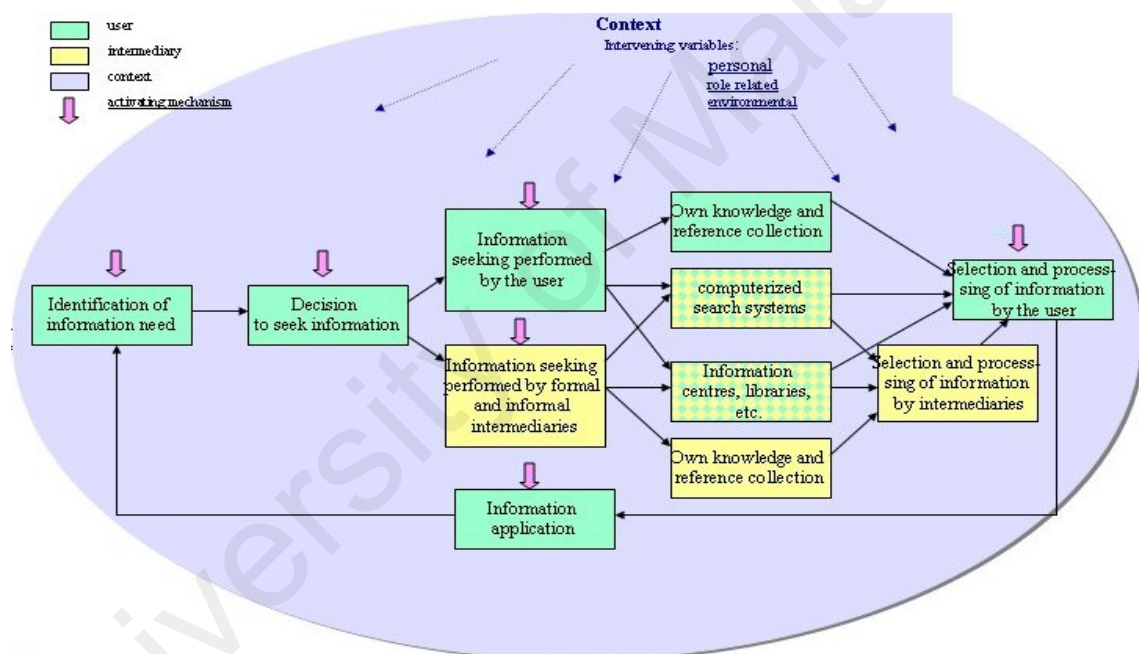
Figure 3.4: A New Model of Information Behaviour
(Source: Niedźwiedzka, 2003)

The above model displays two primary strategies of information-seeking:

a) Users seek information personally.

b) Intermediaries seek information on behalf of user.

Users seek information by themselves, apply their own strategies, available sources and interact with search systems and information services. This type of users is called 'independent users'. People who use various intermediaries and their services and utilise

their information-seeking processes are called 'semi-independent users'. While users who entirely depend on intermediaries are called 'dependent users'. The proposed new model can be applied on every type of users.

Based on this, the conceptual model used in this study embraces Niedźwiedzka's (2003) strategies model, where the scholars perceive their needs and then take decision to seek information. Scholars can be fully independent seekers or semi-independent seekers. In other words, scholars can seek by themselves independently (personally) and apply their own strategies for seeking information, or they can seek information by relying on different intermediaries services and employ their information-seeking processes.

In addition, after scholars take decision to seek information, the stages of information-seeking used in this conceptual model emerges from both Ellis's (1989) and Kuhlthau's (1991) models (Figure 3.5 and 3.6). Ellis (1989) offered his general model of information-seeking behaviour once studying the information-seeking pattern of diverse user groups, such as scholars. Ellis is believed to be one of the most relevant scholars in the process of information-seeking (Al-Suqri, 2007). His model was developed on the basis of scholars' researches, where illustration of six generic stages on information-seeking activities: Starting, Chaining, Browsing, Differentiating, Monitoring and Extracting.
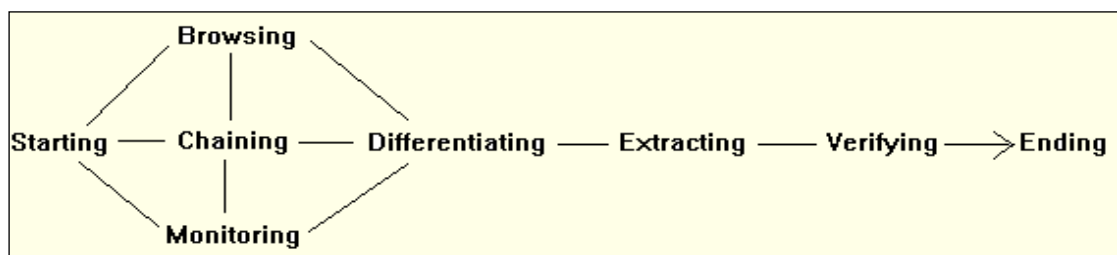
Figure 3.5: A Process Model Based on Ellis's 'Characteristics'
(Source: Wilson, 1999)

Model of the Information Search Process						
	Initiation	Selection	Exploration	Formulation	Collection	Presentation	Assessment
Feelings (Affective)	Uncertainty	Optimism	Confusion Frustration Doubt	Clarity	Sense of direction / Confidence	Satisfaction or Disappointment	Sense of accomplish-ment
Thoughts (Cognitive)	vague ———————————→			focused ——————————→ increased		interest	Increased self-awareness
Actions (Physical)	seeking	relevant Exploring	information ————————→	seeking	pertinent Documenting	information	

Figure 3.6: Kuhlthau's 1991 Information Search Process Model (ISP)
(Source: Kuhlthau, 2004)

Meanwhile, Kuhlthau (1991) developed his model of information-seeking by illustrating the information-seeking process in different stages that can help students to accomplish their assignments. The steps in Kuhlthau's Model start from initiation, selection, exploration, formulation, collection and then search closure or presentation. In his model, the knowledge rises steadily to deal with the information and information system and his cognitive level escalates gradually. Kuhlthau's Model concentrates on the search process instead of using, synthesising, evaluating and incorporating information.

By adjusting Ellis's (1989) framework and exchanging a number of stages of Kuhlthau's (1991) Model, the conceptual model of this study takes into account the cognitive mode of thinking and emotional aspects of scholars' information behaviour. Not only that, but also their feelings, modes of thinking, actions and tasks they performed while seeking information. This is originally reflected in Kuhlthau's Model, particularly at the exploration stage where its content is based on three elements; confusion, frustration and doubt. As mentioned in Kuhlthau (1993), emotional factors lead scholars to seek information, then relevant information is specified. It is treated in the cognitive scope. Changing the seekers' thinking process, and thus impacts seekers'

following information-seeking behaviour. In the early stages of the information search process, the affective factors are considered particularly pertinent, where it is often characterised by these affective factors in uncertainty and anxiety of the possibility of solving the search problem, and when there is necessity to recognise and understand specific concepts, they appear from earlier searches.

All of the affective factors are evenly significant in the later stages, when the cognitive process of the information seekers (scholars) have been improved by their information search and their refresh recognition, they could be utilised to organise the information they have obtained into a consistent outline that their research questions. In the meantime, numerous procedures are embraced in the searching process for specifying and extracting relevant information mentioned in the conceptual model. It is mostly like Meho and Haas (2001) modifying Ellis's (1989) Model, while categorisation and purification are mostly similar to Ellis's (1989) Model stages.

Based on the above, the researcher believes that it is important to take into consideration the impact of affective factors in a research field of information-seeking behaviour in non-western developed countries. Undoubtedly, there are cultural differences in relation to the importance of personal feeling. This can affect the scope to which the current model of information-seeking is appropriate to non-western communities. Consequently, based on Kuhlthau's information search model, the integration of stages of information-seeking can give this study a chance to wholly investigate the influence of affective factors when experimenting the conceptual model in Jordan, while keeping the established framework of humanities scholars' information-seeking drawn from Ellis's Model 1989.

3.3 Selected Models

The selection of these six models of information-seeking behaviour to be applied into this study as a conceptual framework is, therefore, based on several reasons, and based on the assumption that the models offer particular benefits for the study of the information-seeking behaviour among scholars in developing countries. This is not to suggest that the other models of information-seeking behaviour are less relevant to this study. Moreover, most of the models are primarily focusing on a specific aspect of information-seeking behaviour and less discussion on understanding the whole process of the information-seeking behaviour. For instance, Dervin (1983) is mainly concerned about how information seekers construct their own interpretation of information, while Foster (2005) expands on Kuhlthau's (1991) approach that has developed a more detailed conceptualisation of the affective and cognitive influence on the information-seeking behaviour. On the other hand, Bates' (1989) Model is more concerned about demonstrating how information is selected from sources more than providing a framework for the information-seeking behaviour process from the beginning to the end.

Consequently, the reason for choosing these six models is based on the empirical research done by Ellis's Model which has been applied to numerous following researches for many groups of users (Bates, 1989; Choo, Detlor & Turnbull, 1998 & 2000; Ellis & Haugan, 1997; Sutton, 1994; Meho & Tibbo, 2003). Furthermore, Ellis has tested and verified his model, stating that "*the strength of Ellis's Model as with Kuhlthau's, is that it is based on empirical research and has been tested in subsequent studies*" (Wilson, 1999, p. 254). Ellis's Model is also improved because of its significant resemblances with other prominent models, such as Kuhlthau (1988; 1991; 1993); mainly in terms of numerous kinds of activities or tasks performed within the

whole information-seeking behaviour process. Similarly, Ellis, Kuhlthau and Wilson models have been embraced as the foundation for further study by other researchers (Wilson, 1999), and this has motivated the present researcher to adopt their models too.

Furthermore, Foster (2005), Wilson (1996), Niedźwiedzka (2003) and Kuhlthau (1991) models focus on the personal context and personal cognition of information need and their explanation of information-seeking behaviour that might be understood with the terminology they have used to emphasise their concept (Ansari, 2008). The non-linear model (Foster's Model) of information-seeking behaviour demonstrates the process of information-seeking by reflecting the experience of information seekers (Foster, 2005) and that they are what the researcher wants to examine among humanities scholars. Foster's Model was developed based on the academician and postgraduate students' samplings at the University of Sheffield. Similar sampling of academicians is used in this study at YU (detail explanation in Chapter 4). The conceptual model of this study is divided into two phases; namely passive seeking and active seeking.

The passive seeking behaviour which is a mental sequence activities starts with attention to seek for information and covers five elements as follow:

Context Information Need: This element recognises that the information behaviour is not separated from the context within which the information searcher performs. Each potential attribute of individual, culture, condition, behaviour, organisation, environments, or structure has been described as context (Dervin, 2003). That means, the overall context of the scholars; how scholars search for information, and how they identify the relevant information that they need. In addition, any aspects that affect the scholars' information-seeking behaviour and the usage of information are considered as context. In this proposed model, the totality of information-seeking

behaviour is submerged into a context, which comprises Foster's (2005) categories of context, (these three factors (categories) interact with the whole information-seeking process), as shown below:

External Context: It includes social, organisational, time, project, cognitive approach, environment (ICT environment), and location for seeking information needs, such as library, office, personal and colleagues.

Internal Influence: It is primarily the level of scholars' experience, prior knowledge, personal characteristics, self-precision, and self-efficiency. Scholars' internal influences are unique factors to differentiate each information seeker profile.

Cognitive Approach: It refers to the modes of thinking, and the readiness to identify and adapt the dissimilar information resources and to use them.

Attention: Similar to Wilson's (1996) Model which means any factor that attracts scholars' attentions to seek information, where scholars in the passive mental sequence activities circumstance before deciding their needs for information. This includes the passive reception of information, for instance, watching television advertisements without any intention to react on the information received, and later perhaps, this mental activity devolve to make a decision to seek information.

Availability of Information Needs: In order to address the scholars' information needs, they should have good knowledge of the availability of information sources and services provided by their organisation; YU library and the Centre of Excellence, for instance.

Identification of Information Needs Process: In this Model, a phase of the needed occurrence is segregated from a phase of making a decision to seek information, such as Niedźwiedzka's (2003) Model. At this point, scholars perceive their needs for

information and feel that there is a gap in their knowledge in a sense-making situation. Scholars, however, identify and recognise the category of information needs and identify the web sites (see literature review type of information need) and also become aware of the gap in knowledge or the lack of understanding (Kuhlthau, 2005). Scholars attempt to resolve this feeling of uncertainty (Kingrey, 2002) and identify their needs for the information. Furthermore, a rise of any particular needs for scholars can be influenced by context, for instance advanced ICT environment, the elements of the context are closely linked; occasionally can influence the circumstance of each other (Niedźwiedzka, 2003).

Language: Scholars decide which language they will use while seeking information, and which language they prefer to use to read that information. The Arts and Humanities scholars at YU who graduated from Arab universities, Arabic language is the main language for medium of instruction at the universities. Therefore, there are few scholars who cannot communicate in English. However, there are few scholars who graduated from several Western universities, such as Germany, Russia, Spain, France, Romania, and others. Those universities have their own languages as medium of instruction. So, not all scholars at the faculty of Arts and Humanities at YU can speak and read English.

Format: The researcher believes that the proposed model by Niedźwiedzka (2003), scholars have a chance to choose the type of information resources like printed materials as books, journals and others, or electronic resources, such as online databases, Online Public Access Catalogues (OPACs) and the Internet resources, or verbal resources from their colleagues. However, scholars may select more than one type of resources.

Locations: This is the location where the information needs are found, such as libraries, offices, colleagues and others.

The active seeking behaviour reflects that the scholars are already engaged with real seeking stages starting with either the scholars decide to seek information by themselves or by intermediaries until the scholars have reached the satisfaction stage from the information they seek for. The stages are as follow:

Decision to Seek Information: This is a semi-model of Niedźwiedzka (2003), where scholars decide to seek information by themselves as a fully independent seekers and apply their own understanding, available sources and interrelate with the search system and information services (catalogue, search engine, archive and others). Those seekers also select and process the acquired information personally. Moreover, for seekers who use various intermediaries and their services, such as librarians, family members, colleagues or co-workers, and use the results of their information-seeking and processing, we may categorise those seekers as a semi-independent seekers. Scholars can likewise completely rely upon intermediaries, and they can act independently at the stage of mental processing of information.

Exploration: This stage is similar to the third stage of Kuhlthau's (1991) Model. It is where scholars start searching for the information in a particular subject and have general basic concepts of that subject. Scholars can identify any factors (e.g., individual and social causes) that can influence the procedures and outcomes of exploration stage. At this stage, identification of information needs process, scholars may value the information derived from the initial investigations, such as their own personal experiences, collections and may seek advice from their colleagues. Scholars also attempt to understand the problem or to get the common idea about the

topic. The common information is related to the general understanding rather than to the specific information. However, inconsistency, confusion, and doubt frequently increase and scholars feel more confident and more composure (Kuhlthau, 2005).

Monitoring: It is an activity where scholars are concerned about the current and latest knowledge of the topic, by following the exact sources of information whether it is formal (journals, newspapers, databases, conference proceedings and publisher indices) or informal (colleagues, friends, experts) information resources used for keeping up-to-date with the information (Ellis & Haugan, 1997). It involves staying informed of the new information by regularly following particular sources and receiving regular reports or summaries from the selected sources or (in web case) receiving the website updates, for instance, revisiting the favourite sites.

Accessing: It is similar to the accessing stage in Meho and Tibbo (2003) which is described as a channel between the searching stage and the processing stage, particularly when indirect references of information are used such as indexes, abstracts, and bibliographies. The accessing stage gets to be essential because without the complete text of identified articles in the searching stage, scholars may not be able to go on to the processing stage (Categorisation). During the accessing stage, scholars get embraced with decision making activities where they can proceed with the processing stage or return to the searching stage (Exploration). The choice is made by the success or failure of numerous sources or references and types of information, such as subject's archival materials and government documents. Accessing the information, according to the literature, is one of the barriers faced by scholars while seeking information. As a result, in finding the potential relevant information, scholars attempt to search for many locations and use other forms of materials of secondary sources (Meho & Tibbo, 2003). The researcher, however,

expects that scholars at YU may not face any barriers because they have the Centre of Excellence (for more information, see introduction).

Categorising: This is similar to Ellis's (1993) "Differentiating Stage"; it is a way for classifying the information sources that they have obtained whether in printed or electronic format. At this stage, scholars have access to the relevant information and want to categorise the information sources. In a case where scholars did not acquire what they are looking for, they can go back further to the exploration stage of an ongoing search.

Purification: This is also similar to Ellis's "Extracting Stage" where scholars go through particular sources or resources and electronically-systematically search in a local site to extract and selectively identify the most relevant materials of their interest, for instance, sets of journals, bibliographies, indexes, abstracts and computer databases. Indeed, this stage of activity is considered to be as the most direct act and focus on information-seeking process.

Satisfaction: At this stage, scholars choose and obtain the most relevant information resources to address the specific focus of their purposes of study, either for teaching, completion of research, participation in conference, seminar, workshop or other purposes.

No: In a case where scholars are not satisfied with what they have got from the relevant information resources, they can go back further to the categorisation stage and resume or begin the searching process again.

Yes: At this stage, scholars complete their search, and if they are satisfied with what they have obtained from the relevant information resources, they can have the

freedom to choose and decide whether to use such information directly or to store it according to their own way.

Archiving and Storing: At this stage, according to Kuhlthau (2005), scholars gain a new understanding which enables them to explain their thoughts and ideas to others or to make a decision to not use the information and store it in their preferred way.

The researcher designed his conceptual model to make it compatible with the humanities scholars at YU in a shadow of ICT-enriched environment. This conceptual model, which is similar to (Foster, 2005) Model's (Figure 3.2), recognises scholars' information behaviour as not isolated from the context and intervening variables; the seeking process is totally considered in the context.

The present model investigates the whole context of humanities scholars in ICT-enriched environment, how the humanities scholars seek the relevant information, and how the humanities scholars identify their needs from that relevant information.

3.4 Purpose and Value of the Conceptual Model

The main aim of conceptual framework development to be used in this study is to guarantee that the research uses a methodical approach of drawing humanities scholars' information behaviour in Jordan, as an example of a developing country in the Middle East, with that of humanities scholars and other information behaviour in developed Western countries. Libraries and information sciences considered models of information behaviour very worthy as it offers a means of details of information behaviour into the component of different stages. It also allows the detailed study of human-thought procedures and actions at every stage by facilitating the subsequent expansion and delivery of information products and services which are designed to their behaviour and

to help in promoting successful information-seeking. Models of information behaviour involve observing humanities scholars information behaviour in their contexts, where it allows the researcher to dive deeply with more details on humanities scholars' information behaviour.

Based on the integrated conceptual model, the researcher has a significant chance to use it as a comparative research tool. The use of a developed model from developed Western countries as a framework for the development of a research on information behaviour in Jordan provides the chance for a systematic comparison of information behaviour amongst Jordanian scholars and in the Western countries. Thus, the model can assist in understanding humanities scholars' information behaviour in Jordanian universities, particularly at YU.

Nevertheless, most of the models on information behaviour are made by using diagrams which attempt to explain information-seeking activity, the reasons and ramifications of information-seeking activity, or the connections among steps in information-seeking behaviour. The models do not really discuss the stage of stipulating connections among theoretical suggestions; rather the models are at a pre-theoretical stage. The models may propose the connections that might be useful to discover or to investigate the models of information behaviour, but, they seem to be less than the models that are devoted for information-seeking behaviour or information searching. By showing that whether the humanities scholars in developing and non-western countries either parallels that of scholars in the Western countries and therefore can be explained in terms of current models and theories, or it is already deviated from the Western scholars behaviour and their models too.

Some studies, as motioned in the literature review, have indicated in certain cases, often found in developing countries, that would most likely to compel obstacles or other impact on the ways scholars gain their desired information. These contain, for example, not for the limitation availability of desired information in their mother tongue or relating to similar environments, lack of access to information they need, lack of financial support and besides to restrictions on intellectual freedom.

The current models of information behaviour, such as those of Ellis (1989), Kuhlthau (1991), Wilson (1996), Niedźwiedzka (2003) and Foster (2005) followed in this study, are designed to present common features for many types of academician seekers, where most of published studies done during the late 20th century, thus they can be used for comparative studies. Numerous of these studies determine similarities among researchers of diverse disciplines in their information-seeking behaviour (INFROSS, 1970 as in Line, 1999; Folster, 1989; Ellis & Haugan 1997; Romanos de Tiratel, 2000).

A study done by Ellis and Haugan (1997) at Statoil's research centre in Norway addressing activities for both of engineers and research scientists were managed to readily map their information-seeking activities to eight generic information-seeking activities stages: that is surveying; changing; monitoring; browsing; distinguishing; filtering; extracting and ending. Eventually, they confirmed that the information-seeking of Ellis's (1989) Model is a solid relation to scientists, engineers and social sciences patterns information-seeking activities whether it is in an academic or an industrial research environment during the past period and interspersed changes in the information environment regarding to the speed of technological changes.

In spite of the relatively few studies conducted in non-western countries (non-English speaking) and in Arab countries, particularly in the field of academician information-seeking; they indicate that the existing models, such as Ellis's (1991) framework can be utilised to researchers in these countries. One of these studies was conducted by Romanos de Tiratel (2000) at University of Buenos Aires in Argentina; she investigated humanities and social sciences scholars' information-seeking behaviour. She found that there is no significant difference between the university scholars and those scholars in Anglo-Saxon countries. All of Romanos de Tiratel (2000), Tahir, Mahmood and Shafique (2010), and most recently Mostofa (2013) confirmed that the majority of the humanities scholars initiate that there is a research by using informal information search methods, such as consult-a-colleague and specialised literature. In other words, the humanities scholars despite of their countries and disciplinary differences have similar seeking behaviour, since each scholar's information need is unmatched and his or her information is modelled and interpreted through dealings with other scholars and different community and organisational contexts in which the research is proceeded (Romanos de Tiratel, 2000).

Despite the lack of studies on humanities scholars in general and the rarity to some extent in Arab world, some studies were carried out in developing countries, but for larger extent most of the studies have been conducted in Western countries (English speaking). Such as Romanos de Tiratel's (2000), study of West Indian humanities scholars, Tahir, Mahmood and Shafique (2008), study of humanities scholars at University of the Punjab, Lahore, Pakistan, and Mostofa (2013), study of humanities scholars at Darul Ihsan University in Bangladesh, have their exclusive focus, mainly, on monitoring patterns of information-seeking and its usage, comparing these with availability knowledge of these habit among Western scholars.

3.5 Use of the Conceptual Framework in the Study Design

To meet the objectives of this study, the researcher has designed the study instrument based on the conceptual framework, which is established based on the integration of information behaviour models and the key contextual factors influencing information-seeking behaviour. A theoretical framework is developed based on a new conceptual model for studying humanities scholars' information behaviour in enriched ICT environment in Jordan. This conceptual model, shown in Figure 3.7 is based on an integration and synthesis of the elements of the existing information behaviour models of Ellis (1989), Kuhlthau (1991), Wilson (1996), Niedźwiedzka (2003) and Foster (2005) in addition to new elements representing the context of information, such as languages and resources format of information. Furthermore, the identification of suitable questions for the questionnaire and face-to-face interviews are based on the framework, which offers the appropriate opportunity to generate data on the information needs and behaviour of Jordanian humanities scholars and to make comparisons with what are known in the West. Besides, the model is used to offer adequate detailed and practical information in order to provide the required information to the library and information services at YU in particular for developing their services and other libraries in Jordan and Arab countries in general.

Context of Information Need
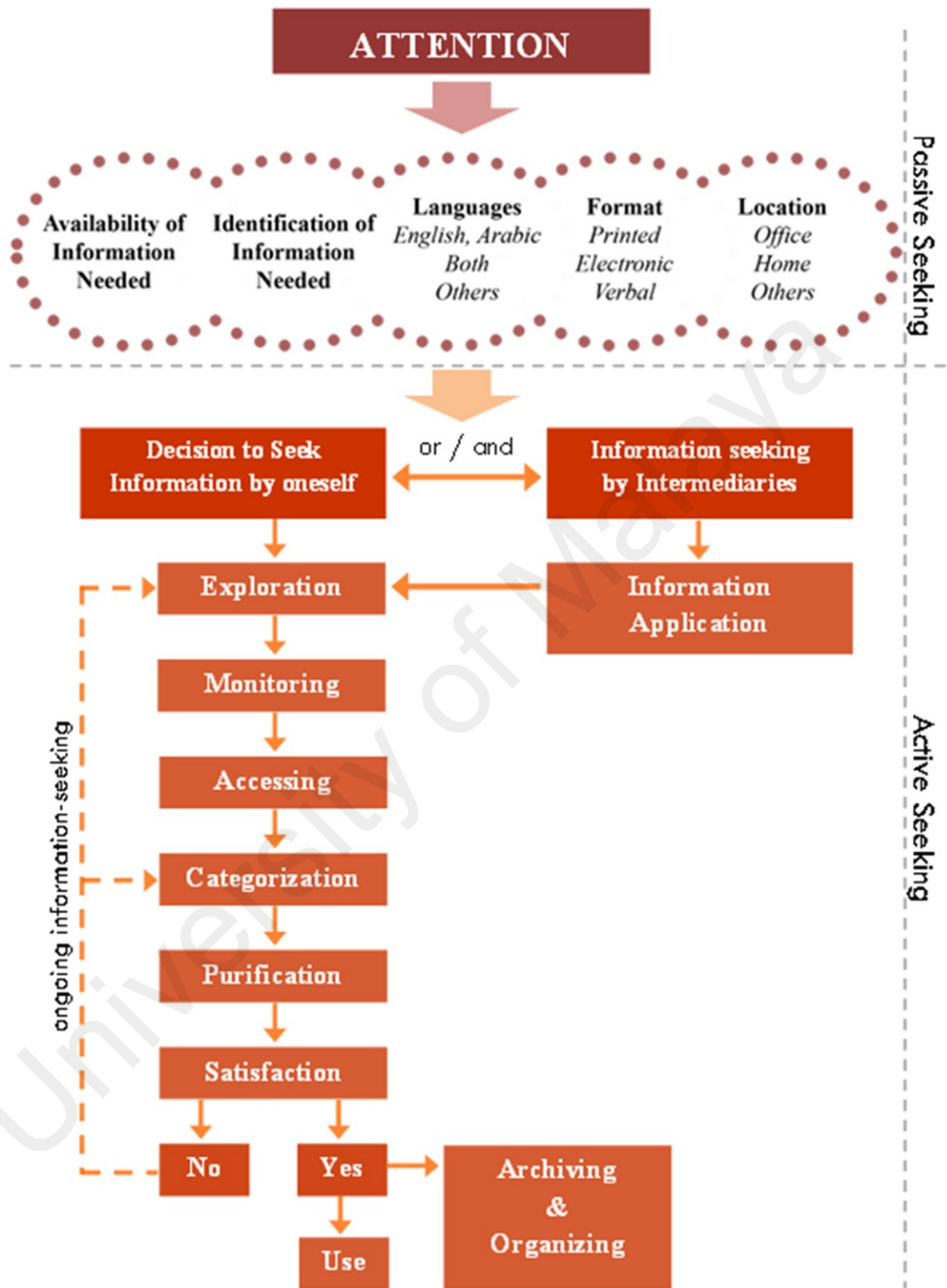
Figure 3.7: Humanities Scholars Information Behaviour Model (proposed model)

Based on the conceptual framework used, four key research questions have been identified, which are:

1) What are the information needs of humanities scholars in an ICT-enriched environment of Jordan?

   a) What types of information resources do humanities scholars primarily use for research and teaching?

2) How do humanities scholars fulfil their information needs?

   a) How do humanities scholars identify and locate relevant information for their academic tasks?

   b) How do humanities scholars obtain relevant information resources?

3) What are the barriers encountered by humanities scholars while seeking information?

   a) What are the barriers that influence humanities scholars' information seeking behaviour?

   b) How satisfied are humanities scholars with the library and Centre of Excellence resources?

4) What is the relationship between demographic information and the information behaviour process?

   a) What is the relationship between independent variables (gender, age, academic position, country graduation, department and years of experience) with types of information need?

   b) What is the relationship between independent variables (gender, age, academic position, country graduation, department and years of experience) with format of resources?

The generic models of this study can help the researcher as a road map to research in this area, and to allow for measuring if there are any contextual factors of information-seeking process. The importance of models appeared significantly in the previous studies (reviewed in the literature review chapter) is the influencing factors on the information-seeking behaviour, patterns and outcomes. Based on the existing models, there is a crucial need to make a modification to the existing models. This is because that the existing models do not match and take into account the latest development in

the field of ICT and to a nature of the new information environment. For that, this study focuses on the factors influencing the information-seeking process by the nature of the information environment; ICT-enriched environment where the local conditions and demographic characteristics give effect to the information-seeking behaviour among the humanities scholars at YU.

3.6 Summary of Chapter 3

The researcher has discussed in this chapter the conceptual framework used in this study and has justified the use of the conceptual framework by facilitating a systematic and comparative study of information behaviour amongst Jordanian humanities scholars. Through the utilisation of a general framework established from former recognised models of information-seeking, and also by noting variations from the framework among the volunteers study, it will be probable to reach at the conclusions regarding to the existence or otherwise on common patterns of information-seeking. The conclusion also takes into account the cultures and relative significance of contextual factors in formative information-seeking behaviour.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter describes the research approach used in this study. The purpose of this study is to provide an understanding of investigating the nature of humanities scholars' information needs, the usage and familiarity with the humanities scholars' information behaviour, the practices in ICT-enriched environment by adopting a specific model designed for this study and the rationale for the choice of the research design.

This study addresses the question of how humanities scholars at YU locate and use the relevant information, particularly, electronic and Internet resources, to address their teaching, research and publication needs (academic tasks needs). The data of this study were collected from humanities scholars at YU, in terms of the nature of scholars' behaviour in meeting their information needs, as well as to determine the barriers that they faced during the information-seeking process. Furthermore, intervening variables affecting scholars' information needs are identified, and the differences between scholars which are based on gender, age, expert, rank, department and preferred language used by the scholars were described, too. This study also seeks to establish ways of improving humanities scholars' information behaviour in their disciplines at YU and to provide a holistic picture of using information in the actual research practices and the academic contexts among scholars. Hence, four main research questions guide the investigation of the study, they are:

1) What are the information needs of humanities scholars in an ICT-enriched environment in Jordan?

   a) What types of information resources do humanities scholars primarily use for research and teaching?

2) How do humanities scholars fulfil their information needs?

a) How do humanities scholars identify and locate relevant information for their academic tasks?

b) How do humanities scholars obtain relevant information resources?

3) What are the barriers encountered by humanities scholars while seeking for information?

a) What are the barriers that influence humanities scholars' information seeking behaviour?

b) How satisfied are humanities scholars with the library and Centre of Excellence resources?

4) What is the relationship between demographic information and the information behaviour process?

a) What is the relationship between independent variables (gender, age, academic position, country of graduation, department and years of experience) with types of information need?

b) What is the relationship between independent variables (gender, age, academic position, country of graduation, department and years of experience) with format of resources?

A mixed-method sequential exploratory is used in this study to answer the research questions. The study is explored using a face-to-face interview and also through survey questionnaire about the information behaviour of humanities scholars in ICT-enriched environment at YU in Jordan. This study is to be an example of an Arab-Islamic developing country in the Middle East and to provide empirical evidences on humanities scholars' information-seeking behaviour in their scholarly interests and tasks. The result of this study is to allow interested parties, such as libraries to improve and upgrade the services of the library in a thoughtful and scientific manner to meet the humanities scholar's needs. This chapter is divided into eight sections: (1) research methodologies - literature review of information behaviour; (2) research design; (3) population and sampling; (4) research instruments; (5) data collection procedure; (6) validity and reliability; (7) treatment of data and statistical analysis procedures; and (8) challenges faced by the researcher in data collection.

```
┌─────────────────────┐      ┌──────────────────────────────────────────────────┐
│ Approach            │┄┄┄┄► │                   Sequential                       │
│ *Mixed Method       │      └──────────────────────────────────────────────────┘
│ *Phenomenological   │         │                                  │
│  Research           │      ┌──────────────────────┐   ┌──────────────────────┐
└─────────────────────┘      │ Phase 1: Qualitative │┄┄►│ Phase 2: Quantitative│
         ┆                    └──────────────────────┘   └──────────────────────┘
         ▼                         │                              │
┌─────────────────────┐      ┌──────────────────────────────────────────────────┐
│ Case Setting        │┄┄┄┄► │             Data Collection: Method                │
│ *Yarmouk University>│      └──────────────────────────────────────────────────┘
│  Human Science      │         │                              │
│  Faculties:         │      ┌──────────────────────┐   ┌──────────────────────┐
│                     │      │ In-depth interview   │   │ Questionnaire Survey │
│ i.   Faculty of Arts│      │ *Face-to-face        │   │ *Open-ended questions│
│ ii.  Faculty of     │      │ *Semi-structured     │   │ *161 respondents     │
│  Archaeology        │      │ *26 respondents      │   └──────────────────────┘
│  & Anthropology     │      └──────────────────────┘
│ iii. Faculty of     │         │                              │
│  Fine Arts          │      ┌──────────────────────────────────────────────────┐
│ iv. Faculty of      │      │                   Analysis                         │
│  Shari'a            │      └──────────────────────────────────────────────────┘
└─────────────────────┘         │                              │
                             ┌──────────────────────┐   ┌──────────────────────┐
                             │ Persona              │   │ Descriptive Statistic│
                             │ *Fictitious, specific,│  │          +           │
                             │  concrete            │   │ Inferential Statistic│
                             │  representations     │   └──────────────────────┘
                             │  of target users     │
                             └──────────────────────┘
```

Figure 4.1: Organisational Structure of Chapter 4

4.2 Research Design in Information Behaviour Studies

For the studies that involved humanities scholars' information behaviour, a variety of methodologies and data gathering tools have been used, both using qualitative and quantitative methods. Quantitative, qualitative and mixed methods have been used to study information behaviour of humanities scholars. Questionnaire survey and interview are the most famous tools that are being used for this topic.

4.2.1 Quantitative Method

Among the studies carried out using quantitative method is one conducted by Gorman (1990) who is considered as the first one who analysed the information-seeking behaviour of theologians at seven theological colleges in Adelaide, Australia. He used a quantitative survey with forty nine questions for collecting the data. Ucak and Kurbanoglu (1998) carried out a survey towards scholars in sciences, engineering, social sciences and humanities at Hacettepe University, Ankara, Turkey to study their

information needs and information-seeking behaviours by comparing the findings to those reported in scholarly literatures. In his paper, Ocholla (1999) discussed the academics' information-seeking behaviours in relation to their productivity in South African universities used quantitative data methods in the survey phase and the questionnaires as a tool for collecting the data from six faculties and 54 teaching departments comprising 327 teaching staffs at the University of Zululand. Romanos de Tiratel (2000) adopted a quantitative approach by using questionnaire method as a main tool for data collection to investigate the information-seeking behaviour of Argentinean humanities and social sciences scholars at Universidad de Buenos Aires, where 124 respondents from 18 institutes, sections, and research centres of the school answered the questionnaires.

Dalton and Charnigo (2004) conducted a study to examine historians and their information sources where 278 historians' scholars considered to be the most important materials and how they discovered them. Their attitudes towards the use of electronic materials were also studied. Patitungkho and Deshpande (2005) studied the information-seeking behaviour of the faculty members of Rajabhat Universities in Bangkok, Thailand. The data were collected using questionnaire from seven faculties in Rajabhat Universities. Ellis and Oldman (2005) explored the extent to which the information-seeking behaviour of English literature researchers in the Internet era. The information for this study was collected using electronic questionnaire, e-mailed to scholars in English departments from departments of UK universities and overseas universities. Francis (2005) conducted an exploratory study on information-seeking behaviour of social sciences scholars at the University of West Indies, St. Augustine. Questionnaires were used as a main data collection tool consisting of 19 closed questions and one open-ended question. It was sent via the campus mail system to the faculty of Social

Sciences. Tahir, Mahmood and Shafique (2008) conducted a survey of open and closed questionnaires at University of Punjab, Lahore to fill a gap in understanding the information needs and information-seeking behaviour of arts and humanities scholars.

Akinola (2009) conducted a study to examine information-seeking patterns of lecturers, at the faculty of Education Obafemi Awolowo University and the University of Ibadan (Nigeria) and investigated their predominant source of information. The study employed descriptive research method using questionnaire for data collection where 100 lecturers constituted the samples. In addition, Tahir, Mahmood and Shafique (2010) assessed the use of electronic information resources and facilities by humanities scholars at University of Punjab, Lahore and had used the questionnaire as the instrument to collect the data from 62 participating scholars. Ileperuma (2002) described the results of an investigation on the information gathering behaviour of arts scholars (humanities, social sciences, language and culture) in Sri Lanka's universities. The method involved in the study was a questionnaire to collect both qualitative and quantitative data and descriptive statistical methods were applied in the analysis of data.

Quantitative approach is applied to gather in-depth information on a small number of people or subjects (Patton, 1990). On the other hand, the quantitative approach in human sciences involves the survey method. The survey method has allowed the researchers to get current data concerning opinions, attitudes, preferences, problems encountered by users, and many other kinds of information relating to various facts of the profession (Busha & Harter, 1980). Among other strengths of the quantitative method are: stating the research problem in very specific and set terms (Frankfort-Nachmias & Nachmias, 1992), clearly and precisely specifying both the independent and the dependent variables under investigation (Matveev, 2002), following firmly the

original set of research goals, arriving at more objective conclusions, testing hypothesis, determining the issues of causality (Matveev, 2002), achieving high levels of reliability of gathered data due to controlled observations, laboratory experiments, mass surveys, or other form of research manipulations (Balsley, 1970), and eliminating or minimizing subjectivity of judgment (Kealey & Protheroe, 1996).

4.2.2 Qualitative Method

Among the studies that applied qualitative method using interviews to investigate information-seeking behaviour of scholars was carried out by Challener (1999) towards professors of arts history and studio art in five art colleges and three universities at Kent State. By interviewing 27 scholars face-to-face to discover their information needs and the sources they use whether it is for their own work or for teaching purposes. Wiberley and Jones (2000) conducted a study to address how temporal considerations influence humanities scholars using electronic information technology at University of Illinois, Chicago. The study adopted qualitative technique by using interviews followed with a set of questionnaires given to the scholars prior to meeting with them. Meho (2001) described and analysed the information needs and information-seeking behaviour of 60 social sciences scholars from 18 different countries using in-depth semi-structured face-to-face interviews.

Rimmer et al. (2006) used exploratory investigation of the information-seeking behaviour of humanities scholars and their interactions with information, in both physical and virtual environments at London, Cambridge, Sussex, Wales, Sydney, New Zealand and Bangkok. They described the User-Centre Interview Search Project (UCIS) that was concerned with humanities scholars' needs and behaviours whether in digital or traditional environments. Yiqian (2006) discussed scholars' information behaviour in

the digital information context by conducting nine in-depth interviews with humanities and social sciences scholars at University of Alberta, Canada. Bronstein (2007) reported about the application of Ellis's Model to the information-seeking behaviour of Jewish scholars. Qualitative method was adopted by using a semi-structured interview to 25 scholars from four universities in Palestine.

Xuemei (2010) examined the information-seeking behaviour of humanities and social sciences scholars in the digital age conducted at Tennessee's State University, USA. The study adopted a qualitative approach by using interview as the primary tool for data collection, the interview was semi-structured and included both closed and open-ended questions. In their paper, Benardou et al. (2010) reported the research practices requirements conducted in the context of preparing DARIAH European e-Infrastructures project. They interviewed arts and humanities scholars using a series of semi-structured interviews from across Europe. Mostofa (2013) investigated the information-seeking behaviour of members of faculty of Darul Ihsan University in Bangladesh. The lecturers were interviewed about their use of electronic information resources for research purpose, their perception of electronic and printed materials and the problems faced. Additional questionnaires (26 open and closed questions) were also conducted in accordance with the survey's critical queries.

According to Busha and Harter (1980), Patton (1990) and Silverman (1993), qualitative approach is applied to gather in-depth information on a small number of people or subjects. The qualitative interview method allows the researcher to gather respondents' thoughts, opinions, perceptions, feelings, experiences and other kinds of information that are related to the study. The qualitative research aims to generate description-people's own written or spoken words, their artefacts and their observable

activities (Taylor & Bogdan, 1998; Bogdan & Biklen, 1998; Odih, 1992). Besides, Fidel (1993) mentioned that the qualitative approach offers the 'best' methods for exploring human behaviour and investigating complex phenomena when very little is known about them.

4.2.3 Mixed Method

There are few information behaviour studies that applied the mixed method approach. In their exploratory study of information behaviour of humanities and social sciences at University of Washington, USA, Bass et al. (2005) have used existing model of scholarly information behaviour as a framework and their study was guided by Marcia Bates's Berrypicking Model (2005). Bass et al. (2005) used a hybrid method that included both qualitative and quantitative data. They used 21 open-ended questions in face-to-face interviews followed by 23 questionnaires survey sent via e-mail.

Al-Suqri (2007) investigated the information needs and information-seeking behaviour of social sciences at Sultan Qaboos University in Oman, focusing on finding how the social sciences scholars at the university locate and use relevant information for their specific research and teaching needs. He used mixed method approach including quantitative and qualitative data. He also used an open-ended survey as an entry point for data collection followed by e-mail interviews and face-to-face interviews, and then followed by focus group discussions.

Baruchson-Arbib and Bronstein (2007) presented an updated research on Jewish humanities scholars seeking behaviour in the digital age who live in Palestine. The study was performed in two phases; the first one consisted of quantitative study using

structured questionnaires, while the second phase consisted of qualitative study using series of semi-structured interviews.

According to Creswell (2007), Campbell and Fiske (1959) are considered as the first researchers who formalized the mixed method; use of various methods to study the validity of psychological character. Mixed methods research means adopting a research strategy employing more than one type of research method; also it can mean working with different types of data. It may also involve using different investigators – sometimes different research teams working in different research paradigms (Brannen, 2005). Moore (2000) noted that although every instrument would present a slightly different view of an issue, together they offer a very rich view. Furthermore, the difference among the qualitative and quantitative approaches make them partners in tune well (David, 1993) and this is what Glazier and Powell (1992) emphasized too, by saying that "a research design that takes advantage of the complimentary aspects of qualitative and non-qualitative methodologies is likely to generate a richer cache of data overall".

Mixed methods allow research to build up as widely and completely as possible, consider the main strength for using mixed method, and compare it with a single method; the scope of investigation is less likely to be constrained by the method itself. Many researchers such as Tashakkori and Teddlie (2003), Johnson and Onwuegbuzie (2004), and Creswell and Clark (2007) have documented some strength of mixed method as following: (i) all research questions will be answered broader and provide more complete view of research problem, where the researcher is not restricted to a single method or approach, (ii) researcher can invest each method's strengths to overcome the weaknesses of other method, (iii) provide strong facts for a conclusion

through meeting and corroboration of findings, (iv) can add insights and understanding that might be missed when used a single method, (v) can increase the generalizability of the results, (vi) can make more complete knowledge required to inform theory and practice, and (vii) able to generate and test a grounded theory.

4.3 Research Design

To achieve the objectives and to answer the research questions of this study, the researcher uses a sequential mixed-methods approach, which is divided into two separate phases for data collection. The first phase involves face-to-face semi-structured in-depth interview over a period of 7 to 8 months. The second phase constitutes a questionnaire survey which was developed and carried out at the end of conducting the interview. Figure 4.2 illustrates the two phases of sequential exploratory mixed method research design employed in the study detailing the process and products for each qualitative and quantitative phase.

Phase One			DEVELOP QUESTIONNAIRE	Phase Two		
Qualitative Data Collection	Qualitative Data Analysis	Qualitative Findings	DEVELOP QUESTIONNAIRE	Quantitative Data Collection	Quantitative Data Analysis	Quantitative Findings

Procedures						
Face-to-face semi-structured interviews.	Identify Personas - Write Persona narrative using LSA.	Describe Personas & themes.	Consider themes as subscales. Write statements for each subscale.	Open ended questionnaires: Five-point Likert scale	SPSS: Descriptive & Inferential statistic.	Frequency distributions Measures of central tendency & measures of variability
Products						
Transcribe recorded interviews from Arabic to English.	4 Personas Coded Texts Number of themes	Descriptions of Personas & themes.	Number of statements across number of themes	Items scores	Descriptive: frequency & percentage. Inferential: Chi-square & t-test.	Description & inference of frequency distribution, measures of central tendency & measures of variability

Figure 4.2: Two Phases of Sequential Exploratory Mixed Method Research Design of the Study

There are a few causes that intrigue the researcher to use mixed method approach. As suggested by Creswell (2009), the research methodology continues to evolve, and mixed methods is another step forward; it enables the researcher to employ strengths of both qualitative and quantitative simultaneously, and using either qualitative or quantitative approaches per research is rather inadequate to address the nature of complex problems in social sciences. Large and Beheshti (2013) emphasised the need to use both qualitative and quantitative in learning and measuring the complex behaviour of users in information-seeking. Given these reasons, both survey questionnaire and interview would be employed in this study. As such, concurrent embedded data collection strategy is chosen.

Besides, the researcher uses the mixed method approach because it is useful for developing the survey instruments (Jick, 1979) and for increasing the validity of variables and research findings (Creswell, 2003; Greene, Caracelli & Graham, 1989). It helps to increase and understand the investigation of the respondents (Moore, 2000). Furthermore, according to Sonnenwald and Wildemuth (2001), the use of mixed method offers multiple data that is valuable in making comprehensive analysis to generate inclusive understanding on information behaviour. Every instrument presents a slightly different view of information behaviour of the scholars; the use of mixed method offers a very rich view of the information behaviour of humanities scholars. Through the use of semi-structured face-to-face in-depth interview (Appendix B), scholars' information needs and seeking behaviours are extracted and analysed. In this case, the interview data is used to elicit questions to construct the survey questionnaire. The analysed results then are synthesized with the literature to develop the questionnaire instruments (Appendix D).

To understand the information behaviour of humanities scholars at YU, a semi-structured face-to-face in-depth interview is conducted in this study, too. The reason is that the interpersonal contact is important in this study and it is desirable to have a chance to follow the response of humanities scholars with their interesting comments. Besides, semi-structured of in-depth interview allows the researcher to gather the thoughts, opinions, perceptions, feelings, experiences and other kinds of information from humanities scholars. The semi-structured questions of the interview makes the interview flexible and dynamic where the researcher can ask and respond according to the answers of the interview to gain profound thought and perception of the interviewees as highlighted by Sonnenwald and Wildemuth (2001). In addition, in-depth interview also helps to identify how humanities scholars do the practice in the process of information-seeking. The data gathered via this method is meant to complement and reinforce the data gathered via survey questionnaire.

Meanwhile, quantitative approach which involves an open-ended questionnaires method allows the researcher to get a current data concerning opinions, attitudes, preferences, problems encountered by humanities scholars, and other kinds of information related to various facts of the profession (Busha & Harter, 1980). Quantitative approach offers an accurate statistical measurement, but, insufficient to provide deep understanding of information-seeking behaviour (Large & Beheshti, 2013). Though, the differences between the qualitative and quantitative approaches make both of them complementary to each other (Silverman, 1993). Besides, Glazier and Powell (1992) emphasized that to generate a richer finding, a combination of qualitative and quantitative methodologies must be applied.

The main reason for using the qualitative approach is because it is the best approach for exploring the phenomena related to human behaviours as mentioned by Fidel (1993) (cited in Large and Beheshti (2013)). Unlike quantitative, qualitative approach does not involved manipulation of certain variables that might be challenging to recognise and classify the data. Moreover, qualitative approach takes the form of phenomenological research because it focuses on the scholars' beliefs and opinions. Creswell (1998, p. 57) stated that "*phenomenological study describes the meaning of the lived experiences for several individuals about a concept or phenomenon*". Thus, phenomenological study is based on the assumption that scholars are experts of their own lives, where knowledge is contextual and relational, and subjective data is valid.

4.4 The Case Setting: Human Science Faculties, Yarmouk University

This study involves humanities scholars' members at YU, Jordan. The respondents of Human Sciences faculties are from four faculties - Arts, Archaeology & Anthropology, Fine Arts, and Shari'a & Islamic Studies. The demographic data gathered about the humanities scholars including variables in age, gender, academic position, year of expertise, degree obtained and country of graduation. Humanities scholars were chosen because there is lack of study and understanding about this topic (Xuemei 2005; Buchanan et al., 2005) particularly in Arab countries, and specifically on the impact of electronic environment on the information-seeking behaviour.

Historically, the faculty of Arts was established in the same year with the establishment of YU in 1976. Then, the faculty of Fine Arts was established at the beginning of the academic year in 1980. Later, the faculty of Archaeology and Anthropology was established in 1984 and the faculty of Shari'a and Islamic Studies was established in 1990. Currently, most of these faculties offer Bachelor and Master

degree programmes, while PhD degree is offered only from few departments from the faculty of Arts, and faculty of Shari'a & Islamic Studies. At present, human sciences faculties have 22 departments (Figure 4.3). YU is considered as a good example that reflects the ICT-enriched environment among the Jordanian universities. The reasons for choosing YU are as follow:

a) YU is considered as one of the most prestigious universities not only in Jordan but in the Arab region. However, the distribution of programmes at the faculty of Science and Technology is to make it specialised in pure sciences.

b) YU is considered to have one of the best academic libraries in Jordan which is Al-Husayniyyah Library. It was shifted to a new building in 2007 (17300 square meters area) with a total cost of USD\$ 6,000,000.

c) YU is considered as the Jordanian Centre of Excellence for Public University Library Services to manage the Jordanian Public University Library Information Network.

d) YU Street was awarded by the Guinness World Records as the most crowded streets Internet cyber cafes in the world. This street is very famous and developing very fast with more than 125 Internet cafes are available. This street is considered unique because it has a big computer company that reflects the evolution of information technology sector (Rihani, 2008).

e) YU has established the first International Computer Driving License Centre in 2001 which trains more people in ICDL than any other centres in Jordan and it is envisaged that every university scholars would be aware of using the computers, and be able to use the electronic resources available in the library universities.

f) Accessibility – the researcher has good relation with YU academicians, which is to assist the researcher to complete the data collection successfully.

Faculty of Arts	Departments	Faculty of Archaeology & Anthropology	Departments
	Arabic Language & Literature		Archaeology
	English Language & Literature		Anthropology
	History		Epigraphy
	Modern Languages		
	Political Science		Tourism
	Sociology & Social Service		
	Semitic & Oriental Languages		Conservation & Management of Cultural Resources
	Geography		
	Translation		

Faculty of Fine Arts	Departments	Faculty of Shari'a & Islamic Studies	Departments
	Drama		Al-Fiqh & its origin
	Design		Usul Addin
	Music		Islamic Studies
	Visual Arts		Islamic Economics & Banking

Figure 4.3: Human-Science Faculties and the Departments

4.5 Conceptual Framework of the Study

The context of this study is humanities scholars at YU where the researcher investigates their information behaviours based on a proposed model (Figure3.1). The model has been developed and designed by integrating and synthesizing five universal models. The five models provide various examples of information-seeking behaviour, and specifically the behavioural characteristics that are used in this study. This study uses the conceptual information behaviour model to reveal and understand the humanities scholars' information behaviour. The proposed information behaviour model forms the basis of this study as a road map of information behaviour process for humanities scholars, and their demographic variables are cross tabulated with their information behaviours to ascertain their relationships.

4.6 Population and Sample

4.6.1 Sampling Size for Qualitative Data

According to Patton (1990), a sample size depends on what is wanted, the aim of the survey, what is at stake, what is beneficial, what is credible, and what can be completed within allocated period of time and resources. Based on similar resources and limitation of time, the researcher chooses to survey either a particular set of experiences for a larger quantity of person (seeking breadth) or a more open variety of experiences for a smaller quantity of person (seeking depth). Hence, this study samples small number of humanities scholars which can be precious, particularly if the cases are brimful with information. Patton (1990) suggested for qualitative sampling designs, identification of minimum samples is due to expected reasoning coverage of the phenomenon, and given the aim of the research and stake holder interests.

At the beginning, for planning and financial causes, the researcher stipulates a minimum expected sample size and builds a rationale for the minimum, and also criteria that would alert the researcher about inadequacies in the original sampling approach or the size. The validity, mindfulness and insights which are generated from qualitative data gathering method is more related to the richness of information of the selected cases and the in-depth face-to-face interview than with the sample size. Lincoln and Guba (1985, p. 201) stated:

> *"The purpose of sampling will most often include as much information as possible, in all of its various ramifications and constructions, hence, maximum variation sampling will be the mode of choice. The object of the game is not to focus on similarities that can be developed into generalisations, but to detail the many specifics that give the context its unique flavour".*

The basis of the case study depends on the willingness of volunteers where they make tedious efforts to keep diary annotations for the researcher as agreed in the consent form.

In this study, to get all the volunteers from a population of 275 humanities scholars at YU to attend the interview was not an easy task. The humanities scholars are always busy with their academic tasks. Therefore, the headquarters of YU had made recommendations to several head of departments to get involved with the interview for the benefits of humanities scholars.

Thus, for the initial phase of qualitative part (face-to-face interview), 26 human-sciences scholars expressed their willingness to get involved in the interview. The interviewees were selected to those who are willing to participate in this study. The positions of the volunteers vary from lecturers to full professors to best represent the broad needs of wider humanities scholars at YU. The description of academic ranks in Yarmouk University is explained in Appendix O. The interviewees are from four faculties; seven respondents from faculty of Arts; eight respondents from faculty of Shari'a & Islamic Studies'; six respondents from faculty of Archaeology & Anthropology, and four respondents from faculty of Fine Arts (See Table 4.1).

Table 4.1: Demographic of Scholars Respondent in Face-to-Face Interview (n=26)

N	Gender / Age	Qualification	Country of Graduation	Academic Position	College & Department	Years of Experience
1	M (63)	PhD	Egypt	Professor	Shari'a & Islamic Studies *Al-Fiqh & Its Origin*	38
2	M (40)	PhD	Jordan	Assistant Professor	Shari'a & Islamic Studies *Al-Fiqh & Its Origin*	6
3	F (43)	PhD	Egypt	Assistant Professor	Shari'a & Islamic Studies *Al-Fiqh & Its Origin*	9
4	M (41)	PhD	Jordan	Assistant Professor	Shari'a & Islamic Studies *Islamic Studies*	7
5	F (34)	Master	Jordan	Lecturer	Shari'a & Islamic Studies *Islamic Studies*	4
6	M (58)	PhD	Egypt	Professor	Shari'a & Islamic Studies *Usul Addin*	33
7	M (50)	PhD	Malaysia	Associate Professor	Shari'a & Islamic Studies *Usul Addin*	16
8	M (42)	PhD	Jordan	Associate Professor	Shari'a & Islamic Studies *Usul Addin*	11
9	M (62)	PhD	Egypt	Professor	Arts *Geography*	36
10	M (59)	PhD	Iran	Associate Professor	Arts *Semitic & Oriental Languages*	26
11	F (31)	Master	Iran	Lecturer	Arts *Semitic & Oriental Languages*	1
12	M (63)	PhD	Egypt	Professor	Arts *Arabic Language &Literature*	37
13	M (61)	PhD	Egypt	Professor	Arts *Political Science*	33
14	M (55)	PhD	UK	Associates Professor	Arts *Arabic Language &Literature*	23
15	F (47)	PhD	Jordan	Assistant Professor	Arts *History*	17
16	M (38)	PhD	Jordan	Assistant Professor	Arts *History*	2
17	M (35)	PhD	USA	Assistant Professor	Archaeology & Anthropology *Anthropology*	4
18	M (46)	PhD	Spain	Assistant Professor	Archaeology & Anthropology *Anthropology*	8
19	M (48)	PhD	Germany	Assistant Professor	Archaeology & Anthropology *Conversation & Management of Cultural Resources*	10
20	M (48)	PhD	Iraq	Assistant Professor	Archaeology & Anthropology *Inscriptions*	20
21	M (34)	PhD	France	Lecturer	Archaeology & Anthropology *Tourism*	2
22	M (50)	PhD	France	Assistant Professor	Archaeology & Anthropology *Archaeology*	22
23	F (55)	PhD	USA	Associate Professor	Fine Arts *Design*	25
24	M (49)	PhD	Bulgaria	Assistant Professor	Fine Arts *Drama*	14
25	M (50)	PhD	UK	Assistant Professor	Fine Arts *Drama*	15
26	M (47)	Master	Egypt	Lecturer	Fine Arts *Drama*	16
F = Female; M = Male						

4.6.2 Sample Size for Quantitative Data

The population for this study is defined accordingly to the purposes of the study. Graziano and Raulin (2000, p. 207) defined a research population as "*the larger group of interest from which a sample is selected*". The sample is a subset of people drawn from the population. A concerned group may be a sample in one context and a population in another context depending on the research focus. A population of interest is typically a group of people who have certain characteristics. It can be any size and that it will have at least one (or several) characteristic(s) that set it off from another population of which the researcher hopes to generalise the results (Fraenkel & Wallen, 2000). In other words, what is "the group of interest" to the researcher in this current study may be defined as a group of faculties of human sciences scholars.

A sampling frame for this study is constructed from four human sciences faculties namely; Faculty of Arts; Faculty of Shari'a & Islamic Studies, Faculty of Archaeology & Anthropology, and Faculty of Fine Arts. A proportional random sampling technique is used to generate the samples. Professors, associate professors, assistant professors, and lecturers constitute the strata of the samples. The total population of humanities scholars at YU is 275. As suggested by Krejcie and Morgan (1970, p. 291) in their statistical table (Appendix J) to determine the sample size from a given population, for a population of 275, sampling of 159-162 is required. However, this study has oversampled an additional of 15% samples to the required sampling size. Therefore, a total of 185 humanities scholars at YU were sampled. The increment of sampling size or oversample to the overall sampling size was done for several reasons, which are: to increase the reliability, to decrease the margin of error of the statistical result, and to address the non-responsiveness (Pew Research Center, n.d.; Bover, 2008; Kennickell, 2008).

As suggested by Neuman (2003) and Fraenkel and Wallen (2000), two criteria are taken into consideration by many researchers when selecting the sampling respondents; they are: time and cost, and accuracy. Thus, a manageable time based on the schedule of the researcher was prepared before travelling to YU for data collection. A total of 161 respondents responded to the questionnaire survey where all were found usable. This counts for a response rate of 87.02%, which is quite high due to the following reasons:

a) The researcher personally administered the questionnaire survey to the samplings in their offices.

b) The researcher personally made constant follow up for at least three times by calling and meeting the samplings in their offices.

c) The researcher personally collected the questionnaire answers from their offices or secretaries.

d) The researcher presented a supported letter from the rector of YU and from each head of departments which have acknowledged the samplings to cooperate in answering the questionnaire survey.

e) The researcher close network with some scholars in YU whom he contacted to support him in conducting the samplings.
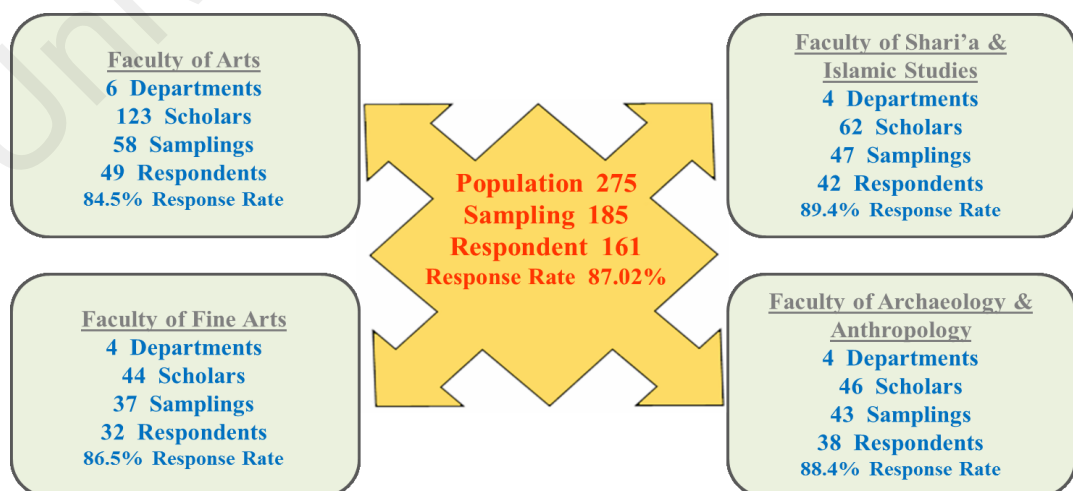
Figure 4.4: Sample Size

4.7 Research Instrument Used

The research instrument refers to the main engagement in collecting the required data to convene the objectives of the study. The researcher uses face-to-face semi-structured interview for the qualitative part, while questionnaire survey is used to present the quantitative part. Explanation on how the researcher designed both instruments is as follow:

4.7.1 Face-To-Face Semi-Structured Interview Design

One of the popular ways used for collecting qualitative data is face-to-face semi-structured interview. It is adapted in this study for elicit information in order to achieve a holistic and deep understanding of humanities scholars' information behaviour. Taylor and Bogdan (1998, p. 88) defined in-depth interview as:

"Repeated face-to-face meetings between the researcher and informants concentrating towards understanding informants views on their lives, experiences or conditions as express in their personal words".

Informants' account which is being sought is highly valued (Minichiello et al., 1995; Arksey & Knight, 1999).

In this study, face-to-face semi-structured interview, also known as in-depth interview, was employed. This type of interview was adopted because of its use to this study since the researcher is concerned with the meanings that the respondents give to particular topics, and since the topics are too complex to be studied by quantitative methods (Taylor & Bogdan, 1998).

The idea for using interview is to set up a clear idea and to obtain an in-depth understanding of the collected data throughout the questionnaire. According to Large and Beheshti (2013), in-depth understanding can generate enormous amounts of data.

Hence, analysing the interview can be a great challenge in terms of identifying and structuring the data collection into organised central themes. The researcher, however, uses the semi-structured interview in which questions are mixed of closed and open questions. The reason is that the researcher can gain accurate data on respondents' (humanities scholars) information behaviour experiences as well as to explore their views and feelings about their experiences. Moreover, by using the semi-structured interview, the researcher can gain the benefits of structured and unstructured interviews; it gives a freedom to the researcher to ask questions in different ways and to probe whenever necessary to create new questions and ask them in different ways based on the questions that have been answered (Meho, 2001). Besides, through in-depth interview, the researcher can obtain factual information about respondents' information-seeking experiences and also explore their views and feelings about their experiences; this additional data is related to the key research questions of this study. On the other hand, respondents may ask the researcher to clarify the question when it is necessary and they share, explore and explain more answers.

The data gathered via this method is meant to provide deep understanding of humanities scholars' activities, which cannot be observed directly by the researcher. The researcher, hence, is able to link the data with the purpose of the research in order to provide a broad view of the situation, the population and the setting (Salkind, 1997).

In addition, the researcher has designed this semi-structured interview guideline to guide him to ask several questions and to ensure the same information are obtained from all respondents by giving the same questions. Besides, it is also to ensure that each interview covers the same questions while giving a chance for the researcher to consider a discretion during the interview. Consequently, this provides the element of structure

which is necessary to focus on the interview but provides enough flexibility to not over determine the course of the interview. The interview guideline can be expanded or revised as the researcher conducts additional interviews (Taylor & Bogdan, 1998). The interview is partitioned into four sections and contains 20 open-ended questions to gather information on participants' knowledge, behaviours, and feelings as well as their opinions and practices regarding information-seeking process (Appendix B).

The first section contains one question to represent the respondents' demographic data; name, gender, faculty and department, mother tongue and language used to read, write, and teach. This section is used to address and answer the forth objective and research question. The second section contains four questions (2-4) to examine the types of information resources used by humanities scholars to satisfy their information needs. This section is used to address and answer the first research objective and research question. The third section of the interview contains nine questions (5-14); they are targeted to explore and examine the humanities scholars' information-seeking process that is directly related to the conceptual model of the study. In order to assist the researcher in understanding the actual process of information-seeking among the respondents and to illustrate their information-seeking behaviour in practice, they are requested to describe the steps that they follow to obtain information on specified subject. This section is used to address and answer the second research objective and research questions. The fourth and fifth sections contain six questions (15-20) related to potential barriers and factors influencing their information-seeking and their perception and satisfaction towards the performance of Al-Husayniyyah Library and the Centre of Excellence in satisfying users' information needs. These sections are used to address and answer the third research objective and research question.

4.7.2 Questionnaire Design

Quantitative research designs are those of primary data which consist of variables that can be coded numerically. These variables may be truly numeric (such as age or the number of times an event occurs) or categorical (such as gender). Thus, the survey (questionnaire) employed in the study is to represent the quantitative research approach. Therefore, a set of questions is developed in order to gain the quantitative data.

The process of designing the questionnaire involved a literature review for international instruments and current methodological papers. Thus, the researcher embarks on designing a questionnaire based on previous studies related to the current study, such as (Gleeson, 2001; Basri, 2002; Yitzhaki & Hammershlag, 2004; Al-Suqri, 2007; Aldojan, 2007; Abouserie, 2007). This is called the funnelling approach as recommended by Frankfort-Nachmias and Nachmias (1996) and Oppenheim (2000). In this stage, the researcher takes all the information and knowledge gathered from the sources as a measurement to guarantee validity and reliability. Besides, some adjustments were made to meet the research objectives; close-ended questions were provided beside open-ended questions to provide more freedom for respondents to give comment and information.

Moreover, the procedure for designing questionnaire went through several stages of refining and scrutinising. A key characteristic of designing process was how to incorporate the main constructs in the conceptual framework model into the questionnaire regarding to the chosen variables and the level of detail that is required. In order to make the collected data contributes to the statistical analysis and to avoid misunderstanding of any question, dichotomous questions were ignored to ease the respondents to complete the questionnaire. Most questions are of Yes/No type and

based on Likert scale type. This kind of question is widely used as a tool in social sciences and is a proper response to measure attitudes, perceptions and options (Vogt, 1999).

To ensure all respondents understand the aim of each question, the researcher has selected applicable phrases, terms and words for each question. The researcher was keen to make the questionnaire attractive, pleasant and easy to complete. Therefore, the use of box items were designed for most questions, where the respondents can 'tick' their answers. The selection and format of the questionnaire is expected to make it easy to be understood by the respondents. Hence, a revision of the questionnaire was made by the researcher's supervisor, two senior librarians at Al-Husayniyyah Library, one senior librarian scholar at International Islamic University Malaysia (IIUM) and another senior librarian scholar at Jordan University (JU). The researcher spent three months (January to March 2012) to design and distribute the questionnaire. A model of the questionnaire (Appendix D) is provided in 49 questions and divided into six sections:

Section one contains 15 questions (1-15) and divided into three parts; part 1: demographic information, part 2: computer and Internet use, and part 3: library use. The data of this section is used to address and answer the forth research objective and research question, which examines whether the variables are related to various aspects of scholars' information needs and the preferred printed or electronic sources.

Section two contains eight questions (16-23) related to the humanities scholars information needs and the use of electronic and printed resources in their research and teaching activities. The questions are designed to address and answer the first research objective and research question.

Section three contains five questions (24-28) related to the location of relevant information for research and teaching purposes. The questions are designed to address the second research objective and to answer the sub-question (a).

Section four contains five questions (29-33) that are designed to gather information about the sources used to obtain information, which are created to address the second research objective and to answer the sub (b) of second research question.

Section five contains ten questions (34-43) related to the barriers, difficulties and factors that influence humanities scholars while they seek information resources. It is designed to address the third research objective and to answer the sub (a) of third research question. Where section Six contains 6 questions (44-49) is related to the overall humanities scholars' perception and satisfaction with information resources and services provided by Al-Husayniyyah Library and the Centre of Excellence. The questions are designed to address the third research objective and to answer the sub (b) of third research question.

4.8 Procedures

4.8.1 Data Collection

It is known that, data collection is considered as one of the most important parts in any research, where the conclusions of any study are based on the data (Fraenkel & Wallen, 2000). It is where the researcher plans how to proceed (Bogdan & Biklen, 1998) with collecting the data on his subject; it is the basic plan or strategy of research and the logic behind it (Oppenheim, 1992). In this study, the researcher collected the data via both face-to-face semi-structured interviews (Appendix B) and open-ended questionnaire (Appendix D). By using these two methods, the whole picture of the study

becomes very clear, and this is due to the nature of each instrument, where each instrument provides several different views of the research issue.

In the beginning of January 2011, the field work was carried out to collect the qualitative data and in the middle of August 2011 (approximately 7 to 8 months) the data collection was completed. All humanities scholars at YU were invited to participate in this study. In order to conduct this study, the researcher sought the approval from four human sciences faculties; mainly, Faculty of Arts, Faculty of Shari'a & Islamic Studies, Faculty of Archaeology & Anthropology, and Faculty of Fine Arts to allow the researcher to conduct the interview with the humanities scholars and to distribute the questionnaire (Appendix F & H) between January and March 2012.

Table 4.2: Data Collection Timeline

Qualitative (Interview)		Quantitative (Questionnaire)	
Start	Finish	Start	Finish
January 2011	August 2011	January 2012	March 2012

Table 4.3 maps the questions in the questionnaire and interview with the conceptual model, research objectives and research questions.

Table 4.3: Guidelines for Constructing Research Methodologies

Conceptual Model	Research Objectives	Research Questions	Questionnaire	Interview
Types of Information Resources Used to Satisfy the Information Need				
Passive seeking behaviour Reflects HS' passive mental thought before a decision is made to seek for information. Passive mental seeking activities include factors that trigger scholars' attention for seeking information, availability of information, languages, format & location.	1) To understand the information needs & behaviour of HS in an ICT-enriched environment in Jordan	1) What are the information needs of HS in an ICT-enriched environment in Jordan? *a) What types of information resources do HS primarily use for research & teaching?*	*16+17+18+19 +20+21 +23*	*2+3+4*
Information-Seeking Process				
Active Seeking behaviour The 7 modes are: a) decision-making (where to seek) b) exploration c) monitoring d) accessing e) categorization f) purification g) satisfaction	2) To ascertain the information needs & information tasks performed by the HS for teaching & research.	2) How do HS fulfil their information needs? *a) How do HS identify & locate relevant information for their academic tasks?* *b) How do HS obtain relevant information resources?*	*24+25+26+27 +28* *29+30+31+32 +33*	*5+6+7+8 +9+10+ 11+12+13 +14*
Barriers				
Barriers Affecting Information Behaviour Whether persona faced any barriers that influence information-seeking behaviour & what they do to overcome it.	3) To identify the barriers encountered by the HS while they seek for & use information for teaching & research.	3) What are the barriers encountered by HS while seeking for information? *a) What are the barriers that influence HS' information-seeking behaviour?*	*34+35+36+37 +38+39+40+ 41+42+43*	*15+16+17 +18+*
Satisfaction				
Satisfaction Stage where personas 'tie up loose ends' through a final search. The information-seeking tasks are completed, information is obtained & information need is satisfied.		*b) How satisfied are HS with the library & Centre of Excellence resources?*	*44+45+46+47 +48+49*	*19+20*
Demographic Relationship				
Passive seeking behaviour -Information need -Format	4) To investigate the relationship between demographics information & the HS information-seeking processes.	4) What is the relationship between demographic information the information behaviour process? *a) What is the relationship between independent variables (gender, age, academic position, country of graduation, department & years of experience) with types of information need?* *b) What is the relationship between independent variables (gender, age, academic position, country of graduation, department & years of experience) with format of resources?*	*1+2+3+4+5+ 6+7+8+9+10 +11+12+13+ 14+15*	

4.8.1.1 Qualitative Data Collection

The interviewees were purposively selected from a wide variety of positions among the humanities scholars at YU (from a lecturer to a full professor) to best represent the wide needs of the broader community of humanities at YU. The researcher conducted a total of 57 interview sessions, of which each participant was interviewed at least twice. There are two sessions for the interview. The first session is to get the answers for all questions. The duration is from 40 to 50 minutes. The minimum duration is 40 minutes and the maximum duration is 50 minutes. The second session is to get confirmation of the answer given from the first session as well as any additional answer the interviewee want to add. The minimum duration is 40 minutes and the maximum duration is 50 minutes.

The interviews started with a warming-up conversation where the researcher introduced himself and the questioned to be asked, and whether the interviewee agrees to make an interview with him or not, and if the time and place are appropriate or not. The interviews have been conducted at a variety of locations as where the scholars preferred such as Al-Husayniyyah Library, scholar's own office and home. This is to ensure that the scholars' respond to the interview in a relaxed condition and also they are ready to be interviewed.

The first step is where the respondents were required to read the consent letter prior to participating in this study that includes clear information about the study and their participation in the interview. While the researcher conducting the interview, he explains to each respondent the procedure and how it is important of their involvement in this study and informs them that their response will be treated confidentially and anonymity. Thus, interviewees can feel free to reveal an honest thought and feeling

(Cohen, Manion & Morrison, 2000). Each interview session took around 40 to 50 minutes and being recorded; the interviews were recorded with the respondents' permission. Moreover, all interviews were conducted in Arabic (Appendix C), where later the interviews are subsequently transcribed and translated into English.

4.8.1.2 Quantitative Data Collection

The researcher and his friends distributed the questionnaire to 185 humanities scholars by going to their offices and handing them a copy of the questionnaire. The questionnaire required approximately 20 to 25 minutes to be completed. All questionnaires were conducted in Arabic (Appendix E), where later on were subsequently transcribed and translated into English (Appendix D).

Firstly, the respondents were asked to read the informed consent letter to participate in this study which includes clear information about the study and their participation in the questionnaire. They have to complete 49 items of the questionnaire that consists of six main sections. The questionnaire was conducted as a second phase of data collection. A total of 185 questionnaires were distributed to the humanities scholars sample over four faculties at YU. 161 questionnaires were completed and returned after 2 months, where the response rate was 87.02%.

4.8.2 Data Analysis

Broadly conceived, data analysis is the activity of making sense of, or interpreting the data. In this study, the data analysis is divided into qualitative analysis and quantitative analysis.

4.8.2.1 Qualitative Analysis

In this study, to identify the information behaviour of humanities scholars at YU, a face-to-face semi-structured interview was conducted because interpersonal contact is important and it is desirable to have a chance to follow and know the respondents' interesting comments. The interview provides data on the respondents' understanding of opinions, attitudes and feelings. Thus, the researcher believes that face-to-face semi-structured interview is considered as one of the most important ways that allows understanding and gathering information about humanities scholars' knowledge, perceptions, opinions and feelings regarding their information-seeking. Furthermore, this research method is employed in the study to help in identifying how humanities scholars practice in the process of information-seeking.

The interviewees were purposively selected from a wide variety of positions among the humanities scholars at YU (from a lecturer to a full professor) to best represent the broad needs of the wider community of humanities scholars at YU. The researcher conducted 57 semi-structured; one-to-one and face-to-face interviews to explore and understand the humanities scholar behaviours and experiences. The sampling size is 26 interviewees because their answers have reached saturated level; similar answers were given by the interviewees themselves (Gillham, 2005).

Each interview contains 20 questions that are divided into five sections, in which related questions are grouped together (Appendix B). Each interview is conducted approximately from 50 to 60 minutes and being recorded with the respondents' permission.

The first section is concerned about the respondents' demographic information, the second section is concerned about the types of information resources used to satisfy humanities scholars needs, the third section is concerned about humanities scholars' information-seeking process, the fourth section is concerned about the barriers and factors influencing humanities scholars' information-seeking behaviour and the last section is concerned about the perception and satisfaction of humanities scholars on Al-Husayniyyah Library and the Centre of Excellence resources and their services.

4.8.2.1 (a) Using Persona Methods

Various analysis methods have been developed in information behaviour researches. Most of the methods involved with a common shortcoming failed to make comprehensive connection between the service provider and the users due to deficiency of practical details of how the users behave (Brickey, Walczak & Burgess, 2012; Miaskiewicz, Sumner & Kozar, 2008) and failed to make the users seem like real people in the decisions making process (Maness, Miaskiewicz & Sumner, 2008). When the target users and their needs are abstract and not life-like, librarians and other decision makers are more likely to use their own assumptions about the users to drive the design process. Consequently, the design process does not reflect the real scholars' information-seeking behaviour and therefore, the need of the scholars are not centred (Maness, Miaskiewicz & Sumner, 2008). This shortcoming can be overcome through a clear and explicit resemblance of users using persona (Ward, 2010; Pruitt & Grudin, 2003).

Hence, to provide more vivid representation of humanities scholars, the researcher uses Persona method in this study. Persona can be identified as *"factious, specific, concrete representations of target users"* (Pruitt & Adlin, 2010, p. 11). In other words,

Persona represents a group of target users that share common behavioural characteristics, needs, and goals. Even though a Persona represents a group of real users, it is written in the form of a detailed narrative about a specific and fictitious person. This fictitious person (the Persona) is first given a face and a name. Then, the Persona is described through a lengthy and detailed narrative that addresses specific details, such as the Persona's family, friends, possessions, working experiences, personal goals, and others. These details make the Persona seems like a real person in the mind of the designer (Cooper, 1999). The narrative also addresses the goals, needs, and frustrations of the Persona that are relevant to the product or the designed system (Maness, Miaskiewicz, & Sumner, 2008).

Even though the Persona is fictitious, it is created directly from users' research data (Cooper, 1999). In fact, the most effective Persona is tied directly to the users' research findings (Goodwin, 2002). The only aspects of a Persona that are usually made up are the name, face, and personal details that make the Persona seems like a real person. However, in the development of the Persona, interviews with and, or observations of the users are essential, because they uncover the attitudes and behaviours of the individuals that might not be evident in other data (Cooper & Reimann, 2003).

An essential benefit of Persona is that they build empathy for the target users. Through the detailed narrative, Persona helps to overcome our natural tendency to be self-centred on our own needs and preferences (Miaskiewicz & Kozar, 2011; Cooper, 1999). Donald Norman, a leading usability expert, explains that in the context of Persona, empathy means "*understanding and identification the user population, the better to ensure that they will be able to take advantage of the product, to use it readily and easily – not with frustration but with pleasure*" (Norman, 1988, p. 158). Empathy

for the Persona allows the design team to stop talking about the general "users" when making product design decisions. Instead, Persona allows individuals to ask questions, such as "*Does this interface allow Pat to accomplish his goals?*" and "*Would this feature frustrate or help Pat?*" This profound shift from talking about general users to the understanding and identification the needs and goals of the Persona allows the designers to more effectively address users' needs (Maness, Miaskiewicz & Sumner, 2008). Besides, the detailed description of the users and how they act in their setting makes the finding of one case study of the Persona transferable to another case study with similar population of users (Rempel, Buck & Deitering, 2013).

4.8.2.1 (b) Conducting the Interviews and Identifying Persona

To understand and identify the humanities scholars' information behaviour at YU, interviews were conducted with 26 humanities scholars. These interviewees were conducted face-to-face and a modest gift was offered for each respondent. The interview was conducted within 50 to 60 minutes, and was recorded using a digital audio recorder. Then, the researcher transcribed the interviews and yielded 320 pages of transcripts in Arabic. During the semi-structured interviews with the respondents, each of the interviewee was asked the same questions.

Next, the researcher identifies the Persona and writes the narrative for the Persona. The methods for the Persona's development comprised of two phases. First, Persona identification involves finding the distinct groups of humanities scholars that constitutes the Persona. The respondents who are characterised to be similar to each other are grouped together. Once the Persona is identified, Persona creation involves writing the detailed narrative about the Persona (Miaskiewicz, Sumner & Kozar, 2008).

4.8.2.1 (c) Identification of Persona

The researcher transcribed all interviews as mentioned above during the analysis process to identify the Persona. 26 participants in 57 interview sessions and 320 transcripts were analysed to identify the Persona. The interview transcripts were analysed through a "manual" approach by reading each transcript and then identifying the significant findings in each interview. The researcher devoted himself to read each of the transcripts and then identifies the significant findings in each interview by identifying the similarities of the respondents' answers to specific questions. Firstly, the answer to each question required to be extracted from the interview transcripts. The researcher did a tabular spreadsheet with questions as rows and interviewees as columns to help in organising the text from the interviews. The results of the tabulated information allow for more easy comparison of the answers across the interviewees for specific questions.

Once the answers have been identified, similar answers are grouped into patterns (Goodwin, 2002). When similar patterns are shared by multiple interviewees, these interviewees become the basis for a Persona (Cooper, 1999). Then, these patterns are clustered into groups, which are constructed to be as homogenous as possible, and to be different as possible from other clusters/groups (Pang-Ning, Steinbach & Kumar, 2006). The simplified sequences of steps are as follows:

Step 1: Conducting Interview

The source of textual data to develop the Persona.

Step 2: Transcribing the Interview

The interview are transcribed, translated from Arabic to English language and confirmed again with the interview respondents regarding their answers.

Step 3: Conducting Latent Semantic Analysis (LSA)

LSA is used as a text analysis technique to categorize similar answers.

Step 3.1: Categorizing similar answers using spreadsheet

Tabular spreadsheet consists of row of answer to the question and column of interviewee is used to organize and ease the process of categorizing similar answers among the interviewees.

Table 4.4: Sample of Spreadsheet to Categorize Similar Answers

Interview	Interviewee 1	Interviewee 2	…….	Interviewee 26
Answer to Question 1				
Answer to Question 2				
Answer to Question 3				
…….				
Answer to Question 20				

Step 3.2: Grouping similar answers into patterns (themes)

Tabular spreadsheet consists of row of similar answers and column of pattern which will be explained in Chapter 5 as theme in sequence according to components of the proposed model.

Table 4.5: Sample of Spreadsheet to Categorize Similar Patterns

Pattern (Theme)	Pattern 1	Pattern 2	Pattern 3	…….
Similar Answers A				
Similar Answers B				
Similar Answers C				
Similar Answers D				
…………				

Step 3.3: Grouping similar patterns into Persona

When similar patterns are shared by multiple interviewees, they become the basis for a Persona. Figure 4.5 illustrates the results of groups of the respondents into four Personas. The first Persona named Prof. Abdullah Ayman Persona consisted of five respondents. Persona 2, named Dr. Bakeri Atief consisted of five respondents. Persona 3, named Dr. Fatimah Mohammad consisted of nine respondents, and the last Persona, named Dr. Ismail Farooq consisted of seven respondents.
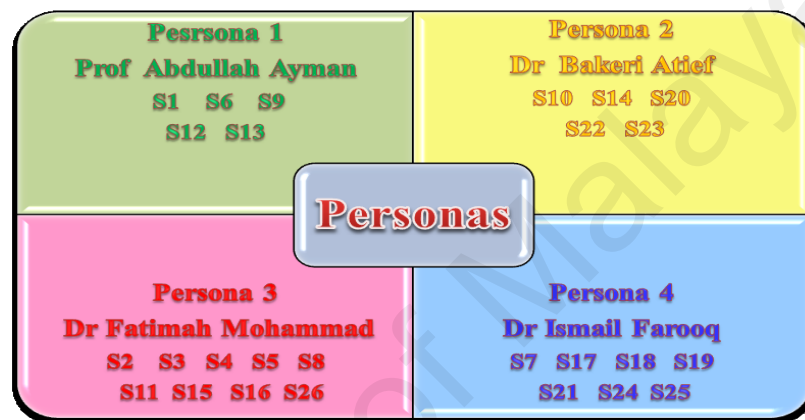
Figure 4.5: LSA Grouping of Interviewees into Four Personas

Identifying the right set of Persona manually is very difficult and the process of identification is an important observation and is considered as a daunting task (Pruitt & Adlin, 2010). To conduct an interview with 26 humanities scholars and each one resulting with a transcript of around 12 pages, then the researcher has to decide which observation is significant and which is not in the 320 pages of text. This involves a lot of efforts and consumes a lot of time as mentioned by Sonnenwald and Wildemuth (2001). Thus, after the researcher has identified the Persona manually, he used a text analysis technique proposed by Miaskiewicz, Sumner and Kozar (2008) called Latent Semantic Analysis (LSA) to identify the Persona directly in a way that highlights the shortcomings of the manual approach; the difficulty of decisions that have to be decided when reviewing the data.

The LSA method allows the identification of Persona in a further objective, fast and less exhaustive way and resource then the manual approach which commonly used by researchers (Cooper, 1999). According to Sinha (2003), and Pruitt and Adlin (2010), if the Persona is not founded on a methodology that thoroughly links the Persona with the users' research findings, they can be considered as lack of consistency. In fact, the research is considered unreliable and the Persona cannot be used in the research design process (Grudin & Pruitt, 2002; Pruitt & Adlin, 2010).

4.8.2.1 (d) Writing Persona Narrative

After completing the LSA method, four Personas were identified as mentioned earlier to reflect in-depth behavioural information of humanities scholars at YU. For each of the four Personas, the researcher has grouped the similar answers from the interviewees. Then, the similarities become the focal point for the narrative of the Persona.

Once giving each one of the four Personas a special name and face, the researcher summarised five to six answers that are most similar among the respondents where the answers were collected and clustered into a Persona. For instance, one of the key similarities of the answers that constitute Prof. Abdullah Ayman Persona (Figure 5.3) is how he does not use the library collection and electronic resources. Therefore, for Prof. Abdullah Ayman narrative, the researcher summarises this specific scholars' needs by stating, "Prof. Abdullah Ayman is not aware of the electronic resources at all, which he has never been able to follow the breath of information resources that are accessible to him on the Internet at present. Therefore, for his research, he uses his own collection of printed materials for his needs."

After summarising the similarities, the researcher has set a live-narrative for each Persona and reinvigorate it by writing part of the Persona's description (in the first paragraph) that presents who the Persona is. For instance, Dr. Bakeri Atief Persona (Figure 5.4) is described as, Dr. Bakeri Atief is an associate professor at three human-sciences faculties at YU, and he has been a faculty member for 23 years. He is still actively involved in his research and writes in Arabic and other languages for his research papers. Dr. Bakeri Atief is an active volunteer in Irbid City (where he lives) in the preservation of the environment and as Drug Awareness Committee. During weekends, he likes to garden at home. These explicit, fictitious particulars made the Persona vivid and lifelike in the eyes of the chief of YU libraries and the decision makers. The full descriptions of four Personas are provided in chapter five.

4.8.2.2 Quantitative Analysis

The 18th edition of Statistical Product and Service Solutions (SPSS) is used in this study to encode and manipulate the collected data. In order to ensure the accuracy of data, the researcher recorded the data independently and repeatedly verified. Data analysis of the responses contains both descriptive and inferential statistics methods, while Chi-Square test is used to compare significant differences between variables. Descriptive statistics method is a technique undertaken to analyse the characteristics and relationship between diverse variables based on systematic monitoring of these variables (William & Monge, 2001), such as percentages, means, and standard deviations. Meanwhile, inferential statistics can perform more sophisticated functions, which is used to compare and observe differences among groups of variables to make decisions or predictions about a larger population of data. The researcher used the independent samples t-test, chi-square test of independence to determine the relationship between the independent variables like Demographic Variables: Gender,

Age, Academic Rank, Country of Graduation, Academic Position, Department, and Length of Service; and Dependent Variables: types of information needs and preference for printed or electronic format.

In terms of the relationship between respondents years of experience and their views of different types of information as information needs or not, the researcher conducted a series of t-tests to examine their significant length of services (experience). To examine the independence between demographic categorical variables and the preferred format of information resources, the researcher used the independent samples chi-square test.

4.8.3 Pre-testing the Questionnaire

After designing the questionnaire, the researcher ran a pre-testing of the questionnaire to facilitate the understanding of the respondents on the questions given to them. Thus, the pre-testing of the questionnaire was conducted to find the flaw before the actual survey is conducted with the actual sample.

The respondents are the humanities scholars at YU. The researcher sent the English copy of questionnaire to three reviewers for comments and evaluation and to do a pre-testing; one from YU, one from Jordan University (JU), and one from International Islamic University Malaysia (IIUM). Pre-testing was also done by the researcher's supervisor at the University of Malaya (UM) and two senior librarians from Al-Husayniyyah Library.

During the pre-testing process, the researcher was able to identify whether the questions were suitable to be asked or not. If there were comments and suggestions from the referees on the questions, the researcher would be able to modify and adjust

the questions. Thus, based on their advice and revisions, many corrections have been made to the questionnaire before it was finalised to ensure that the questionnaire is understood and easy to follow.

4.8.4 Questionnaire Translation

To make the questionnaire easier to understand and to complete for the respondents who are not fluent in English language, the researcher has translated the questionnaire into Arabic since the study is conducted at Arab-spoken University. To ensure the accuracy of translation, the researcher sent the questionnaire to two translators at the University of Malaya (UM) and University Utara Malaysia (UUM).

Once receiving the two translated questionnaire, the researcher made a review and comparison between both Arabic translations with the English version and chose the most applicable one. To produce accurate Arabic questionnaire that is identical to the English version, the researcher sent both questionnaires (Arabic and English) to one scholar who is fluent in both languages and specialised in library and information sciences at the Department of Library and Information Sciences (IIUM). After the researcher was satisfied with the quality of the final translation, the researcher started distributing the questionnaire for pilot survey.

4.8.5 Pilot Survey

After pre-testing the Arabic version of the questionnaire, a pilot survey of the questionnaire became necessary to note any issues so that the corrective steps can be taken to avoid any kind of inconsistencies or misinterpretations before actual survey is carried out. Oppenheim (1992) stated that through pilot survey, the researcher can check the wording of the questions and, where necessary, to improve the questions. Cohen,

Manion & Morrison (2000), emphasised that, pilot survey allows the researcher to make changes or revisions to the instruments before the survey is carried out.

In-depth review of all instruments with insightful comments and editing was done by the researcher's supervisor. A pilot survey was carried out among 35 humanities scholar at YU in January 2012. The researcher invited them to participate in the pilot survey and talked to them nicely to encourage them to provide insightful comments when necessary. Within a period of three weeks, the researcher collected 26 responses. The comments from the respondents were taken seriously and some changes were made, such as grammar, rephrasing and arrangement of the questions for the final draft of the questionnaire.

4.9 Reliability and Validity

One of the most sensitive issues that the researcher should be aware of is the reliability and validity of all measurements. The researcher takes into account this matter, thus he embarks on designing a questionnaire that is based on previous five studies related to the research. This is called the funnelling approach as recommended by Frankfort-Nachmias and Nachmias (1996) and Oppenheim (2000) to guarantee the validity and reliability, despite the researcher's knowledge that virtually to reach a perfect reliability and validity is impossible to achieve (Neuman, 2003).

Reliability means consistency or dependability of the research. It refers to the degree to which if the instrument is to be administrated under the same conditions, it gives the same results. Popham (2000, p. 121) stated that "*the consistency of results produced by measurement devices*". In other words, the degree to which they are free from errors of measurements, which point out the ability of the researchers to get the same results from

the same respondents at different times using the similar methods. Five humanities scholars participated in this field test. After the test, several changes were made to the instruments.

Meanwhile, validity refers to the degree to which an instrument measures what it is supposed to measure. Popham, (2000, p. 94) defined validity as "*the degree to which a test measures what it purports to measure*". From the beginning of developing the instrument, the researcher was keen to simplify difficult words to alleviate the systematic error in the measure. For content validity of the questionnaire, input was solicited from a number of sources. For validation purpose, the researcher designed the instruments based on several previous researches and thorough check was made by two expert librarian scholars (both have expertise on the subject and measurement). One of the experts is from IIUM and another one is from YU. Revision and editing were also made by the researcher's supervisor to improve the instruments. To verify the content validity and reliability, the instrument was piloted. Details of the pilot survey were discussed in the previous section.

4.10 Trustworthiness in Qualitative Data

In qualitative studies, Lincoln and Guba (1985) have outlined four criteria to establish trustworthiness of data - credibility, transferability, dependability and conformability.

4.10.1 Credibility

Lincoln & Guba (1985, p. 301) defined credibility as:

"*Evaluation of whether or not the research findings represent a credible conceptual interpretation of the data drawn from the participants' perceptions and experiences of the phenomenon undertaken by the study*".

In this study, triangulation is used to achieve credibility (Creswell et al., 2007). According to Guion, Diehl and McDonald (2011) triangulation is a process for analysing the research questions from multiple perspectives. Perspective triangulation is used in this study, which is described as using multiple perspectives, to interpret the collected data (Patton, 1999). This is achieved when the answers of the interview with humanities scholars are classified according to several themes related to research questions under the Persona analysis method. Similar perspective of the answer is classified to similar perspectives of theme to ensure the credibility of findings.

In ensuring the credibility of interview, prolonged engagement was carried out where each interview was conducted approximately from 40 to 50 minutes with at least two sessions each and being audio recorded with the respondents' permission. Furthermore, the researcher used member checking process during the interview process. This is done by restating and summarising the given answers of the interview questions and then by showing and asking the interviewees to determine the accuracy of the summary of the given answers. The credibility process allows the researcher to critically analyse and give comment on the findings, and affirm that the summaries of the given answers reflect the views, feelings and experiences of the interviewees. This process also ensures the answers of the interviewees have been recorded properly.

4.10.2 Transferability

Transferability refers to the ability of achieving similar findings using similar research method at another context or setting. According to Krefting (1991), Creswell (1994) and Shenton (2004), transferability can be achieved by explaining detailed descriptions of the participants and context of study (sampling procedure). Therefore, appropriate sample and context, which have knowledge about the topic of study and

which is best represent the context of study must be selected (Morse et al., 2008). Besides, Shenton (2004) recommended additional detailed explanation about the number of sample, period of time of data collection and length and frequency of data collection session. The phenomenological research of qualitative approach embarked in this study contributes to the transferability aspect. Moreover, detailed descriptions of the sample and context of study, data collection method and analysis procedures were explained in chapter 4 (4.4, 4.5, 4.6, 4.7 and 4.8).

4.10.3 Dependability

According to Krefting (1991), addressing consistency of findings is referred as dependability. Consistency of findings can be achieved through clear and well-defined research questions (Miles & Huberman, 1994), detailed description of research methodology and design (Krefting, 1991; Creswell, 1994; Shenton, 2004). Table 4.3 shows a consistency of research objectives and research questions (explain in relation with problem statement and aim of the study in sub-sections 1.4, 1.5 and 1.6) with the research methodology to maintain consistency of the findings other than detailed description of the research methodology and design as explained in sub-sections 4.4, 4.5, 4.6, 4.7 and 4.8.

4.10.4 Conformability

Conformability is about the determination of an accurate result (Charmaz, 2008). Conformability can be achieved through triangulation, detailed description of the research methodology and recognition of shortcoming in the research methodology. In this study, conformability is achieved through perspective triangulation in the Persona's analysis method as explained in sub-section 4.8 and through detailed description of the research methodology as explained in subchapter 4.3 to 4.8. Lastly, the shortcoming to

produce trustworthiness finding is overcome through Persona analysis method as explained in sub-section 4.8.2.1. Through Persona, the findings reflect the real humanities scholars' seeking behaviour because vivid representation is portrayed in the analysis and findings. In addition, qualified interpreter is used to revise the translated answer from the interview.

4.11 Challenges during Data Collection

In this section, the researcher highlights the challenges and difficulties and explains how he overcomes those challenges.

Language is considered as one of the main challenges faced the researcher. This is because there are many scholars at YU who are not fluent in English. This made the respondents unable to respond to the interview or complete the questionnaire in English. As a result, the researcher has translated both instruments into Arabic. Language dilemma has prompted the scholars to make extra efforts. Thus leading to extra workload on the researcher in analysing and reporting the survey. The process of translation from English into Arabic and vice versa was not an easy task. This dilemma appears clearly in the interview, where the respondents were supposed to reveal more about their feelings and experiences. However, the researcher has overcome this dilemma by writing the instrument in a simple language and straightforward. Nonetheless, qualified interpreter has revised the translation process to ensure the accuracy and correct standard.

Another challenge is related to the limited cooperation and reluctant of humanities scholars to be interviewed. The process to convince the scholars to participate in this study was not an easy task. It was very important to achieve a satisfactory response rate

for this study as possible. The researcher has to visit each scholar individually in their offices and talk to them gently and state the significance of this study and how this study will benefit the scholars themselves in improving the library services and to the university community. This dilemma was not easy to overcome even though the researcher has a permission letter from the president of YU and from the heads of departments of each faculty which urges the scholars to cooperate with the researcher. To overcome the challenge, the researcher asked his relatives who knew few professors at YU to help him in asking the humanities scholars to participate in the interview and in the questionnaire.

Lack of time in the process of making an appointment with the scholars for face-to-face interview also required a lot of effort. The researcher has to call all humanities scholars by telephone to arrange the date to conduct the interview. Unfortunately, the interview appointments often needed to be rescheduled because the scholars are always busy. This increases the workload and also time consuming. In addition, rigorous weather condition (winter season) during the process of data collection made the interview appointments and distribution of the questionnaire on hold and delayed the process of data collection. Furthermore, the use of public transportation increased the difficulty during the data collection process, especially in the winter season.

4.12 Summary of Chapter 4

This chapter has explained the research approach where the mixed methods of qualitative and quantitative approach are applied. The research design in terms of sampling size, selection of suitable instruments and case setting are justified accordingly to best address the research objectives and to answer the research questions. Similarly, detailed procedures for data collection and data analysis as well as pre-testing and pilot

study are described and justified. Moreover, the ethical aspects such as reliability and validity in quantitative and trustworthiness in qualitative other than challenges faced during data collection are outlined.

CHAPTER 5: QUALITATIVE ANALYSIS AND FINDINGS: PERSONIFYING THE INFORMATION NEEDS AND SEEKING BEHAVIOURS OF HUMANITIES SCHOLARS

5.1 Introduction

This chapter revolves around the results of an effort to gain insight into the information needs and behaviours of humanities scholars at Yarmouk University in Jordan. This insight began with interviews conducted with 26 humanities scholars from 22 humanities disciplines which aimed to address the following research objectives:

a) To understand the information needs and behaviour of humanities scholars in an ICT-enriched environment in Jordan.

b) To ascertain the information needs and information tasks performed by the humanities scholars for teaching and research.

c) To identify the barriers encountered by humanities scholar while they seek for and use information for teaching and research.

d) To investigate the relationship between demographics information and the humanities scholars' information-seeking processes.

The interviews were conducted in Arabic language, at various locations to which the scholars preferred: Al-Husayniyyah library, scholars' own office or their homes. These interviews provide more in-depth information on the scholars' views on their information needs, their information behaviour, the barriers they encountered, and their information satisfaction in fulfilling their information need in the university's ICT-enriched environment. As described in Chapter 4, the interview transcripts were clustered into four unique groups using a modified approach based on Latent Semantic Analysis (LSA) (Maness, Miaskiewicz & Sumner, 2008).

The information needs and behaviours of each of the groups were then represented through a persona, a method used in the Human-Computer Interaction (HCI) field for summarizing and communicating information about a group of users in a personable and empathetic form (Miaskiewicz, Sumner & Kozar, 2008). The four personas that were uncovered may be able to effectively communicate the actual information needs of the humanities scholars through the personal narrative, name, and face, which continuously will remind the library of what their users really want and need from their services, not what the librarians think about the need of the scholars.

The qualitative finings display a relevance relation to the research questions and the proposed model (explained in chapter 3). The findings are presented and discussed under the following four main sections:

a) Information Needs of Humanities Scholars (Section 5.5 & 5.6 address the first research objective).

b) Information-seeking Behaviours of Humanities Scholars (Section 5.7 addresses the second research objective).

c) Barriers and Factors Influencing Information-seeking Behaviour (Section 5.8 addresses the third research objective).

d) Perceived Satisfaction of Information Obtained (Section 5.7 addresses the third research objective).

Figure 5.1 presents the organizational structure of this chapter.
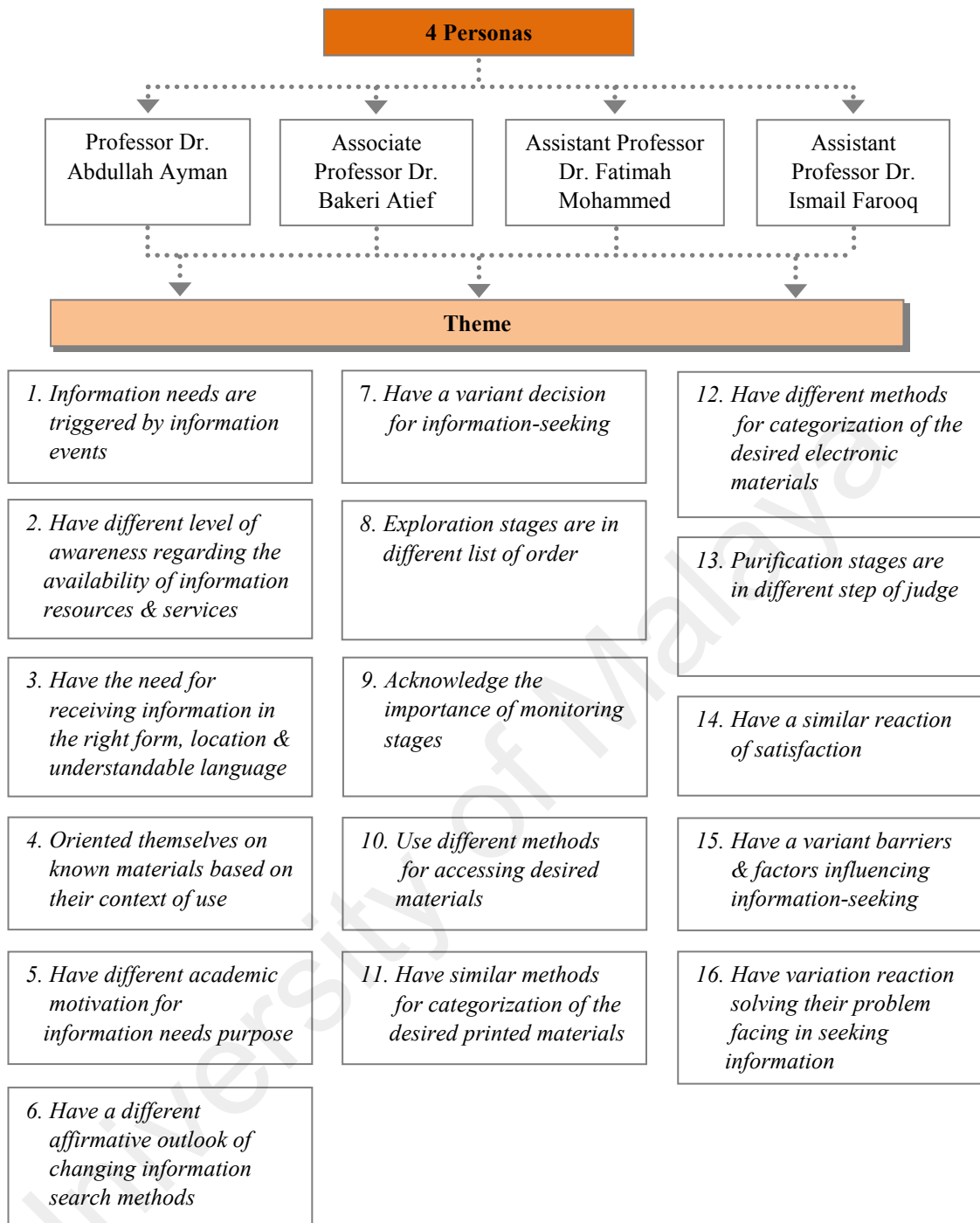
Figure 5.1: Organizational Structure of Chapter 5

5.2 Participants Demographics

The total number of humanities scholars interviewed was 26, comprising 5 females (19%) and 21 males (81%). The participants came from four faculties; 7 respondents from Faculty of Arts; 8 respondents from Faculty of Shari'a & Islamic Studies; 6 respondents from Faculty of Archaeology & Anthropology, and 4 respondents from

Faculty of Fine Arts. Also, the respondents were from a wide variety of academic positions (from lecturers to professors) to best represents the broad information needs of the community of humanities scholars (Table 5.1).

In addition, the age range of participants (humanities scholars) are from 30-40 years old (7=27%); 41-50 (12=46%), 51-60 (4=15%), and more than 61 years old (3=12%). 23 (88%) of the respondents have a doctorate degree, while 3 (12%) of the respondents have a master degree. 16 (61%) of the respondents graduated from Arab countries (Jordan, Egypt and Iraq), while 10 (39%) of the respondents graduated from abroad, 2 (8%) from USA, 8 (31%) from European countries and 1 from Malaysia. With regard to years of teaching experience, 9 (35%) scholars have less than 10 years of experience, 8 (31%) scholars have 10-20 years, 4 (15%) have 21-30 years, while 5 (19%) scholars have more than 31 years of experience. Table 5.1 presents the demographic profile of the interview participants.

Table 5.1: Demographics Profile of the Interview Participants

Nu.	Gender & Age	Highest Degree Awarded	Country of Graduation	Academic Position	Academic Disciplines	Years of Teaching & research Experience
1	Male (63)	PhD	Egypt	Professor	Shari'a & Islamic Studies; Al-Fiqh	38
2	Male (40)	PhD	Jordan	Assistant Professor	Shari'a & Islamic Studies; Al-Fiqh	6
3	Female (43)	PhD	Egypt	Assistant Professor	Shari'a & Islamic Studies; Al-Fiqh	9
4	Male (41)	PhD	Jordan	Assistant Professor	Shari'a & Islamic Studies; Islamic Studies	7
5	Female (34)	Master	Jordan	Lecturer	Shari'a & Islamic Studies; Islamic Studies	4
6	Male (58)	PhD	Egypt	Professor	Shari'a & Islamic Studies; Usul Addin	33
7	Male (50)	PhD	Malaysia	Associate Professor	Shari'a & Islamic Studies; Usul Addin	16
8	Male (42)	PhD	Jordan	Associate Professor	Shari'a & Islamic Studies; Usul Addin	11
9	Male (62)	PhD	Egypt	Professor	Arts; Geography	36
10	Male (59)	PhD	Iran	Associate Professor	Arts; Semitic & Oriental Languages	26
11	Female (31)	Master	Iran	Lecturer	Arts; Semitic & Oriental Languages	1

Table 5.1, continued

12	Male (63)	PhD	Egypt	Professor	Arts; Arabic Language & Literature	37
13	Male (61)	PhD	Egypt	Professor	Arts; Political Science	33
14	Male (55)	PhD	UK	Associate Professor	Arts; Arabic Language & Literature	23
15	Female (47)	PhD	Jordan	Assistant Professor	Arts; History	17
16	Male (38)	PhD	Jordan	Assistant Professor	Arts; History	2
17	Male (35)	PhD	USA	Assistant Professor	Archaeology & Anthropology; Anthropology	4
18	Male (46)	PhD	Spain	Assistant Professor	Archaeology & Anthropology; Anthropology	8
19	Male (48)	PhD	Germany	Assistant Professor	Archaeology & Anthropology; Conversation & Management of Cultural Resources	10
20	Male (48)	PhD	Iraq	Assistant Professor	Archaeology & Anthropology; Inscriptions	20
21	Male (34)	PhD	France	Lecturer	Archaeology & Anthropology; Tourism	2
22	Male (50)	PhD	France	Assistant Professor	Archaeology & Anthropology; Archaeology	22
23	Female (55)	PhD	USA	Associates Professor	Fine Arts; Design	25
24	Male (49)	PhD	Bulgaria	Assistant Professor	Fine Arts; Drama	14
25	Male (50)	PhD	UK	Assistant Professor	Fine Arts; Drama	15
26	Male (47)	Master	Egypt	Lecturer	Fine Arts; Drama	16

Legend:
• Prof. Abdullah Ayman persona   = 5
• Dr. Bakeri Atief persona   = 5
• Dr. Fatimah Mohammad persona   = 9
• Dr. Ismail Farooq persona   = 7

5.3 Identifying the Personas

After the interviews data were transcribed manually and translated to English Language, which yielded to 320 pages of transcripts, the transcripts were analysed to identify the personas. Consistent with Goodwin (2002), the researcher reads each of the transcripts, and identifies the significant observations in each of the interviews. Once the observations are identified, similar observations are grouped into "patterns". When similar patterns are shared by multiple research participants, these participants become the basis for a persona. A text analysis technique using Latent Semantic Analysis (LSA) proposed by Miaskiewicz, Sumner and Kozar (2008) was used to identify the persona.

Using LSA, four distinct clusters that informed the personas' narratives were identified (Figure 5.2).

Figure 5.2: LSA Grouping of Interviewees into Four Personas

For each of these personas, the similar answers provided from 26 participants were identified. These similarities became the focus of the resulting four personas narrative. Each persona was given a name and fictitious details to make the persona vivid and lifelike (Maness, Miaskiewicz & Sumner, 2008). The four personas are summarized in Table 5.2.

Table 5.2: Four Identified Personas

Persona Name	Description
Professor Abdullah Ayman S1, S6, S9, S12, S13	Abdullah Ayman represents five Professors in the study. He was educated in various Arab countries and has academic experience of more than 35 years.
Associate Professor Dr. Bakeri Atief S10, S14, S20, S22, S23	Bakeri Atief represents five Associate and Assistant Professors in the study. He was educated in Arab and foreign universities. He has a teaching experience of 23 years at Yarmouk University.
Assistant Professor Dr. Fatimah Mohammed S2, S3, S4, S5, S8, S11, S15, S16, S26	Fatimah Mohammed represents nine Associate, Assistant Professors and lecturers in this study. She is a junior scholar with 8 years of teaching experience at Yarmouk University. She graduated from Jordan universities.
Assistant Professor Dr. Ismail Farooq S7, S17, S18, S19, S21, S24, S25	Ismail Farooq represents seven scholars of Associate and Assistant Professors in the study. He graduated from Europe countries and has been lecturing for 10 years

5.4 Writing the Personas

After giving the persona a name and face, the researcher summarized the answers that were similar among the interviewees and grouped the answers into a persona. For example, one of the key similarities of the interview participants that composed the Professor Abdullah Ayman persona (Figure 5.3) is the lack of awareness and desire to use the Internet to connect with the broad university community and the reliance on his personal collections such as books to fulfil his information needs. Therefore, within Professor Abdullah narratives, the researcher summarized this specific persona needs by stating, "Professor Abdullah is not aware about the electronic resources at all, which he is never being able to catch up with the information resources that are available to him on the Internet today. For his research, his own collection offers him printed materials that he needs, so he is not aware about the available information resources at the Al-Husayniyyah Library. Books are considered the primary resource for his research, so he often does not seek to use journals in any electronic databases".

Once the similarities were summarized, each of the personas needed to be "brought to life." For each of the personas, the researcher wrote a part of the Persona narrative (within the first paragraph) that introduces who the persona is. For example, Dr. Fatimah Mohammad persona (Figure 5.5) is described as, "She is a newly married and seeks self-independence with two children; she enjoys cooking traditional Jordanian food in her home whenever she has free time. Dr. Fatimah also a member at the Yarmouk University Club and likes swimming and play chess whenever she has some free time. These specific and fictitious details made the persona vivid and lifelike in the eyes of library management officers, of which continuously will remind the library of what their users really want and need from their services. Figure 5.3 to 5.6 present the full description of the persona.

Persona Picture	Name: Professor Abdullah Ayman
	Represents five respondents of senior scholars from four human-science faculties.
	Age: 61 **Year of Expertise:** 35 **Teaching:** Bachelor, Master and PhD students **Supervision:** Master and Doctoral students

Meet Professor Abdullah Ayman

Prof. Abdullah Ayman is a professor at four human-science faculties at YU, and has been a faculty member for 35 years. He is actively involved in his research on human sciences by using Arabic language for all of his research papers. He is one of the important social personalities in his society, so he spends a lot of his time to "mend fences" between the members of his society.

After many years reading information about his field, he feels bored to read the same things. So, he starts reading other fields as he believes that he has enough knowledge and it is time to "convenience the knight". He spends his free time by reading Arabic literature and writing poetry.

Prof. Abdullah Ayman is not aware about the electronic resources, which he has never been able to follow with the breath of information resources that are available on the Internet nowadays.

Therefore, for his research, he seeks information in his home office and uses his own collection of printed materials. He is not aware about the availability of information resources at the Al-Husayniyyah library. Books are considered as the primary resource for his research. Thus, often he does not seek journals in any electronic databases.

Furthermore, almost all of his research papers are carried out alone - fully independent seeker and he does not delegate the research tasks by relying on his expertise. But rarely, he becomes entirely dependent intermediary seeker when he starts looking for the electronic resources. Hence, rarely he contacts his colleagues for further information. He explores information by searching his own collection, track references (chaining citation) of author and publisher. He does not really monitor the information-seeking process like before when he was young - where he contacts the publisher to monitor particular authors and subscribes the printed books and journals.

In preparing the research paper, he uses the old card methods where he writes the important notes, and he accesses the desired materials by browsing his own collection, contacting his colleagues, browsing library shelves and going to the location of the existing materials. Besides, he does not use the facilities of the computer despite the availability of a computer in his office.

Most of the time, he judges the information materials by reading it in full, but when he does not have enough time, he reads the abstract and the introduction and then the conclusion. He directly obtained the information resources and reforms particular idea before completing the research process. His biggest frustration in barrier of information-seeking was the unavailability of time and lack of funds.

Figure 5.3: Professor Abdullah Ayman Persona

Persona Picture	Name: Dr. Bakeri Atief
	Represents five respondent senior scholars from three human-science faculties.
	Age: 52 **Year of Expertise:** 23
	Teaching: Bachelor, Master and PhD students
	Supervision: Master and Doctoral students

Meet Associate Professor Dr. Bakeri Atief

Dr. Atief is an associate professor at three human-science faculties at YU, and has been a faculty member for 23 years. He is actively involved in research on human sciences using Arabic and other languages. He actively volunteers with a variety of services in the Irbid City (where he lives) after the lectures - environmental preservation and drug awareness. On the weekend, he likes to do garden.

He still depends heavily on printed resources. Sometimes (once a week), he logs into the Al-Husayniyyah OPAC to make a search and regularly (3 times a month) visits in person to Al-Husayniyyah and asks the librarian to accompany him to select the materials from the shelves. Al-Husayniyyah offers 60 percent of the books that he needs. He relies on his collection and contacts his colleagues to fill his information gap. He does not have any computer or searching skills training, but recently he has become partial awareness of information search methods. He learned by himself few skills through trial and error, asking his colleagues and family members for some help. Thus, he still feels stress when dealing with the electronic resources.

After the slow pace of learning, he has adapted to the new technology. However, he tries to avoid using the electronic resources for his research paper and ask his students to avoid it also. This is due to his misconception about the uncertainty and inaccuracy of the electronic resources. He believes that there is no control, particularly the Internet.

As a fully independent seeker, his personal experience is the starting point of his research. But, as entirely dependent seeker, he asks his colleagues for help in collecting information, particularly the electronic resources and suggestions about certain issues. He still uses the old card method, but he is also capable of using the computer facilities. He also does not have a research network with others.

He initially explores the information by using the OPAC and the library shelves where he could follow up with the citations of references. He showed some proactive behaviour in monitoring the new information. He contacts the publisher to subscribe printed books and journals. He also considers attending conferences as a good source to be updated.

In accessing the information materials, Dr. Atief relies on the library collection - free library copy and inter-library loan request. Then, he classified the resources to its subject and organized in the physical folders. He purifies each resource by reading the abstract and introduction and check the table of content to read the main point. After he had satisfied, he stops searching and obtained the resources to save his time and effort.

His biggest frustration was the lack of desired information, inaccurate information and not confident in using the electronic resources. He also wishes that Al-Husayniyyah offers more printed materials.

Figure 5.4: Dr. Bakeri Atief Persona

Persona Picture	**Name:** Dr. Fatimah Mohammad
	Represents nine assistant respondents of junior scholars from three human-science faculties.
	Graduated: Arab countries
	Age: 40 **Year of Expertise:** 8
	Teaching: Bachelor and Master students
	Supervision: Bachelor and Master students

Meet Assistant Professor Dr. Fatimah Mohammad

Dr. Fatimah is a lecturer and assistant professor at three human-science faculties at YU, and has been a faculty member for 8 years. She is actively involved in human sciences research using Arabic language. She is a newly married and seeks for self-independence with two children. She enjoys cooking traditional Jordanian food and likes to swim and play chess during free time. She also a member of YU Club.

She likes to use the library facilities, at least once a week she goes to the Al-Husayniyyah library. She surfs Al-Husayniyyah website (twice a week), only to see if the library has access to specific journals after she does not find the article on Google or Google Scholar. It offers her 70% of her desired resources. Just 3 scholars from this persona have an idea about the Centre of Excellence and have used it before.

Dr. Fatimah adopted the electronic information technology significantly and around half respondents of this persona has attended a computer searching skills training and has ICDL. She likes to use the electronic resources and respondents from the faculty of Shari'a of this persona have their own gate of online database collection (Al Maktabah Al Shamilah). But, she still feels some drawback where there are an abundance of electronic resources and unavailable of desired full text. So, she often spends her own money to get access to the full text.

She does not rely on her collection because she does not have extensive collections, difficult to find specific resources and expensive cost. She hopes Al-Husayniyyah to subscribe few electronic databases so she can browse online dissertation and databases in Arabic language and to have more printed journals. Dr. Fatimah begins her exploration stage by consulting her colleagues to locate the information, and then used the OPAC system and the search engine (Google) to narrow down her search. This allows her to track references (Chaining citation) and follow bibliographic references. Often this leads her to subscribe to certain academic electronic databases.

She gives equal attention to both printed and electronic resources in the monitoring stage. Her monitoring process involves searching index and abstracts, searching and browsing online catalogues, citations and references in reading materials, browsing table of contents of journals, communicating with colleagues and friends, browsing Internet and search engine (Google Scholar), revisiting preferred websites and Centre of Excellence website, and subscribing the electronic databases.

She favours accessing the online catalogue, reading the abstract and printed the resource. She categorizes the information into a selected topic of folders in the computer. Then, reads the abstract and starts skimming the main point for purification. After satisfied, she gets the resources and highlights the important information to be used later.

Her biggest frustration is when she does not have access to the full text from the Al-Husayniyyah library databases, restrictions to some resources and lack of specified information.

Figure 5.5: Dr. Fatimah Mohammad Persona

Persona Picture	**Name:** Dr. Ismail Farooq
	Represents seven respondents of associate and assistant of junior scholars from four human-science faculties.
	Graduated: Europe countries
	Age: 45 **Year of Expertise:** 10
	Teaching: Bachelor and Master students
	Supervision: Master students

Meet Assistant Professor Dr. Ismail Farooq

Dr. Ismail is an associate & assistant professor at four human-science faculties at YU and has been a faculty member for 10 years. He is actively involved in human-science research using Arabic and other languages. He lives in the YU staff hostel with his wife and three kids. He likes to cycle and jogs inside the YU to stay healthy and likes to watch the news and foreign movies.

Dr. Ismail connects with researchers around the world who has similar interests and they actively share research together. He uses Al-Husayniyyah library website frequently (twice a week) to access databases (Emerald & EBSCO). But, he rarely goes to the library in-person and in general, he knows about the Centre of Excellence website and has used it before.

He has attended a computer searching skills training and has ICDL. Thus, he prefers to use the electronic resources than the printed one which provides variety and current information, flexibility and save time. He finds 70% of his resources online. He is fully aware of the changing of information search methods. He is a competent Google and Google Scholar's user and always looking for new course and updated the existing course knowledge. He likes to find articles from the press to incorporate into his class and contacts his colleagues who teach similar courses at YU and other universities for exchange of ideas.

He is a fully independent seeker in printed materials, but a semi-independent seeker in online resources and resources that are not available in Jordan universities' library. Thus, he asks for help and exchange in collecting information and suggestion from his colleagues and ex-supervisor from overseas. He also asks them for updated information in monitoring his resources.

Besides, he accesses the online catalogue, reading the abstract and printed the resources. He also browsed the Internet and read from the computer screen. He categorizes the information that he gets into two categories - related and nearly related to his research topic.

For purification of information, he reads the abstract and skimming the table of contents to read the important points in a particular chapter. After he satisfied with the resources, he directly obtains it and starts highlighting the important notes.

He does not rely on personal printed collection because he does not have extensive collections. Besides, it is difficult and expensive to find specific resources locally. However, he is looking to make his private electronic collection more than printed one because the printed collection is difficult to get.

His biggest frustration is when he does not have access to the full text from the Al-Husayniyyah library databases. Thus, he still uses his previous university library as alumni.

Figure 5.6: Dr. Ismail Farooq Persona

5.5 Information Needs of the Humanities Scholars

Information need is an individual's or group's desire to locate and obtain information to satisfy a conscious or unconscious needs. This section addressing the first research objective where presents scholars' passive mental thoughts, which refers to the factors that can bring scholars' attention for seeking information, highlighting and examining humanities scholars' knowledge on available information resources that they need to access at Al-Husayniyyah Library and at Centre of Excellence. The researcher also looked at different preferences of information resources in terms of languages and format, which can reflect the changes in research methods, and lastly, their preferred location for seeking information. In other word, this section reflects humanities scholars' passive mental thought before a decision is made to seek for information that they need as shown in the proposed model.

Theme 1: Humanities scholars' information needs are triggered by information events

Interview findings revealed that information events evoke the information needs of the scholars. This study identified seven (7) types of information events that brought the attention of four personas to their information needs:

i. Conferences and Seminars

Discussion at conferences and seminars are the information channels which are consistently quoted as being very important information events. Abdullah Ayman and Fatimah Mohammad indicated that the importance of conferences and seminars was to trigger new ideas as reflected in their following remarks,

"Discussions at conferences often suggest new ideas which push me to look for additional particular information" (Abdullah).

"Definitely the conferences are fertile environment for new scientific discussions; it has [sic] raised questions and inquiries which leads me to search for answers" (Fatimah).

Given the importance of both, keeping up-to-date with recent scholarship and meeting fellow researchers at conferences, Ismail Farooq and Bakeri Atief said,

"Almost at the end of any scientific meeting, you don't have an idea how important it is...[sic] you bump into with people whose work you admire and ask new and fresh questions" (Ismail).

"It is an ideal place to find out what's hot and not so hot topic in my research area and make contact with people who might be interested in what I'm doing" (Bakeri).

ii. Invisible College or Informal Communication

All four personas agreed that informal communication exchanged through conversation and discussion with their peers bring about the information needs which results into information-seeking activities. All personas mentioned either the word "colleagues" or "other faculty members" who seem to have helped trigger their information needs. For example,

"When my colleagues consulted me about Hadith or some issues, they actually guide me to seek for further details" (Abdullah).

"Agreed that discussion with other faculty members leads me to want to know more" (Ismail).

iii. Classroom Discussion

However, the information needs of Bakeri Atief, Fatimah Mohammad and Ismail Farooq were also triggered through classroom discussions and questions rose by their students. Bakeri considered the questions from his graduate students as "*have always attracted*" his attention to conduct further research and readings in a particular area, as he said,

"Many times that classroom discussion of my students attracts my attention to seek for information" (Bakeri).

On the other hand, the researcher noted that there was a good resemblance between Fatimah and Ismail regarding the questions that were raised by their students during the lectures. Both concluded,

"At the end of the student presentation, the questions raised during Question and Answer session, had brought our attention to which we need to find out more, and to conduct a research" (Fatimah & Ismail).

iv.   Communication with Ex-Research Supervisors

Only Ismail Farooq indicated that discussing and corresponding with his previous supervisors who are working at abroad universities has triggered new inquiries regarding to his research.

"I still keep in touch with my supervisor and discuss with him some inquiries which sometimes lead me to run cooperate searching paper" (Ismail).

v.   Mass Media

Only Abdullah Ayman informed that some certain ideas obtained from the mass media are capable of stimulating him the need to know and seeks further information.

"Sometimes I brainstorm on a particular issue, while watching my favourite education channel, National Geographic, and some questions loom in the horizon" (Abdullah).

vi.   Browsing the Internet

Both Fatimah Mohammad and Ismail Farooq indicated that browsing websites seeking answers for some inquiries prompt their further needs. In their own words,

"I can practically venture into a new field when browsing Google Scholar, looking for current work in my area" (Fatimah).

"We are the one who browse the Internet regularly, so sometimes we find some new research ideas that motivate us to look further" (Ismail).

vii.   Reading

Bakeri Atief, who confessed himself as a voracious reader, revealed that intensive readings have always brought his attention to seek information.

"While reading and I find some interesting areas that attract my attention, I will start searching for further details, right after" (Bakeri).

The findings from these personas indicate that the humanities scholars, in a context of teaching and research, recognized that their knowledge is inadequate to satisfy their information needs. They recognized their information needs are evoked by information events. For all personas, conferences and seminars as well as the invisible colleagues are the dominant information events that triggered their information needs. For those who were educated abroad, information needs are also triggered by the contact and communication with their ex-research supervisors. For those who are Internet-savvy, their information needs are continuously triggered by browsing online information. Reading and watching the television are important to those who have the passion and time to spend on doing these activities.

5.5.1 Knowing the Availability of Information Resources

Theme 2: Humanities scholars have different level of awareness regarding the availability of information resources and services

Ideally, in order to address information needs, a scholar should have a good knowledge of the availability of information sources and services that his organization have. Interview findings revealed that the humanities scholars were either partially or fully aware of the availability of information sources and services provided by the academic library (Al-Husayniyyah Library) and the Centre of Excellence. However, in terms of the sources and services provided by the Internet Centre (Centre of Excellence), interview findings revealed that the scholars were either ignorant or very familiar.

i. Partially Awareness of Library Sources

Abdullah Ayman confessed that he predominantly relied on his personal book collections of about 20 to 30 years old to meet his information needs. This was because he believed that the "*library collections do not reflect his information needs*", he seldom goes to the library and did not seek librarians for help to use

the services. He however mentioned the availability of printed sources such as books, journals, monographs and dissertations, library catalogues and indexes in the library. He knew that the library has electronic resources, but he could not list the examples of the sources when requested by the researcher, reflecting his unawareness regarding this type of resource. He acknowledged that he had never been able to catch up with the breath of electronic information sources that are available to him through the library website. He remarked,

"*Very seldom I use [sic] Al-Husayniyyah collections, because I built [sic] my own collection over time, more than 1600 titles, but of course I have a good collection of books, journals, monographs, theses and dissertations"(Abdullah).*

ii. **Fully Awareness of Library Sources**

The other three personas; Bakeri Atief, Fatimah Mohammad and Ismail Farooq showed their full awareness of the availability of information resources at the Al-Husayniyyah library. They were quick when asked to list the types of library resources they used. Bakeri emphasized that "*all types*" of information sources are available and mentioned the term "*printed and electronic*". He said,

"*Al-Husayniyyah has all types of information resources includes both electronic and printed resources like books, e-books, printed journals, e-journals and databases" (Bakeri).*

"*Providing me with all kinds of sources that I need ever since I was a student here, it has not only good books in my area, but also journals, e-books, e-journals, AV materials and a number of full-text databases, with citations to the articles" (Fatimah).*

Meanwhile, Ismail who prefers online sources to printed sources lamented that there was still lack of library materials in his area although he agreed that the library did provide access to various types of resources.

"*As far as information resources are concerned, Al-Husayniyyah provides all types of information resources. But, despite the availability of all kinds of information, there is still a lack in the printed materials and the inability to browse all the online databases" (Ismail).*

iii. Ignorance of the Internet Sources and Services

Both of senior personas, Abdullah Ayman and Bakeri Atief admitted that they had no idea about the existence of the Centre of Excellence, and had never visit or use the services that were provided.

"I am the old generation, who believes in printed resources, just now I knew from you [the researcher] about this centre" (Abdullah).

Bakeri expressed his surprise for not knowing the existence of this centre,

"Oh! It upsets me, not knowing that we have such centre, and just now I knew about it" (Bakeri).

iv. Familiarity with Internet Sources and Services

While the image was totally different with the younger personas, Fatimah Mohammad and Ismail Farooq did not only show their awareness of the availability of sources and services offered by the Centre of Excellence, but they also have been using the website and information portal since it was launched in 2005. They showed their familiarity in their statements,

"I have been using it many times and it really save my time searching for information" (Fatimah).

"Of course I have been using it since 2005, where I can login in at any time and search from [sic] many universities, OPACs" (Ismail).

The researcher noted that, more than half of the personas not only they did not know which type of information resources are provided and what is available at the Centre of Excellence, but also the great calamity that they did not know about the existence of the Centre of Excellence. So, the researcher decided to meet the director of the Centre of Excellence at Yarmouk, Mr. Aoad Athamnih on 13th of April 2011 and asked him about the issue of lack of promotion about the Centre of Excellence services. Mr. Aoad Athamnih said, it is not his fault and it is not his responsibility to advertise about the services. Because according to Mr. Aoad Athamnih, the Director of the Centre of Excellence is not affiliated to the Yarmouk University despite of the existence of the

centre within the university campus. The administration of the Centre of Excellence follows the Higher Education Ministry as an independent entity. So, each library of the universities should make an announcement about the services of the centre.

Theme 3: Humanities scholars have the need for receiving information in the right form, location and understandable language

Scholars in this study have different preferences for information sources. It was found that the language used for seeking information, as well as the format and type of information sources affect their decision when seeking information either by themselves or by the intermediaries. The older personas Abdullah Ayman and Bakeri Atief who predominantly read and write in Arabic language are dependent on information sources published in their mother tongue only. Given their reliance on books and personal collections as described in earlier findings, they obviously prefer printed materials.

The younger personas, Fatimah Mohammad and Ismail Farooq indicated that they need both of Arabic language and English language for seeking information and for publishing their research. Even though Fatimah is not a graduate from overseas university which uses English as a medium of language, but with the requirement to have a TOEFL certificate as graduation requirement for all postgraduate students in Jordanian university, Fatimah is able to communicate and seek for information in English. Besides of having ICDL license, she has and able to widen her information-seeking to English information resources, hence, she is competent in browsing via the Internet and online databases. Ismail who had been educated abroad, and developed far-reaching contact with international peers, need resources in both Arabic and English languages, as well as other languages relevant to his academic area. Since he knew English language and was competent in using online databases and the Internet resources, they would obviously prefer digital resources.

However, the interview results showed that humanities scholars have a different preferred location for seeking information. Where the older persona Abdullah, who was not correlated with the use of online resources, indicated that his most preferred location to seek for information was in his home-office where he had his own collections and his second preferred location was his university office. While the other personas, Bakeri, Fatimah and Ismail indicated that they preferred to seek information at their university office where they can access the online resources and use the OPAC remotely. The second preferred location was the university library.

5.6 Identification of Information Need

5.6.1 Knowing the Needed and Sought Information

Theme 4: Humanities scholars oriented themselves on known materials based on their context of use

Undoubtedly, examining the type of information source humanities scholars' used and the reasons for using that information are considered as one of the best ways to understand humanities scholars' information behaviour and meeting their information needs which continuously address the first research objective. Interview findings revealed that humanities scholars in this study oriented themselves on either printed and electronic resources and indirect way categorize the information resources they used for their academic tasks into four main known information sources namely: i) Personal Information Environment, ii) Al-Husayniyyah library Information Sources and Services, iii) People as Information Sources, and iv) External Electronic Information Sources.

i. **Personal Information Environment.**

a) Oriented Themselves to Use Their Personal Experience and Background for Searching Purposes.

Both Abdullah Ayman and Bakeri Atief personas stressed that they preferred to use their academic background as an expert or pioneer researcher in their research field, and thus, their topics of study were usually selected on the basis of their existing knowledge and experiences. In their words,

"Of course, when I want to write in my field, I need to be out-fitted with my background that enables me to cover all sides of the topic. Thus, my experience is considered as my first adopted keys of preparation in any scientific research and it always involves in the aspects of my area" (Abdullah).

"Since I was a PhD student, I rely a lot on my personal experience and still have the same behaviour even after become a scholar at YU. I think it is a very important source for seeking information. My position at YU needs me to be a scholar, so my personal experiences are always influence me in my field. For example, when I am teaching, I try to express the best thought and way in teaching" (Bakeri).

b) Oriented Themselves to Use Their Own Printed Collection for Searching Purposes.

Abdullah Ayman relied fully on his own printed collection like books and journals and printed references materials for searching purposes. Because he believed that the library collection did not reflect all of his information needs. So, he predominantly depended on his own printed collection to meet his searching need. He chose his own collection by himself carefully from a variety of resources through his scientific journey of life to meet his specific needs. He also mentioned that he classified and stored it as he liked, so it was easier for him to find what he was looking for. He also had his own notes at the margins and special memos in each resource. He stated that,

"I used to buy and collect printed resources, since my study in 1965. My own library contains more than 1600 resources, where I do use it most of the time when I want to prepare for any research paper and mostly I will find for what I am looking for" (Abdullah).

c) Oriented Themselves to Use Their Own Electronic Resources and Gateway for Research Purposes.

Both personas Fatimah Mohammad and Ismail Farooq hinted about their natural behaviour in collecting electronic resources from various locations. They store it in their personal computer or external devices, and then share it to each other.

"I always use electronic resources whether databases or journals, so I download many articles that related to my field and save it in my PC and in my external hard disc" (Fatimah).

"Since I was a PhD student, I was trying to build my own electronic collection, I save it in my laptop, thumb drive and also I use my e-mail capacity" (Ismail).

Only Ismail alluded about his own electronic gateway as featured types of Internal Human Information Resources (IHIR). He collected many electronic resources from several locations and then stored it and classified it as he believed it was more valuable and flexible to use. One vivid example of these gateway electronic resources was the Dr. Al Jayousi web site

(http://www.drjayousi.com/pages/Default.aspx).

"As I mentioned before, since I was a PhD student, I was trying to build my own electronic collection. So, many of my colleagues asked me to provide them with some references that I have. Thus, I start to establish my own gateway to provide resources for academicians" (Ismail).

"I have my own electronic gateway to store and organise link of webpages and collection of resources under particular titles, which can be used among each other as lecturing for future references" (Ismail).

ii. Al-Husayniyyah library Information Sources and Services.

a) Oriented Themselves to Use Al-Husayniyyah Printed Resources for Teaching Purposes.

Both Abdullah Ayman and Bakeri Atief indicated that they were using only printed educational textbooks for teaching undergraduate students. They also used printed journals and reference materials provided by Al-Husayniyyah library for teaching postgraduate students.

"*For preparing the lectures, I always prefer printed educational textbooks for undergraduate students, but for postgraduate students, I absolutely prefer to use both printed books and journals together*" (Abdullah).

"*It depends on the purpose of use, for teaching undergraduate students purpose, the educational textbooks will be my first choice, but it is slightly different in preparing for postgraduate lectures, the reference books and journals will be my first choice*" (Bakeri).

b) Oriented Themselves to Use Al-Husayniyyah Printed and Electronic Resources for Teaching Purposes.

While both Dr. Fatimah Mohammad and Dr. Ismail Farooq personas revealed that they tend to rely on educational printed textbooks for teaching undergraduate students, they also tend to use both printed and electronic resources together for teaching postgraduate students.

"*Yes! It depends on what I am looking for. Electronic journals for example are considered as my second resource for teaching purposes after printed educational textbooks. The printed journals are my first choice for teaching undergraduates, but for postgraduates, both printed and electronic journals will be my first choice*" (Fatimah).

"*All types of materials are important but not at the same time, it depends on the purpose of using it. For teaching undergraduates, the textbooks will be my first resource, but for teaching postgraduates I use both electronic and printed journals and books*" (Ismail).

c) Oriented Themselves to Use Al-Husayniyyah Printed and Electronic Resources for Searching Purposes.

Both of Bakeri Atief and Fatimah Mohammad personas revealed that they tend to use both printed and electronic resources like books and journals for searching purpose simultaneously. In their own words,

"*I prefer to use printed materials like books, journals and at the same time; I use electronic resources like academic databases too*" (Bakeri).
"*I need both types for my research; I use Questia many times, and I even have personal subscription to online databases*" (Fatimah).

d) Oriented Themselves to Use Al-Husayniyyah Electronic Resources for Searching Purposes.

Ismail Farooq showed his preference for using electronic resources such as journals and databases while he seeks information for research purpose than printed materials. He stated that,

"For research purpose, I usually Google it first. After that, I am looking at academic electronic databases and journals and then I am looking at printed materials" (Ismail).

e) Oriented Themselves to Use Al-Husayniyyah (OPAC) for Information on Specific Research Topic.

Both personas of Fatimah Mohammad and Ismail Farooq reported that they were frequently using the library Online Public Access Catalogue (OPAC) to check what was available in the library on specific research topic, general research subject and booking resources of what they like.

"I find the Online Public Access Catalogue is very useful for whole variety of specific search for journals, books and different online information" (Fatimah).

"Even the library is nearby but I rarely go to the library because I am frequently using the OPAC so I can know what is available there. Then I send one of my students to collect which document I like" (Ismail).

iii. People as Information Sources.

a) Oriented Themselves to Contact Similar Research Interests and Concerns for Awareness of Current Research.

Both of Fatimah Mohammad and Ismail Farooq personas preferred to contact with other researchers who have similar interest and sharing their awareness in their field of study.

"When I am thinking deeply on one subject, I contact with some researcher who share with me similar research interest and concern. Talking about that issue where the new idea and solution is coming and generating" (Fatimah).

"Knowing who is doing what and where in the similar field is a significant thing, which involves the awareness about other scholars with similar interest from all over the world. ...so I collaborate with the scholars from many countries and with scholars from diverse background of knowledge" (Ismail).

Three personas of Bakeri, Fatimah and Ismail assessed the importance of consulting their colleagues who have more expertise in their field of research, for enriching and elevating the scientific value of their research.

"Consulting with my colleagues and friends provides a good chance to share many information resources among us, it is a generating process" (Bakeri).

"*I am frequently talking with my colleagues about similar interesting areas. It leads to generate, interchange and sharing a lot of interesting researches among us and enabling me to obtain many resources to use" (Fatimah).*

"*I talk to my colleagues in the department and those who are from overseas. So, I get a lot of terms about current research, which are useful for things that have not been published yet" (Ismail).*

b) Oriented Themselves to Contact Their Previous Supervisors for Research Purpose.

Only Ismail Farooq persona indicated that consultation with previous academics supervisors who are working at abroad universities was considered as one of the most important resources that he preferred to use, mainly when it was difficult to obtain information from other resources. This was in addition to the request and exchange of services such as copying materials. They also exchanged ideas and some advice with one another.

"I sometimes consult my supervisor who always has different perspectives with reference to some resources. So I get a lot of resource that I could not have it locally" (Ismail).

iv. **External Electronic Information Sources (EEIR):** any electronic resources, electronic databases, external OPAC, electronic university theses and electronic newspapers.

a) Oriented Themselves to Use External Universities Electronic Resources for Research Purpose.

Only Ismail Farooq depended primarily on electronic information resources. He looked for information via the Internet; he had his own frequent visit to search

engines and particular university library websites and databases where he can find his desired information for his research purpose.

"Online is a big way for research, where many scholars doing research from the Internet. I am one of the scholars who seek information a lot via online; I just do Internet searches and login to my library university website" (Ismail).

The findings from these personas indicated that humanities scholars, in the given context of using materials for teaching and searching purpose, showed differences in the types of resources format they used. They recognized the format of information sources needed was evoked by the context of use. For all personas, educational printed textbooks were the dominant type of information used for teaching undergraduate students. For teaching postgraduate level, senior scholars preferred to use printed textbooks, printed journals and ready references sources. Meanwhile, the junior scholars preferred to use printed and electronic resources together. For research purpose, the finding shows that junior scholars rely on their own printed collections. Moreover, junior scholars and those who are Internet-savvy preferred to use electronic resources like databases and journals more than printed material for easy use and up-to-date information. However, orienting oneself to only electronic resources for teaching does not emerge from the qualitative data obtained.

In a nutshell, only Ismail Farooq persona used more than one language for seeking and publishing his works; meanwhile Arabic was the medium language for his teachings. Moreover, Bakeri Atief, Fatimah Mohammad and Ismail Farooq personas showed the importance of information and advice from colleagues, or experts in their fields, when conducting research. While, the process of gathering special collections of the humanities scholars is a common behaviour among all segments of humanities scholars' society. But, the difference between senior scholars and junior scholars is that they gather their own electronic collections more than the printed one, since printed

collections are more expensive and difficult to find. Finally, it can be pointed out that the perception of each persona regarding the format and its language plays a crucial role in the overall information-seeking process. Therefore, the awareness of each persona could decide the pathway which information-seeking process should take place.

5.6.2 The Nature of Information Need

Theme 5: Humanities scholars have different motivation for information needs

After knowing the type of information resources that humanities scholars need, questions about the nature of their information needs begin to loom in their minds. When the researcher asked the respondents to state the possible reasons behind their motivation for information needs, they reported that their research-oriented information needs was based on the context of their research, teaching, literacy and interpersonal information needs. Those information needs can be grouped into four main categories namely: i) Research Information Needs, ii) Teaching Information Needs, iii) Information Literacy Needs, and iv) Inter-Personal Information Needs.

i. Research Information Needs

a) Need for Current Research Information Topics and Activities for Specific Authors.

Only Abdullah Ayman persona showed his concerns and tracking in particular of others' works.

"*I have defined and acknowledged certain authors and I always follow them and their new printed publications i.e., books and articles*" *(Abdullah).*

He also mentioned in the following citation for particular author.

"*I will look for specific authors' citations and see what they have published and who is doing what and where*" *(Abdullah).*

b) Need for Particular Publications in the Research Field.

Abdullah Ayman showed his interest in specific publications that matched his research field by following particular periodical and some serious publications.

"I concentrate on some specific periodical and some publications related to my field of research" (Abdullah).

c) Need General Current Academic Research Information and Its Trend.

All personas showed their information need on the latest research trend in their fields, whether it was by attending conferences, workshops, seminars, and others or by browsing some specific academic online websites and databases. Both Abdullah Ayman and Bakeri Atief indicated that when attending conferences, they found many current general academic issues and research in their research field. This will inform them about the latest development in their disciplines.

"*One of the best advantages of conferences is that you can find some kind of general things that are going on and what is happening in your field*" (Abdullah).

"I find conferences are very useful to find out the current research in my field as an initial work where it has not been published yet, so, I know the current trend for scientific research and what is happening around me" (Bakeri).

However, Fatimah Mohammad and Ismail Farooq showed their needs for browsing some specific academic databases and online conference proceedings to know the latest trend of academic research.

"*Attending conferences makes me think about the current trend of research, which is related to what I want to do, or how to do it in a different way, I think about whether the methods they are using would be helpful for my work or not" (Fatimah*

"I am always searching at the academic websites, databases and conference publications where I can know what is happening in my whole disciplines and to know the current research trends where I can bring new developments into the classrooms" (Ismail).

d) Need for Information on How to Conduct a New Research.

Fatimah Mohammad indicated that she was in need for some information when she was conducting a new research. She stated,

"When I am conducting a new research, I always get the initial information from the textbooks and journals" (Fatimah).

e) Need Information to Enrich and Refine Research by Consulting Colleagues.

Both persona of Fatimah Mohammad and Ismail Farooq assessed the importance of consulting their colleagues who have more expertise in their field of research, for enriching and elevating the scientific value of their research.

"*Consulting my colleagues at my department who do the same area of interest will definitely enrich my research" (Fatimah).*

"It is so good to consult with my senior colleagues at my department and some friends overseas about my research topic, where it is better because it can enrich my research" (Ismail).

As noted, Fatimah only consulted her colleagues and friends from her departments. While, Ismail consulted with his colleagues from his department and also his colleagues from abroad for more richness of value from international research networking.

ii. Teaching Information Needs

a) Need for Updating Information on the Curriculum from Other Universities.

Ismail Farooq showed his willingness to receive information about the latest curriculum from overseas universities and tried to adopt and apply it in his teaching classes.

"I need to keep my curriculum relevant at all times, I will always compare my materials with other universities, and keep my teaching responsive to changing demands of my students" (Ismail).

b) Need for Current Information in the Field that They Teach.

Both Fatimah Mohammad and Ismail Farooq mentioned on the importance of getting the latest specific information in their field that they taught, where they could improve their knowledge by following current issues in their field.

"When I always need to view the current specific academic issues in my field, the periodical is considered as my main gate for that information". She also adds, *"Definitely workshops and periodicals always provide me with the latest specific issues in my field of teaching"* (Fatimah).

"Online searching for the latest specific information in my field makes me more confident, reliable and more applicable ability for me to teach my students something new" (Ismail).

iii. Information Literacy Needs

a) Need Information for Checking Students' Plagiarism.

Only Fatimah Mohammad and Ismail Farooq showed their awareness on the plagiarism issue, particularly the electronic and Internet resources when their students used them. They mentioned the importance for scholars to be experts in the electronic and Internet resources in order not to be fooled by their students, and not to allow them to take advantage of their negligence in using the Internet and electronic resources, and to avoid any type of embarrassment from the students' plagiarism behaviour. Thus, the students feel that there was some kind of control over the electronic and Internet resources. This can motivate the students to do research ethically, and it can raise the quality of the education and the students simultaneously. They stated,

"It is very important for scholars to be experts in using Internet sources, especially to judge an instance of plagiarism; you do not want students to cheat in their papers and this will motivate the students to do research and study very hard, thus raises the quality of the education and the students simultaneously. You also need to do this for yourself, your own papers; it can lead to embarrassment and loss of reputation if you plagiarize" (Fatimah).

"When I ask my students to write a short research paper, I found many of them submit a copy-paste paper and commit plagiarism from others' works". He also adds, *"Even some of them do not bother themselves to make any changes in the research paper, even almost put the name of the real author of the research paper"* (Ismail).

b) Need Information for Confirming or Verifying Information that are Already Known.

Bakeri Atief mentioned for the information need to make a confirmation about some information he has knowledge before. He said,

"*As an Archaeologist, sometimes I need information to verify some dates and national and world events*". He also adds, *"I need to confirm some information before my students asks me about it, I have to be authoritative in my own area that I have known for a long time" (Bakeri)*.

c) Need to Clarify the Information that are Already Known.

Only Ismail Farooq stressed on the importance of illustrative information and tools that can help him to clarify some information that he had already known.

"*I need some explanatory information and tools to clarify some data, for my students to understand it easily" (Ismail)*.

iv. Inter-Personal Information Needs

a) Need Feedback on Information from Colleagues on Personal Presented Research.

Bakeri Atief, Fatimah Mohammad and Ismail Farooq indicated that, the comments from their colleagues about what they have (the former) published or presented in academic occasions like conferences and seminars has a great benefit for them.

"*When I participate in any workshop, seminar or conference, I get comments for what I have presented and needed" (Bakeri)*.

"*I need to know what people think about my work, so I always ask for my senior scholars' feedback, those who are very experienced. I felt it is easy and natural to ask questions. They call me or even e-mail me and share useful comments!" (Fatimah)*.

"*The feedbacks from my colleagues about my presented paper are critically important to me" (Ismail)*.

b) Need a Moral Support from Colleagues Who have similar topic of interest.

Only Fatimah mentioned on the importance of moral supports from colleagues in a spiritual manner.

"*While I am talking with my colleagues who are interested in my research during paper presentation, it makes me feel excited and strong; it makes me feel more inspired and confidence" (Fatimah)*.

In summary, information needs constitute to a main research practice of all personas and thus determine how they go further in seeking for information.

5.6.3 Changing Information Search Methods and Accessing ICT Environment

Theme 6: Humanities scholars have a different affirmative outlook of changing information search methods

It is obvious to note that humanities scholars' searching methods are affected with the ubiquity of the Internet, electronic resources and become indispensable research tools, their information behaviour in the context of ICT-enriched environment. All personas agree that their research approach has changed, but in a variation level, since the advent of technology and the Internet access has made their research more efficient and more accessible in a very positive way. They indicate that the major changes happened to their behaviour in locating information since they started their research is the increasing use of computer and online information. In particular, it becomes more efficient and more accessible, faster, comprehensive, easier than before and saves their time for searching and preparing their papers. This helps them to increase their productivity in multiple scientific literatures and gives them a chance to search for information from anywhere they like. Also, the technology has allow the scholars to contact each other to exchange views and ideas, which leads to the extend access to the information. On the other hand, none of the personas believed that the physical materials and libraries could be completely replaced. However, those information changes information search methods which can be divided into two categories:

i. **Lack of Awareness of Changing Information Search Methods**

Abdullah Ayman has a special perspective on the process of searching for information, which he revealed that he previously had been travelling to other countries to get information resources, such as books and scientific journals.

But, now what he needed to do was ask what he wants from the librarians and the information resources will be provided for him, or he contacted the publishing companies to get what he wanted, not to mention that book exhibitions are widespread available across the country. Abdullah articulated that when he wanted some resources from the library – which was rarely as he relied on his own collection – he asked his secretary or one of his family members to find it for him. He revealed that he did not use the online catalogue before, but he believed that searching of information becomes faster than before and starting to change his way in looking for information. But, he did not like to use the computer in any way and read online, because he did not possess any computer skills or Internet research skills; he believed that physical materials and libraries cannot be replaced. In his words,

"*I am not that enamoured scholars who plays with computers or can deal with the electronic things ... because I still prefer the physical resources, I can hold something in my hand and read it physically. Maybe the future generation like to read online. I think the use of electronic resources will change the way I look for information*" (Abdullah).

In a nutshell, the negative outlook of Abdullah towards the ICT facilities and not using the electronic resources was due to his unfamiliarity with it, despite its availability at YU. This implies that he did not obtain proper information-seeking skills.

ii. Partial Awareness of Changing Information Search Methods

Bakeri Atief articulated that he always try to follow up the technology by using the online catalogue and electronic databases. He gradually becomes more involved with the electronic technology, but his involvement was being influenced by considering who directs the creation of the materials that he used. In this regards, he stated that,

"I am still not a proficient scholar in using the electronic resources, but I think I am improving day by day and become better compared to before. When I started using the online resources, I would not use the Internet i.e., Google frequently because I totally prefer the textbooks. I guess it is a very strange thing" (Bakeri).

He mentioned that his research methods were being affected or changed since he started using the computer and the online information resources for searching information. In particular, he indicated that the computer and the Internet helped to speed up the process of information-seeking and his effort and time have been reduced. This helped him to increase his productivity in doing multiple scientific literatures. He articulated,

"*Previously, I used the card catalogue system and then browsed the books on the shelves, now by using the online catalogue, I can search from my office via logging into the OPAC system, it is very easy to find the relevant information resources; it is very fast and do not require much effort*" (Bakeri).

iii. Fully Awareness of Changing Information Search Methods

Both personas of Fatimah Mohammad and Ismail Farooq showed their fully awareness of changing information search methods. Fatimah indicated that her research approach has been affected too since the advent of technology. Particularly with the Internet access which makes her research more efficient, more accessible, easier to search and faster than before which saving her effort in a very positive way. In her words,

"W*hen I was a student, I used the card catalogue system to search for books and other resources. Today, the scenario is different, all I need is just connect to the Internet when I'm in my office, and it is easy, fast and does not require much effort*" (Fatimah).

On the other hand, Fatimah believed that the physical materials and libraries could not be replaced, so she still likes to use the library facilities. She regularly visits Al-Husayniyyah Library at least once a week. She visited the library website only to see if the library has access to specific journals. She mentioned,

"Due to technology revolution and the availability of the Internet and electronic resources (databases and electronic journals), my research method has changed dramatically. Now it is so easy and fast" (Fatimah).

While, Ismail indicated that his research approach has changed since the advent of technology and the Internet has made his research process more efficient and more accessible to information in a very positive way. Through the ICT, Ismail searching method has improved where he can connect and keep in touch with many researchers around the world who shared similar research interest and this has allowed him to conduct more researches comprehensively and sophisticatedly. In his words,

"Honestly, the greatest change that has happened nowadays is that I can do my work faster and my research becomes more comprehensive and more complicated in English, and this has impacted my writing style. Previously, writing a paper took long time, but now it only takes a few months. As well as the technology has allow me to contact overseas scholars and share common values and exchange views and ideas" (Ismail).

Ismail indicated that he always login remotely to the electronic library collections and used the Internet search engine for searching information and many websites and databases were also available at his university library where he was studying. In this regard he said,

"Most information and services are available online, so I do not need to visit the library buildings to get the information needed. I can search and get it from my desk. It makes my research process interesting and faster" (Ismail).

5.7 Information-Seeking Behaviour Activities

After understand all the passive mental triggers of each persona since the spark of the first mental trigger which attracts personas' attention to seek for information, acknowledgement of the availability of information, and identification of their information needs and type of format of information they like to use and locate, it is logical that in this stage for each persona to take a decision for information-seeking. This section addresses the second research objective.

Therefore, in this part of study, the researcher moves beyond the information-seeking activities of the respondents which portray their information-seeking behaviour in order to test the applicability of the proposed model of information behaviour (discussed in chapter 3) to their experiences. Consequently, the findings of this study are reported in relation to the eight stages of the model of humanities scholar's information-seeking behaviour discussed earlier: a) Decision to seek information by the respondent or by intermediary, b) Exploration, c) Monitoring, d) Accessing, e) Categorisation, f) Purification, g) Satisfaction, and h) Archiving and Organisation.

5.7.1 Decision to Seek Information (Initiation)

In this stage, the personas are aware of and they know what type of information they need, in which language they will seek for the information, how they go about to meet the information, and ensure that they have an adequate skills and knowledge to be able to use the resources that will be required to meet their information needs. All this will have effect on their information-seeking decision.

Theme 7: Humanities scholars have a variant decision for information-seeking

Interview findings revealed that the personas have a variant level decision for information-seeking, where they act either as fully independent seekers or semi-independent seekers, or entirely dependent seekers who transfer all of the tasks to one of the intermediaries.

i.   **Fully Independent Seekers**

Abdullah Ayman preferred using well-documented approach to seek information by depending on his personal experiences. He initially relied on his own printed collection and seeks information by himself where he acted as a fully

independent seeker. He revealed that when he started his searching process based on the existing knowledge and previous experiences, he mobilised all of his senses where the process of information-seeking acquires all of his time, while he already had that positive expectation to find what he was looking for with his own collection. He wrote down the general topic on a card and made a general outline for his research topic. In other word, he broke down the large topic into more manageable sub-topics and wrote it down on papers (for example, cards) to facilitate his researches. In this regards, he said,

"I like a hen when it wants to lay her eggs, I mobilise all of my senses to find what I'm looking for with my own collection" (Abdullah).

Bakeri Atief, he always feels that he will find what he was looking for based on his experience and background. He used card technique by breaking down a large research topic into sub-topics and wrote it down on the cards. He stated that he always browsing the shelves and using OPAC. He said,

"*Normally, I start looking for printed information by myself and browsing it whether in our library university collection or in my own collection, where I have optimistic feeling to find what I am looking for" (Bakeri).*

Both personas Fatimah Mohammad and Ismail Farooq showed their optimism when they started searching and will find what they were looking for. They indicated that they were fully independent seekers when seek for printed materials whether it was in their university library or in other university library collections and normally they found what they were looking for by using OPAC and Centre of Excellence website and other library collections.

"I would start by dividing my topic into several subjects that I will address in this topic……. Al-Husayniyyah library has many types of information resources; so I expect to find that particular topic. Then, I start seeking on its collection using OPAC by myself and other online library collections" (Fatimah).

"The first step is to divide the topic into specific keywords, then determine the databases that is appropriate to use for my search. I always seek information by myself with optimistic feeling that I will find what I am looking for and my feeling is usually accurate. I search in Al-Husayniyyah library collections and other universities libraries collections and Center of Excellence website and other websites. Besides, I use all available ways and searching techniques" (Ismail).

ii. Semi-Independent Seekers

Both personas Fatimah Mohammad and Ismail Farooq showed their semi-independent information-seeking skill when they were looking for online and electronic resources which were not available at Al-Husayniyyah library. Fatimah Mohammad indicated that she sometimes due to her inability to get a full text of electronic resources; she asked her colleagues or librarians for help and to provide her with the resources. Thus, she was acting as a semi-independent seeker. In her words,

"*When I start searching, I normally find what I am looking for but sometimes, I cannot get the full text for a particular article, so, this pushes me to ask for help from my colleagues to find the article"(Fatimah).*

While, Ismail Farooq was optimistic and confidence of his searching capabilities skills to find what he was looking for. But, when he did not find what he needed at Al-Husayniyyah library and at the Centre of Excellence website; where it rarely happened, he asked his previous supervisor at overseas university to search for him about that particular resource.

"I consult with my colleagues, overseas supervisor and seek for their help to find that particular resources and at later stage, I ask them to make a copy of that specific material when I cannot get it here [Jordan]" (Ismail).

iii. Entirely Dependent Seekers

Both personas Abdullah Ayman and Bakeri Atief became entirely dependent intermediary seekers when they started looking for electronic resources. This happened because of their inadequate skills and knowledge to use and seek

information electronically. Hence, they asked for advice from other experts in electronic resources such as databases.

Abdullah revealed that this happens when he failed to find particular information in his own collections. Thus, due to his inability to search using electronic collection, he hesitantly asked for help from one of the intermediaries, for instance, his secretary or one of his family members who has a good knowledge about electronic search techniques.

"If I fail to find a particular resource in my collections, then I ask for help from my secretary or one of my family members who has a good knowledge about electronic search techniques" (Abdullah).

While, Bakeri indicated that he started searching using electronic resources, particularly the databases, after he faced difficulties in finding particular information, which he always complained that he cannot get the particular information online. He also felt frustrated when he searched by himself, due to his inadequacy of searching skills. Thus, he seeks help from the librarians or his colleagues. In his word,

"To get particular information within a huge data set is not an easy task, so I always ask my colleagues and sometimes librarians" (Bakeri).

5.7.2 Exploration

Theme 8: Personas exploration stages are in different order

Abdullah Ayman indicated that he started his exploration stage by browsing his own collection and track references (Chaining citation) on relevant topics, and kept in his mind the date of publication, how important it was for consideration of the research topic and authors' reputation, particularly when approaching a new subject. Apparently, Abdullah used classical approach of chaining as illustrated in his quotation,

"I can find an article within a topic and scan the references, looking for some other interesting articles....citations and references in the text that I read have always been quit helpful" (Abdullah).

However, Abdullah rarely asked his colleagues and friends, and browsed the collection of library shelves to obtain information about the subject. Also, he commonly contacted a publisher and subscribed several materials.

> *"Rarely I go to the library and browsing the library shelves, but sometimes I contact my colleagues for their advice on the information resources" (Abdullah).*

Bakeri Atief persona indicated that he initially started his exploration stage by using OPAC and explored the library shelves where he could follow up with the reference citations. His decision to follow up with the reference citations came from his belief on the relevance of those resources to his research field, authors' and publishers' reputation, and modernity and frequency of citations of those resources. He stated,

> *"I like to go to the library and begin browsing the online catalogue, when I am done with the book section, I start browsing the printed journals and I normally have some particular resources to follow up with their reference citations in order to meet my needs" (Bakeri).*

Furthermore, Bakeri started looking for electronic resources by using Google search engine where he sometimes asked for help from his colleagues and friends. Hence, he still feels that he needed more information. Quotation of his saying,

> "*When I finish searching the printed resources, I then start searching the electronic resources (e-journals and databases); this is only if I need more information*" (Bakeri).

Fatimah Mohammad began her exploration stage for new subjects by consulting her colleagues as a first channel to locate the secondary information research resources, and then used the OPAC system, and the search engine (Google) to narrow down the original information. This allowed her to track references (Chaining citation), and following a bibliographic references. This often led her to subscribe to certain academic electronic databases.

> "*I plan a topic and what I need to address in that topic, after that I identify some keywords for making my search process easier. Typically, I begin with online search, and then with library catalogues and more likely I search through online databases; if it does not work, I go for a specific search engine like Google*" (Fatimah).

While, Ismail Farooq indicated that his first channel to locate information when he began a new research project is Google search engine, where he made a link with other search engines such as Alta Vista; he normally used more than one language when seeking for information such as English, French, Spanish, German, and others. He said,

> "*I directly start with Google search engine that can link me with other search engines...of course! I use more than one language*" (Ismail).

Ismail warmly praised his own electronic collection, which he saved it on an external hard disk. He described it as the first place to refer to for any research project. He generally browsed the Internet as mentioned earlier. He also located literature by following bibliographic references from electronic documents (which he already had). After this general exploration on the Internet and his electronic collection, he logged in into Al-Husayniyyah Library, the Centre of Excellence and OPAC system. He logged in into the library web site to search for a particular academic database. Not to mention for using databases provided by the library which he was familiar with, this behaviour largely pre-dominates his exploratory phase. In his words,

> "*I have a very extensive knowledge of French, German and Spanish databases, so I use it frequently; that is due to the fact that I graduated from Europe University. In fact, Proquest, Springer, Dialog, www.mecd.gob.es, Enesco and Emerald are among the most important databases that I use in my research process. I use my access to use some of the university databases where I obtained my PhD degree*" (Ismail).

Furthermore, Ismail consulted with a number of senior academicians and his overseas supervisor for general request liked discussing new topic in the first stage, and at later stage he asked for copies of that particular resource to be sent to him; when he cannot get it from local libraries. In this regards, he said,

> "*I consult my colleagues, senior academicians and overseas supervisor and seek for their general request regarding my research topic, and at later stage, I ask them to send a copy of that specific material when I cannot get it here [Jordan]*" (Ismail).

These findings indicate that all four personas have different order in exploration of information as shown in Table 5.3.

Table 5.3: Exploration Stages of Personas

Persona	Methods
Abdullah	Searching in his own collection > track references (Chaining citation) author and publisher reputation, date of publication, importance > browsing the collection of library shelves > contact a publisher > subscribe some materials
Bakeri	OPAC > library shelves > reference citations > Google > colleagues and friends
Fatimah	Colleagues and friends > OPAC > search engine (Google) > track references (Chaining citation) > subscribe to some academic electronic databases
Ismail	Google search engine > own electronic collection, Gateway > bibliographic references > OPAC > Al-Husayniyyah Library collection > Centre of Excellence > consults a number of senior academicians and his overseas supervisor

5.7.3 Monitoring

Theme 9: Personas acknowledge the importance of monitoring stage

Another behaviour identified in this study is monitoring stage which means all personas should be aware of the current and latest knowledge of their topics, by following up and tracking specific resources of information, whether formal or informal information resources and being informed of the new information by regularly checking the relevant resources and receiving constant updates from the selected resources. In order to find out whether this stage is appropriate to all humanities scholars' personas at YU, all personas were asked if they monitor their desired information or not, and how they do it. Thus, in order to mention about the awareness, all personas were engaged in a wide variety of monitoring activity, where each persona has his or her method and tools that they used to monitor the relevant information needs.

Abdullah Ayman indicated that he was not really monitoring the information-seeking process like before when he was much younger; where he contacted the publisher to monitor particular authors and subscribed printed books and journals. But, at the present, his monitoring process is limited and concentrated to his own collection and

198

contact with his closed colleagues from similar field. He explained that he still prefers visiting bookstores and book exhibitions, browsing library shelves from time to time while using indexes and abstracts and book reviews to get the parameters of what was happening around and then be acquainted with the topic specifically; the focus point. In this regard, he stated,

> *"I use abstract and book reviews to get the criteria and explore (monitor) what is happening around which helps me to narrow down the sought information, which is the focus point" (Abdullah).*

In addition, Abdullah considered attending conferences as a good source for keeping up-to-date in a specialist field. He limits his monitoring methods and tools to eight types: a) attending conferences, b) visiting bookstores and book exhibitions, c) browsing library shelves, d) contacting publisher, e) subscribing printed books and journals, f) searching indexes and abstracts, g) communicating with colleagues and friends, and h) book reviewing and monitoring particular author.

> *"I like to visit bookstores for checking new books and many times I contact with the publisher and subscribe some books and journals...I meet some of my colleagues when I attend academic conferences who are expert writers in my field" (Abdullah).*

While Bakeri Atief identified that he regularly monitors the relevant information resources in his field. He showed some of proactive behaviour in the monitoring of new information, where he contacted the publisher to subscribe printed books and journals. He also considers attending conferences as a good source for keeping up-to-date in a specialist field.

> *"I have a list of important journals in my field that I keep track regularly and contact the publisher to subscribe with two journals in my field. But, attending conferences allow me to monitor more accurate issues in my field" (Bakeri).*

Bakeri achieved his monitoring stage by using certain methods and tools as his summarized it by eight types: a) searching index and abstracts, b) searching and browsing online catalogues, c) communicating with colleagues and friends, d) browsing

library shelves, e) contacting publishers, f) subscribing to journals, g) book exhibitions, and h) attending conferences.

> *"From time to time, I search in OPAC and browsing our library shelves for monitoring new resources and use the indexes and abstracts. I also like to contact with my colleagues and friends for new issues" (Bakeri).*

Fatimah Mohammad showed the importance of monitoring stage in her information-seeking behaviour by monitoring both printed and electronic resources on equal basis. Her monitoring process are outlined as followed: a) searching index and abstracts, b) searching and browsing online catalogues, c) citations and references in reading materials, d) browsing table of contents of journals, e) communicating with colleagues and friends, f) browsing Internet and search engine (Google Scholar), g) revisiting preferred websites and Centre of Excellence website, and h) subscribing electronic databases. In reference to the above, she stated that,

> *"I monitor both printed and electronic journals, searching and browsing online catalogues and using index and abstracts citations and references list. The Google Scholar also keeps me updated. I do this frequently by checking the new issues of those journals. I have around 10 journals, both in Arabic and English that I regularly check. Databases that the YU Library has also provide me with the current information in the field of my research. I also have a membership (subscribe to certain databases like Questia). Moreover, I do contact with my colleagues and friends asking about new issue" (Fatimah).*

Furthermore, Ismail Farooq indicated that the monitoring process was considered as one of the most important part of his information-seeking behaviour where he showed his quite similar methods with Fatimah, but he concentrated more on the electronic methods and tools while trying to be up-to-date. He monitored by using methods and tools as follow: a) searching and browsing online catalogues, b) searching index and abstracts citations and references in reading materials, c) monitoring online databases, d) communicating with colleagues and friends, e) browsing Internet and search engine (Google Scholar), f) revisiting preferred websites and Centre of Excellence website, g)

subscribing electronic databases, h) communicating with previous overseas supervisors, and i) scanning the public media. He stated that,

> *"I do monitor the Internet and e-journals by making a regular check for what is available on the Internet and also check the new issues of e-journals. I also check the table of contents, indexes, and review websites available online. Amazon.com for instance helps me to be updated on new books in my field".* He also adds, *"I check top journals and the most used databases and scanning particular media in my field and sometimes I contact with my previous overseas supervisor and my colleagues also"* (Ismail).

The researcher noted that, the electronic resources become the hard-core source of information in facilitating monitoring process of Ismail. This is because he is a pro-active in monitoring process where he contacted his colleagues, friends and previous overseas supervisor to check for the updated information. Besides, he received constant updates of information from several databases that he subscribed and he also did scanning the mass media.

Generally, the result for this part of study shows that the monitoring relevant resources are commonly used among all personas. Abdullah and Bakeri monitored the printed resources more than the electronic resources. While Fatimah was equally monitored the printed and electronic resources. Whereas Ismail monitored the electronic resources more than the printed resources, where electronic resources have a significant impact and facilitate his monitoring process. Table 5.4 summarized the tools each persona used to monitor information they need.

Table 5.4: Tools Used by Persona to Keep Up-To Date

Persona Name	Tools
All Personas	Searching index and abstracts citations and references in reading materials > Communicating with colleagues and friends
Abdullah	Book reviews > Monitoring particular author
Abdullah & Bakeri	Attending conferences > Visiting bookstores and book exhibitions > Contact publisher > Browsing library shelves > Subscribing printed books and journals
Bakeri, Fatimah & Ismail	Searching and browsing online catalogues
Fatimah & Ismail	Browsing Internet and search engine (Google Scholar) > Revisiting preferred websites and Centre of Excellence website > Subscribing electronic databases
Ismail	Communicating with previous overseas supervisor > Scanning the public media

5.7.4 Accessing

Theme 10: Personas use different methods for accessing desired materials

This stage becomes necessary because without having the full text of items identified in searching stage, scholars may or may not be able to go on to the processing (categorization and purification) stages. The activities subsumed under this stage contain methods and tools that personas members used to access the materials needed for their scholarly tasks.

Abdullah Ayman indicated that he still has that old habit (methods) of information-seeking behaviour in accessing the information where he indicated that the most methods he used for accessing desired materials are by browsing his own collection shelves, contacting his colleagues, browsing library shelves and travelling to the location of the existing materials. Furthermore, he indicated that the most tools he used to access desired resources are by reading his own copy of collection and writing down the importance notes in special cards, make a copy of his colleagues' resource, read a free library copy, and use inter-library loan request and make a copy of that resources.

"Firstly I read from my collection and writing down the importance notes in special cards. Sometimes I go to library, browsing library shelves where I can read a free copy and borrow it. Also, I contact my colleagues who I believe have that resources and make a copy and many time I contact publisher to order particular resources……..whenever I attend a conference, I make a special tour to look for a new resource" (Abdullah).

Additionally, Bakeri has a similarity with Abdullah regarding the methods and tools used for accessing the desired materials. But, the difference was that he used OPAC and browsing the library shelves, which he can read a free library copy and used inter-library loan request.

"I start by accessing to the online catalogue and reading the abstract of those resources. When I have finish, I start browsing the library shelves and read a free copy and many times I use inter-library loan request. I also contact my colleagues and copy their resources…Also contact publisher and subscribe" (Bakeri).

"When I have finish from printed materials, I try to access to the Internet and electronic resources which only if I need more information and printed out those resources" (Bakeri).

Both Fatimah and Ismail personas showed quite similar methods and tools used for accessing desired information and obtained it. The most methods they used for accessing desired materials were by accessing the online catalogue and reading the abstract of those resources and printed it. They also browsed the Internet and search engine (Google Scholar) to read from the screen, bookmarks particular websites and printed it out. Besides, they accessed to online resources, Centre of Excellence and other academic websites where they read from the screen, bookmark, downloaded to personal computer and portable data storage, print, and subscribe to electronic databases.

"I access to online catalogues and reading the abstract of those resources, and many times I make a search which I can read directly, bookmark and download those resources and sometimes I print it out. Besides, I access to online resources and a number of academic websites - Centre of Excellence website is one of them. I do not forget, of course, to contact my friends where I can borrow their resources and sometimes make a copy" (Fatimah).

"If I want to access some particular information and it is not available at Al Husayniyyah Library, I would request it through the inter-library loan or search in the website, it may be there in electronic format, thus I search and use various websites which can provide a reachable link to the issue...normally I read it directly and highlight the importance notes and keep a copy in my PC or my pendrive and many times I print it out" (Ismail).

In addition, Ismail is the only a persona who indicated that he contacted with his previous overseas supervisors and browsed public media to download particular desired resources to his personal computer. He said,

"I also contact my colleagues at Yarmouk University and my previous overseas supervisor, and sometimes I make browsing in public media" (Ismail).

Table 5.5: Tools and Methods Used by Persona for Accessing Desired Materials

Persona	Tools	Obtaining methods
All Personas	Colleagues and friends	Borrow, make a copy
Ismail	Own collection shelves	Reading own copy of collection and writing down the importance notes in special cards
	Travelling	Buy the resource or make a copy
Ismail & Bakeri	Library shelves	Read a free library copy and use inter-library loan request
	Publisher	Buy the resource, subscribe
Bakeri, Fatimah & Ayman	Online catalogues	Reading abstract of the resource, print the online articles
	Online resources	Read from the screen, bookmark, download, subscribe to electronic databases and print a copy
Fatimah & Ayman	Internet	Read from the screen, bookmark, download and print a copy
	Google Scholar	Read from the screen, bookmark, download and print a copy
	Academic website	Read from the screen, bookmark, download and print a copy
	Centre of Excellence website	Read from the screen, bookmark, download and print a copy
Ayman	Own gateway	Read from the screen, bookmark, download and print a copy
	Previous overseas supervisors	Download and print a copy
	Public media	Download

5.7.5 Categorization

Theme 11: Personas have similar methods for categorization of the desired printed materials

In this stage, all personas have already accessed to the relevant information in the previous stage and have copies of the materials. All personas were asked to describe their ways to classify the information that they already obtained in order to determine how they do the categorization stage. Vividly, all personas have similar methods at the categorization stage for the desired printed materials. All personas indicated that they evaluated and classified the sources regarding to its relevance and usefulness to their

subject. They organized the resources in physical folders or binders, not only by subject from general to specific, but according to the relevance of the resources to their research topic. They labelled the resources in subject headings and separated it according to the author name, while retaining the temporal chronological order of the sources and then stored it in their own home library or office.

> "*I create huge folders for the useful and quality resources at my office and home. Then, I divide it into sub-files with date of issue and put what I found in the files. I use a card and label each resource, based on the subject heading that I have for each file. Then, I look for each author and try as possible as I can to keep each one in one sub-file*" (Abdullah).

> "*I should first confess that I am not very good in organizing and saving electronic materials, so I do copy and paste of the materials and print it directly and organize it under each sub-title, taking into account the date of publication for each resource and keep the materials I got in physical folder with palaeographic information. I use a card and label each resource, based on subject heading that I have for each file, Then, I look for each author and try as possible as I can to keep each one in one sub-file*" (Bakeri).

Theme 12: Personas have different methods for categorization of the desired electronic materials

Both Fatimah Mohammad and Ismail Farooq have a slight different approach to do categorization for electronic resource than Abdullah Ayman and Bakeri Atief. They added two methods of categorization stage - the format of resource whether printed or electronic, and the origin of the resource (from where they get the resource).

> "*I already create some folders which has a name based on my topic of interest in my computer hard drive. Inside these folders, there is another folder named under sub-title. So, when I find any article, I save it in one of these folder based on its topic. Sometimes, if there is more than one resource for particular author, I establish special folder for that author. Then, I write down the bibliographic data and location on a top of the downloaded electronic resource as a note so that I can go back to them whenever I need to*" (Fatimah).

> "*I categorize information that I got into two categories which are closely related to my research topic and information which has a secondary relation to my research topic, which I do not necessarily overlook but I save it in one folder to use it later on....For the relevant resource to my research topic, I create some folders for my research topic in my PC; named based on my concerned fields, then I save all the resources that I got with full bibliographic data under their particular sub-title inside these folders. Normally, I find more than one article for the same author, so I establish folder for his articles and organize it historically*" (Ismail).

In addition, it is clear that the categorization process of Fatimah Mohammad and Ismail Farooq personas was very important to their information-seeking process. Not only important in terms of organizing materials, but also in contributing to the overall efficiency of their research process. While, less important material can be skimmed and stored if necessary for retrieval in the future. Table 5.6 summarizes the personas categorization methods for the electronic materials they desire.

Table 5.6: Methods for Categorization of the Desired Electronic Materials

Persona	Categorization
All Personas	- Related (closely related and nearly related) - Usefulness and quality - Belong to sub-title - Labelled by subject heading (from general to specific) - According to author's name - According to date of issue; from past to present
Fatimah & Ismail	- Format (printed or electronic) - Location of resources (from where the resource was obtained)

5.7.6 Purification

This stage concentrates on information-seeking process, to know how each persona is going through particular resources to identify the most relevant materials for them. In details, purification is the undertaken activities by persona through particular resources to be judged according to their origin, quality, relative importance and usefulness in identifying the most relevant materials for their scholarly tasks based on the persona perception. Therefore, the researcher asked each persona about their technique during the purification stage to discover whether they just skim materials, read relevant part, skim each resource for relevance and read them later, or other ways they like to use. For the purification stage, the theme was based on the age of the persona; senior persona (Abdullah Ayman and Bakeri Atief) and junior persona (Fatimah Mohammad and Ismail Farooq). Essentially, the steps of purification stage are identical, but with a slight variation at certain steps between the senior and junior persona.

Theme 13: Senior and junior Persona have different purification stages

All personas indicated that reading abstract tool was considered as the first list of judge order that they used in their purification stage. In addition, they considered reading each resource in full tool as a last step of purification stage. However, the steps of purification stage were identical, but with a slight variation at certain steps between the senior and junior persona as it is shown in Figure 5.7 and 5.8.

> "*My habit for judging any materials is by reading it in full, but when I do not have enough time and need urgent information, I read the abstract and the introduction, and then the conclusion. When I feel that I cannot find that particular information, I go through the table of contents and then read the main point and sometimes I read more relevant particular chapter and identify the specific information*" *(Abdullah).*

> *"I just read what is relevant by going through the abstract, and then I read the introduction which is very important to check, and then read the conclusion. When I have enough time, I go through the table of contents for the specific page that I need where I can highlight the relevant information and sometimes I read it in full" (Bakeri).*
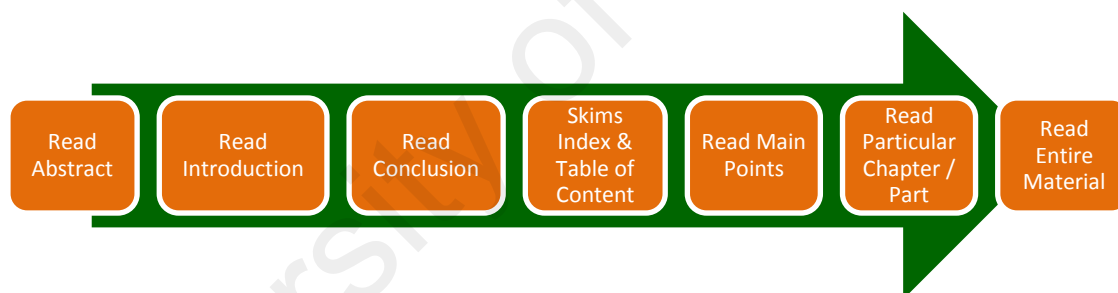
Figure 5.7: Steps of Judge of Senior Persona at Purification Stage

> "*Normally, after I read the abstract and I review the table of contents which I can read the main points, then I start skimming it for relevant points to read it later. Then, I start reading each chapter. When I find it useful, I browse the index for more relevant resources and then read the whole resource later*" *(Fatimah).*

> *"Initially, I start with reading the abstract and skimming the table of contents to read an important point in a particular chapter. If I feel I can't judge the importance of the resources for my topic, I skim the whole resources for relevance information where many times it leads me to read particular parts of the resource that are more related to my topic. When I have time, I browse the resources index to gain more relevant resources and few times I read it completely" (Ismail).*
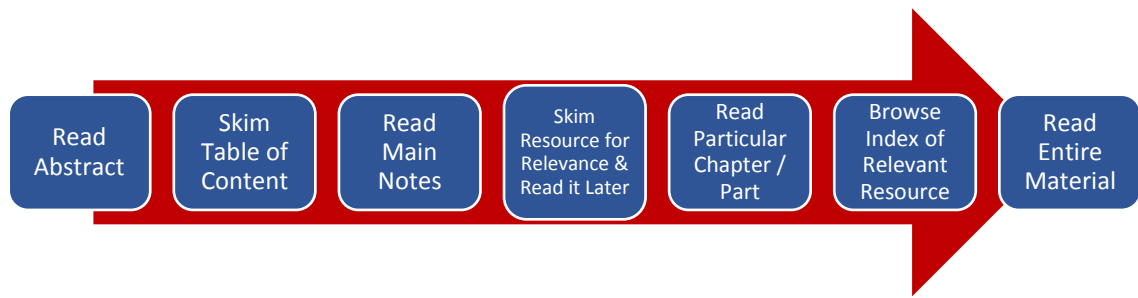
Figure 5.8: Steps of Judge of Junior Persona at Purification Stage

It turns out that the steps of judge at the purification stage can take place at the first step of purification like reading the abstract, or in any step of purification stage which depends on the level of complexity of the resources, and the satisfaction level on the steps of judge for each resource which is vary regarding the knowledge of the persona about the information of the resources.

5.7.7 Satisfaction

The last stage of the proposed research model is satisfaction stage that addresses the third research objective. Where the persona involves gathering selected information that already being judged for the quality, validity and accuracy among the relevant information resources at the purification stage to meet their satisfaction of the information needs. If the personas are not satisfied with the result, they go back to the categorization stage, but if they are satisfied, they have two choices whether to obtain it immediately and stop searching to generate and produce any academic products or making copies of those resources to be used later. At this stage, the researcher asked the personas about this matter and their answer is as follow.

Theme 14: Personas have a similar reaction of satisfaction

An interesting finding was the unanimous view that all personas express their satisfaction by obtaining the desired resource directly and start using it, whether by a)

writing down the important information on a special card, b) printing the resources and highlighting the important information, c) by reading from the screen and highlighting the important information, or d) writing down the important information at the margin of each resource that they are satisfied with.

i. Directly obtain the resources and write down on a card or at a margin of the resources

Abdullah Ayman indicated that he started directly reformulates a particular idea of particular resources before completing the searching process and started generating new outputs and wrote them down on cards or at the margin of the resource, such as a professional builder who built a wall where he puts each card in a proper place. This way is needed as a professional researcher as he said,

> "*When I am satisfied with the relevant articles that are related to my topic, I request it directly and start reformulating the idea accurately and professionally by writing down the important notes in special cards, I become as a professional builder who builds a wall where I put each card in a proper place…Waiting to end the search will make me late and lost a lot of time*" (Abdullah).

Bakeri Atief was quite similar with Abdullah except he used the electronic resources hesitantly as mentioned earlier. When he was satisfied with what he has collected and ensured that the appropriate resources were collected and feels that the resources can achieved his purpose, he stopped searching and immediately obtained those resources to save his time and effort. He believed that he will not be able to find that electronic resources later on, so he obtained the electronic resources directly and print it, and started highlighting the important information and reformulating the idea on particular cards or at the margin of the resources.

> "*I obtain the resources once I have the relevant information because I am not sure that I will find that resource again, so I print out the electronic texts to be read rather than reading it from the screen, black and white is more comfortable. I start highlighting the important information and reformulating the idea accurately and professionally by writing it on special cards or at the margin of the resource*" (Bakeri).

ii. Directly obtain the resources and highlight the important information to be used later

Fatimah Mohammad and Ismail Farooq indicated that while they were searching, as mentioned earlier, if they were satisfied with the particular resources, they directly obtain that resources and highlight the main points to be formulated and used it later after they have finished the full searching.

Normally, when I am satisfied with any resource, I start to read it directly and highlight the important notes and keep a copy in my PC or my pendrive. After finish the searching, I start writing from the highlighted notes and many times I print it for ease of use" (Fatimah).

"When I find an article in relation to my topic, I request that article so that I make good use of my time. Then, I start highlighting the most relevant notes to my sub-topic. After I finish searching, I start formulating the highlighted notes and write my research paper" (Ismail).

As can be seen, all personas obtain and request the resources directly. If they wait until they finish the searching process, they will lose a lot of time and may not find the resources later, particularly the Internet resources. However, only Abdullah Ayman still uses the printed resource, while Bakeri Atief started using the electronic resource but he dislikes reading from the screen, so he printed all the resources. This clearly showed his preference of the traditional behaviour through printing documents, even though they live in an advanced electronic environment. Ismail and Bakeri started to use the obtained resource directly and wrote down the most relevant information to their topic in their own style on special cards. On the other hand, Fatimah Mohammad and Ismail Farooq preferred to use the resources that they have obtained after they have finished their searching process. They saved and archived the electronic resources that they obtained in their PC or in any external storage and used it later.

5.8 Barriers Affecting Information Behaviour

After understanding the personas activities and their methods of information-seeking behaviour, questions were raised whether they faced any barriers or difficulties that

influence their information-seeking behaviour and what have been done to overcome the barriers. So for that, this section addresses the third research objective where several questions were asked to all personas in order to understand the nature of that barriers and difficulties that they faced

Theme 15: Personas have variation of barriers that affect their information-seeking

    i.   **Problem with the library resources:**

        a) Library restrictions

Both personas Fatimah Mohammad and Ismail Farooq mentioned that Al-Husayniyyah Library restriction was an important factor that influenced their information-seeking. They indicated that Al-Husayniyyah Library has restricted them from accessing the online YU dissertations from their office. Al-Husayniyyah Library just allows users to browse the full version of dissertations only from inside the library campus or to borrow it physically. They also mentioned that the library denies the users from accessing the dissertation that are available at Jordan University Library, which is considered as the depository centre for dissertations of all universities in the Arab countries.

"Dissertation is one of the important resources which I refer from time to time for me to supervise my student. It will be very useful to login remotely into the YU dissertations online and browse it from my office, where I can save my time and effort" (Fatimah).

"I hope that Al-Husayniyyah Library can allow us to browse its dissertation collection online, and make an agreement with Jordan University Library to provide us with a link trough Centre of Excellence to browse its dissertation collection" (Ismail).

        b) Impractical classification of resources

Both personas Fatimah Mohammad and Ismail Farooq identified impractical classification of dissertation as a problem they faced in their information-seeking progress. This happened because the library organizes its dissertation

collection by date and not by subject. Thus, this was considered impractical and useless in their opinion.

"Unfortunately, Al-Husayniyyah Library classified its dissertation collection by date not by subject. So, when I want to browse a particular dissertation, it takes more time and effort to find it" (Fatimah).

"Classifying dissertation by date is useless, so the library should make better classification" (Ismail).

c) Poor organization of resources

All personas expressed their problem with poor organization of resources in the library. This problem becomes clearer after they went for many browsing activity at the shelves. Sometimes the item is missing from the shelves whereby the system shows the item is available. In their words,

"Sometimes the librarian told me that the item is available in the system, but the truth is, when I browse at the shelves, the book is not there" (Abdullah).

"Al-Husayniyyah offers its collection in an open shelf style. So, sometimes the books are not check out and yet the books are not located at their place" (Bakeri).

"I occasionally encountered difficulty in locating some resources, because they are not at their appropriate place" (Fatimah).
"The absence of the book at their place is making me tired and facing a problem. I think this is happen because the student changes the location of the book" (Ismail).

d) Limited accessibility

Three personas of Bakeri Atief, Fatimah Mohammad and Ismail Farooq mentioned that the main barrier they faced when seeking for information at Al-Husayniyyah Library was the accessibility of full text resources. They said,

"The access to full text resources is actually the main problem; sometimes the database only provides bibliographical data" (Bakeri).
"At Al-Husayniyyah Library, there are some databases and e-journals which do not provide the full text, so it takes time to have it via inter-library loan" (Fatimah).

"Supposedly, I should not face a problem when I seek for electronic materials on online database. But, the truth is, sometimes, Al-Husayniyyah library online database does not provide the full text" (Ismail).

e) Lack of resources in specialized field

In contrast to overload of information, both Bakeri Atief and Fatimah Mohammad indicate that there is scarce of resources where the library fails to provide them with some particular resources (refers to a range of information resources available within a topic) in particular field (such as Drama, Medical Anthropology and Persian Poetry). Besides, they highlighted the scarcity of some historical documents in digital forms. In their words,

"When I write about my field [Drama, Medical Anthropology, and Persian Poetry], I have to deal with little information available at Al-Husayniyyah library. So, I have to find the resources at other places" (Bakeri).

"For real current resources online will satisfy my needs, but for older documents actually written before the electronic revolution, will not be useful searching online. They are scarcity in digital sources like historical documents" (Fatimah).

f) Difficulty in tracking the resources

Only Bakeri Atief persona mentioned for the difficulty in tracking or tracing the relevant information resource (for example, interrupted sequence of conference proceedings, and denial of access or partial access, specific author, and series) was considered as one of the difficulties he faced and frustrated him while he seek for information, with reference to what he mentioned,

"Al-Husayniyyah library should take care more about the series and make sure they are not interrupted or discontinued. Librarians should be more aware of this issue and know what is the new topic in our field" (Bakeri).

ii.   Barriers in the university environment:

a) Insufficient of time

Abdullah Ayman mentioned about insufficient of time. He considered time as the most important factor that influenced his information-seeking behaviour. The insufficient of time hindered him from doing his research due to his commitment in teaching. He complained that his timetable was always full with teaching, sifting for massive amounts of gathered information, learning the

database searching, or being involved with problem solving of his community. This has affected his information-seeking behaviour. With reference to what he stated,

"My major dilemma is insufficient of time. I usually look for information during the weekend. I spend all my time to meet my academic tasks, really, there is not enough time" (Abdullah).

b) Inadequate funding

It is not a surprise to note that all personas unanimously agreed that the inadequate funding and budget are considered as one of the factors that have significant influence in their information-seeking behaviour. Consequently, discouraging them from doing some research and producing academic paper.

"Lack of funding in supporting the YU academicians' research is the main factor limiting me from seeking for information" (Abdullah).

"Lack of resources support from YU is the major deterring factor and limits me from seeking for information. Lack of finance support is another factor that restricts me from information-seeking and academic tasks" (Bakeri).

"Limited research grants from the university have restricted my passion. Grants are important to finance the research which needs a lot of money" (Fatimah).

"Research funds are important source of financial to finance research activities like data collection, buying the materials and to hire research assistant. But, the budget constraint makes the intention of most of the lecturers to an end" (Ismail).

c) Prolonged assessment process of journal publication

Fatimah Mohammad emphasized the barrier in journal publication especially in YU journals which took a long time in the assessment, acceptance and publication process. The prolong process made her feel tedious and has discouraged her from producing and publishing new topic of research. Not to mention, the university regulations and lack of appreciation to the scholars in publishing paper has discouraged her also. Thus, all of these barriers play significant roles in affecting her information-seeking process.

iii.   Personal barriers:

a) IT skills

The inadequate and insufficient computer and Internet searching skills are considered as one of the main barriers that affected both personas Abdullah Ayman and Bakeri Atief in their information needs and information-seeking. This was because they did not receive any type of training on computer skill and or, on searching skill. Therefore, it was not a surprise to note that both personas mentioned about their unfamiliarity with the new form of electronic information resources. As a result, they indicated that they still prefer using printed materials and dislike using the electronic resources, reading from the screen and dealing with the computer. They mentioned,

"Actually, I am not familiar with this technology and I am not feeling confident when dealing with electronic resources and I dislike reading from the screen. So, I do not like to bother myself with it" (Abdullah).

"Sometimes, I face a difficulty using new technology when I'm seeking for new information" (Bakeri).

Furthermore, regarding the training session, both personas of Abdullah and Bakeri mentioned that when the library plans to conduct any training session, it should coordinate with scholars firstly to check out their schedules, their preferences on attending the training session at the faculty and if possible in their offices. With reference to that he stated,

"As I told you earlier, I do not have enough time ... I tried one time to attend training session on using computer; I attended one day after that I could not continue ... it is complicated". (Abdullah).

Moreover, the Arab culture may affect both personas' decisions for choosing the preferred training methods. They implicitly feel inferior and shy to attend the training session with the junior scholars and find out that they lack of certain IT skills. They also believe that they do not need to learn the IT skills because they

are going to retire soon. These are the factors that push them away from taking any IT skills training. Therefore, they relied on and satisfied with their own printed collections.

I feel comfortable, but the library should offer training session for using the library resources, particularly online resources, let say once a month and if there are some brochures it will be good too" (Bakeri).

b) Abundant online information retrieval

Both personas Abdullah Ayman and Bakeri Atief showed their irritation due to the numerous results of search retrieved when they seek for online information. They indicated that they are overwhelmed by the online research topics when they used any of the search engines. Hence, they highlighted about the need to filter the huge availability of information on the Internet, where they cannot acquire the most relevant information that they need. They said,

"Online information resources are abundant where the process of acquiring the relevant information is complicated" (Abdullah).

"When I use Google, I retrieved many resources, but when I read the resources, it is not that related to my specified topic" (Bakeri).

c) Personal conviction

Bakeri Atief showed his misconception about the online resources. He believed that there was no control on electronic resources particularly the Internet. Therefore, - as he believed - there was no certainty or accuracy regarding the electronic resources. This played a significant factor that has influenced his information need and hindered his information-seeking.

"Anyone can add or delete something from the Internet resources as what they want; there is no control on the online academic resources" (Bakeri).

d) Cultural constraint

Abdullah Ayman pointed out about the cultural issue that restricted him from having a time for information-seeking. The cultural constraint was due to the

allocation of time he needed to spend towards his community. Community services such as community events and community arbitrator consumed a lot of his time. A person with a prominent reputation and social duty among his Arab community made Abdullah Ayman a busy person. He said,

"In our culture, as someone with a reputation, I always respected by my community, they always come and ask for my opinion regarding the society matter. So, I can say that, most of the time, I spent my time to serve my community" (Abdullah).

Theme 16: Personas have variation of reactions for problem solving in information-seeking

When the personas faced certain problems during the process of information-seeking, they took certain reactions to overcome the problems. The researcher asked about this matter and each persona indicates several solutions which can be summarized:

i.   Asking their overseas supervisors:

Ismail Farooq indicated that he sometimes asked his overseas supervisor to overcome his difficulty in finding certain resources.

"When I failed to get particular resources, I do not hesitate to contact my overseas supervisor to provide me the unavailable resources" (Ismail).

ii.   Asking their colleagues and friends:

Bakeri Atief, Fatimah Mohammad and Ismail Farooq personas showed alike behaviour to overcome the difficulty they faced in getting particular resources; unanimously asking colleagues and friends to provide the unavailable resources.

"When I need particular resource and face difficulty to get it, I definitely ask my colleagues to help me to get those resources" (Bakeri).

"To get over this difficulty, I always consult with my colleagues and friends who share with me similar topic of interest and they are very helpful" (Fatimah).

"Actually, we are very lucky to have few excellent professors whose have a very good collection at their home and can offer any help I might need" (Ismail).

iii.   Contacting the authors or publishers:

All personas showed comparable behaviour to overcome the difficulty they faced in getting particular resources which was by contacting the author or publisher of the resources to obtain a copy of those resources.

"Sometimes I contact the author of the resources or publisher to get a copy of those resources, sometimes I get a response and sometimes no response. It is helpful but costly in the same time" (Abdullah).

"I think it is a good idea to contact the author and publisher to obtain some resources which I cannot find in Al-Husayniyyah Library, but of course this will cost me" (Bakeri).

"I try to get the unavailable resources through different sources, but if I cannot, I contact the author or publisher to obtain a copy of those resources" (Fatimah).

"The last way to get particular resources [for me] is by contacting the author or publisher which is costing me" (Ismail).

iv.   Asking their secretary, family members, and others:

Both personas Abdullah Ayman and Bakeri Atief indicated that when they seek for a particular electronic resource, they asked their secretary or one of their family members to find that particular resource.

"If I fail to find a particular resource in my collection, I ask for help from my secretary or one of my family members who has a good knowledge about electronic search technique" (Abdullah).

"To deal with this situation, I ask one of my kids who is a professional in online searching" (Bakeri).

v.   Asking university librarian:

Bakeri Atief, Fatimah Mohammad and Ismail Farooq personas indicated that occasionally they asked librarian to help them to find particular resource.

"Sometimes, I rely on Al-Husayniyyah librarian. They are supportive and provide me with some advice, like where to look, how to find and so on" (Bakeri).

"I have a good relation with Al-Husayniyyah librarian, where sometimes, I asked them to provide me with particular resource" (Fatimah).

"We have a helpful librarian team at Al-Husayniyyah Library. Sometimes, I asked them to help me to find some resources" (Ismail).

vi.   Using other library websites:

Ismail Farooq persona showed his extra effort by login to other overseas library websites, where he can get what he was looking for.

"I login to my previous university library and try to find what I'm looking for" (Ismail).

vii.   Finding a similar information:

Ismail Farooq indicated that he tried to get similar information through different sources such as the Internet where he can get information of particular resources.

"I try to get those resources through different sources such as from the Internet and from particular academician websites" (Ismail).

viii.   Individual membership and subscription to electronic academic resources:

Fatimah Mohammad solved the problem of resources shortage via subscribing to certain electronic academic databases.

"*I have a membership and subscribe to certain databases like Questia where it can fulfil the shortening of particular resources I faced" (Fatimah).*

Appendix P presents the summary of four persona according to the proposed model and presented theme.

5.9 Summary of Chapter 5

This chapter has presented the finding from the interview session on 26 humanities scholars. Through the use of semi-structured face-to-face in-depth interview, humanities scholar's information needs and seeking behaviour were extracted and analysed. In providing a more vivid representation of the humanities scholars, persona method was used. The result has grouped the humanities scholars into four personas; the first persona is called Prof. Abdullah Ayman persona which comprised of five respondents. Persona 2, named Dr. Bakeri Atief also comprised of five respondents. Persona 3, named Dr. Fatimah Mohammad consists of nine respondents, and the last Persona,

named Dr. Ismail Farooq consists of seven respondents. Throughout the personas, 16 themes which presented the passive and active seeking behaviour of humanities scholars were found. It was clear that the four personas actually represent the senior and junior scholars. The next chapter of quantitative analysis and finding is designed to confirm and validate the qualitative analysis and finding.

CHAPTER 6: QUANTITATIVE ANALYSIS AND FINDINGS: CONFIRMING THE INFORMATION NEEDS AND BEHAVIOUR OF HUMANITIES SCHOLARS

6.1 Introduction

This chapter revolves around the findings of the survey of 161 humanities scholars on information needs and behaviours in ICT-enriched environment in Jordan. The purpose of this chapter is to answer the following research questions using both descriptive and inferential statistical analyses:

1) What are the information needs of humanities scholars in an ICT-enriched environment in Jordan?

   a) What types of information resources do humanities scholars primarily use for research and teaching?

2) How do humanities scholars fulfil their information needs?

   a) How do humanities scholars identify and locate relevant information for their teaching and research tasks?

   b) How do humanities scholars obtain relevant information resources?

3) What are the barriers encountered by humanities scholars while seeking for information?

   a) What are the barriers that influence humanities scholars' information seeking behaviour?

   b) How satisfied are humanities scholars with the library and Centre of Excellence resources?

4) What is the relationship between demographic information and the information behaviour process?

   a) What is the relationship between independent variables (gender, age, academic position, country of graduation, department and years of experience) with types of information need?

   b) What is the relationship between independent variables (gender, age, academic position, country of graduation, department and years of experience) with format of resources?

The findings are presented and discussed based on the research question of this study under the following sub six sections.

a) Demographic characteristics and background information for the humanities scholars sampled, which is divided into three parts: demographic information, computer and Internet use, and library use (to address the forth research question).

b) Need and use of electronic and print information resources (to address the first research question).

c) Identifying and locating relevant information (to address the second research question).

d) Sources use to obtain information (to address the second research question).

e) Issued faced regarding information behaviour (to address the third research question).

f) Perception and satisfaction (to address the third research question).

In this chapter the descriptive analysis is discussed first, and then followed by the inferential analysis. Figure 6.1 presents the organizational structure of this chapter.
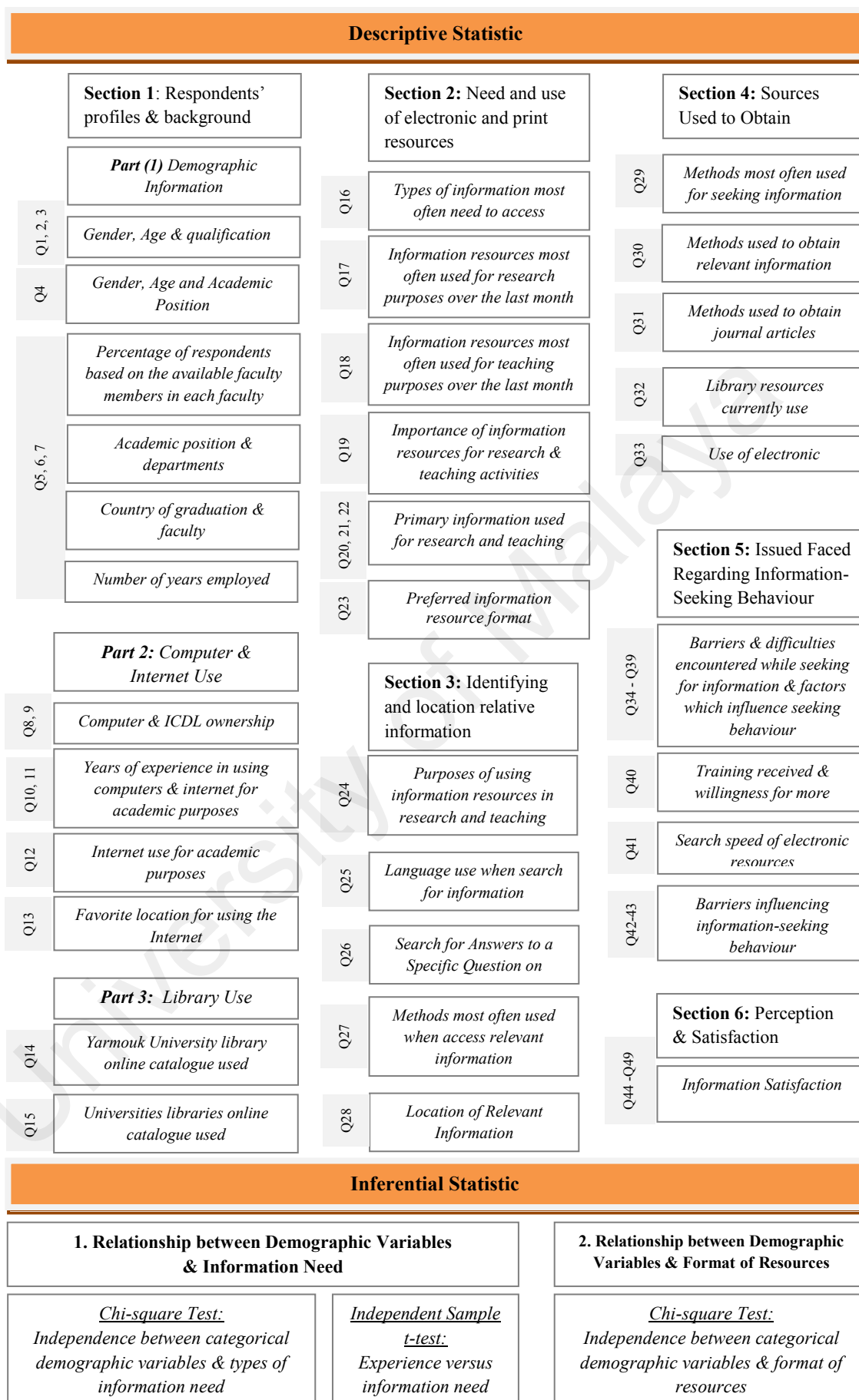
Figure 6.1: Organisational Structure of Chapter 6

6.2 Descriptive Analyses of the Findings

Descriptive statistical procedures are carried out for the purpose of organising and summarizing the data in a way that the data can be meaningfully presented; it is a technique undertaken to analyze the characteristics and relationship between diverse variables based on systematic monitoring of these variables (Williams & Monge, 2001). In this study, the researcher uses the frequency distributions, measures of central tendency and measures of variability to describe the data collected from the questionnaire. The descriptive analysis findings are prearranged and offered in sequences. Below is the first eight questions of this research.

6.2.1 Demographic Characteristics and Background Information

6.2.1.1 Part One: Demographic Characteristics

Out of 185 questionnaires that had been distributed, 161 questionnaires were returned and used in the data analysis. This gives a response rate of 87.02% which is excellent for the data analysis. Table 6.1 shows the frequency distribution of the categorical demographic characteristics of the sample (part 1 of section 1 of the survey).

As shown in Table 6.1, majority of the sample is male and represents 90.7% (146), while female sample represents 9.3% (15) only. Based on the academic qualifications, majority of the respondents scholars are PhD holders 90.7% (146), and the rest of the respondents are master degree holders comprised only of 9.3% (15). It is also noted that the females attained a higher degree of knowledge, but their number is limited compared with males. This reflects the general scenario of the scholars in the Jordanian public universities. According to the competitiveness report of the World Economic Forum for the year 2010-2011, there was 15% female worker and 85% male worker in Jordan. However, it was mentioned that Jordan has the worst indicator of women's

participation in the labour market and was placed last among 133 countries (World Economic forum, 2010). The result of this statistics is quite similar to the outcome of the survey in regards to the gender composition of academic staffs and this is not unusual in Arab society which is described as a male-dominated society.

Besides, the respondents who are over the age of 56 represent 28.0% of the 161 respondents (45), followed by those whose age is between 36-40 years old 27.3% (44), with the remainder being between 51-55 years old 16.1% (26), between 41-45 years old 13.7% (22), and between 30-35 years old 8.7% (14). Only (10) scholars (6.2%) whose age ranges from 46-50 years old. It is important to note that the frequency age of senior scholars who are over the age of 56 (45) is almost equal to the age of scholars whose age ranges between 36-40 years (44) which means that the university makes a balance between spirit of renewed junior scholars and senior scholars.

Table 6.1: Respondents' Demographic by Gender, Age and Academic Qualification

Gender \\ Age	Academic Qualification							
	PhD M	Master M	Total	PhD F	Master F	Total	**TOTAL**	*Percentage*
30-35	3	7	10	N/A	4	4	**14**	**8.7%**
36-40	33	3	36	8	N/A	8	**44**	**27.3%**
41-45	21	1	22	N/A	N/A	N/A	**22**	**13.7%**
46-50	10	N/A	10	N/A	N/A	N/A	**10**	**6.2%**
51-55	23	N/A	23	3	N/A	3	**26**	**16.1%**
>56	45	N/A	45	N/A	N/A	N/A	**45**	**28.0%**
Total	135	11	**146**	11	4	**15**	**161**	**100%**

With respect to the respondents' academic position (Table 6.2), 31.1% (50) is professor, which is nearly one third of the total respondents. 23.6 % (38) of the professors is over the age of 56. The youngest group of professor is in age range of 46-50 (4). Meanwhile, 22.9% (37) is associate professor with the highest number (13) in age range of 36-40, followed by age range of 41-45 (8), age range of 51-55 and over the

age of 56 (7). There is no associate professor in age range of 30-35. Furthermore, 29.9% (48) is assistance professor with the highest age range of 36-40 (18), followed by the age group 41-45 (12), and the lowest age group range of 30-35 (3). Lastly, 16.1% (26) of the respondents is lecturers comprising only three age groups; 36-40 (13), 30-35 (11) and 41-45 (2).

Table 6.2: Respondents' Demographic by Gender, Age and Academic Position

Gender / Age	Academic Position											
	Professor		Total	Associate Professor		Total	Assistant Professor		Total	Lecturer		Total
	M	F		M	F		M	F		M	F	
30-35	N/A	N/A	N/A	N/A	N/A	N/A	3	N/A	**3** *1.9%*	7	4	**11** *6.8%*
36-40	N/A	N/A	N/A	13	N/A	**13** *8.1%*	10	8	**18** *11.3%*	13	N/A	**13** *8.1%*
41-45	N/A	N/A	N/A	8	N/A	**8** *5.0%*	12	N/A	**12** *7.4%*	2	N/A	**2** *1.2%*
46-50	4	N/A	**4** *2.5%*	2	N/A	**2** *1.2%*	4	N/A	**4** *2.5%*	N/A	N/A	N/A
51-55	8	N/A	**8** *5.0%*	4	3	**7** *4.3%*	11	N/A	**11** *6.8%*	N/A	N/A	N/A
>56	38	N/A	**38** *23.6%*	7	N/A	**7** *4.3%*	N/A	N/A	N/A	N/A	N/A	N/A
Total	50	N/A	**50** *31.1%*	34	3	**37** *22.9%*	40	8	**48** *29.9%*	22	4	**26** *16.1%*

Regarding to the academic positions for each department, the statistical details are shown in Table 6.3. The Faculty of Arts has the highest percentage of professors (40.0%, 20) and associate professors (46.0%, 17) and the lowest percentage of assistant professors (18.8%, 9). The Faculty of Archaeology and Anthropology has the highest percentage of assistant professors (29.1%, 14) and lecturers (34.6%, 9). Ironically, the Faculty of Fine Arts has the highest percentage of lecturers (38.5%, 10) and the lowest percentage of professors (14.0%, 7) and associate professors (8.1%, 3). This is well understood since the Faculty of Fine Arts is the newest faculty that was established among humanities faculties. Given that very few number of professors and associate professors in the faculty, there is no postgraduate programmes offered.

Table 6.3: Respondents' Demographic by Academic Position and Department

Faculty	Department	Academic Position				
		Professor (50)	Associate Professor (37)	Assistant Professor (48)	Lecturer (26)	Total (161)
Arts (n=49)	History	5 *10.0%*	6 *16.2%*	3 *6.2%*	1 *3.8%*	**15** *9.3%*
	Arabic Language & Literature	7 *14.0%*	1 *2.7%*	N/A	N/A	**8** *5.0%*
	English Language & Literature	2 *4.0%*	3 *8.1%*	1 *2.1%*	1 *3.8%*	**7** *4.3%*
	Sociology & Social Sciences	2 *4.0%*	3 *8.1%*	2 *4.2%*	N/A	**7** *4.3%*
	Political Sciences	2 *4.0%*	2 *5.4%*	2 *4.2%*	N/A	**6** *3.7%*
	Geography	2 *4.0%*	2 *5.4%*	1 *2.1%*	1 *3.8%*	**6** *3.7%*
	Total	**20** *40.0%*	**17** *46.0%*	**9** *18.8%*	**3** *11.5%*	**49** *30.4%*
Shari'a & Islamic Studies (n=42)	Al-Fiqh & Its Origin	6 *12.0%*	5 *13.5%*	4 *8.3%*	1 *3.8%*	**16** *10.0%*
	Islamic Studies	2 *4.0%*	4 *10.8%*	8 *16.6%*	2 *7.6%*	**16** *10.0%*
	Usul Addin	3 *6.0%*	2 *5.4%*	1 *2.1%*	1 *3.8%*	**7** *4.3%*
	Islamic Economic & Banking	2 *4.0%*	1 *2.7%*	N/A	N/A	**3** *1.9%*
	Total	**13** *26.0%*	**12** *32.4%*	**13** *27.0%*	**4** *15.4%*	**42** *26.1%*
Archaeology & Anthropology (n=38)	Archaeology	5 *10.0%*	2 *5.4%*	7 *14.5%*	3 *11.5%*	**17** *10.6%*
	Anthropology	3 *6.0%*	2 *5.4%*	4 *8.3%*	2 *7.6%*	**11** *6.8%*
	Tourism	1 *2.0%*	1 *2.7%*	2 *4.2%*	3 *11.5%*	**7** *4.3%*
	Conservation & Management of Cultural Resources	1 *2.0%*	N/A	1 *2.1%*	1 *4.0%*	**3** *1.9%*
	Total	**10** *20.0%*	**5** *13.5%*	**14** *29.1%*	**9** *34.6%*	**38** *23.7%*
	Design	2 *4.0%*	2 *5.4%*	3 *6.2%*	3 *11.5%*	**10** *6.2%*
	Drama	2 *4.0%*	N/A	4 *8.3%*	2 *7.6%*	**8** *5.0%*
	Visual Arts	2 *4.0%*	N/A	2 *4.2%*	3 *11.5%*	**7** *4.3%*
	Music	1 *2.0%*	1 *2.7%*	3 *6.2%*	2 *7.6%*	**7** *4.3%*
	Total	**7** *14.0%*	**3** *8.1%*	**12** *25.0%*	**10** *38.5%*	**32** *19.8%*
	TOTAL	**50** **100%**	**37** **100%**	**48** **100%**	**26** **100%**	**161** **100%**

Moreover, the Department of Arabic Language & Literature (14.0%, 7) and the Department of Usul Al-Fiqh (12.0%, 6) have the highest percentage of professors. The Department of Islamic Studies has the highest percentage of assistant professors (16.6%, 8) and the Department of Visual Arts and the Department of Design have the

highest percentage of lecturers (11.5%, 3). Whereas, the lowest percentage of professors is from the Department of Conservation & Management of Cultural Resources and the Department of Tourism (2.0%, 1). For the Department of Conservation & Management of Cultural Resources, Visual Arts and Drama, they do not have associate professors. The Department of Arabic Language & Literature and Islamic Economic & Banking have no assistant professors and lecturers. The Department of Political Sciences and the Department of Sociology & Social Sciences have no lecturers, too.

With respect to the country of graduation, Table 6.4 shows that more than half (51.6%, 83) of the scholars earned their highest degree from Arab countries, while respondents who earned their highest degree from the United States of America represent 12.4% of the sample (20), and from the United Kingdom represent 6.2% (10) with the remainder who graduated from other different countries 29.8% (48). It is important to note that nearly half of the scholars earned their highest degree from Arab countries and half of the scholars are from non-English speaking countries. This influenced the language used by the scholars in their search for information.

The Faculty of Shari'a & Islamic Studies has the highest percentage (80.9%, 34) of scholars who graduated from Arab countries because Arab countries are considered as the birthplace of Islam. The Faculty of Fine Arts has the highest percentage (28.1%, 9) of scholars who graduated from the USA and from the UK (12.5%, 4). Logically speaking, if we know that there are few universities in Arab countries offering PhD in fine arts, while the highest percentage of scholars who graduated from other countries are from the Faculty of Archaeology & Anthropology (71.1%, 27). This comes from the nature of Anthropology that requires a study and understanding of different cultures from other countries.

In addition, the Department of Usul Al-Fiqh has the highest graduands from Arab countries (38.1%, 16). Whereas, the scholars from Department of Design (18.7%, 6) were USA graduates, the scholars from Department of Drama (12.5%, 4) were UK graduates and the highest graduands from other countries are from the Department of Archaeology (34.3%, 13). All respondents (100%, 38) from the Faculty Archaeology & Anthropology are PhD holders. The lowest percentage of PhD holders are from the Faculty of Arts (85.7%, 42). The Faculty of Arts has the highest percentage of M.A holders (14.3%, 7). While, there are no M.A holders in the Faculty of Archaeology & Anthropology.

Furthermore, the Department of Archaeology has the highest percentage (44.7%, 17), followed by the Department of Usul Al-Fiqh (38.1%, 16), and then the Department of Design (31.2%, 10) as PhD holders. Meanwhile, the lowest percentage of PhD holders is in the Department of English Language & Literature and Geography (6.1%, 3). While, the Department of Visual Arts has the highest number of M.A holders (9.4%, 3).

Likewise, Table 6.5 shows detailed breakdown list of other countries; Spain, Germany, France, Bulgaria, Russia, Pakistan, India, Turkey, Japan, Greece and Malaysia.

Table 6.4: Countries of Graduation (Arab Countries, USA and UK)

Department	Country of graduation				Total	Qualification	
	Arab Countries	USA	UK	Other Countries		PhD	Master
Faculty of Arts (n=49)							
Arabic Language & Literature	8 *16.3%*	N/A	N/A	N/A	8	8 *16.3%*	N/A
English Language & Literature	0	3 *6.1%*	4 *8.2%*	N/A	7	3 *6.1%*	4 *8.2%*
History	11 *22.5%*	N/A	N/A	4 *8.2%*	15	15 *30.6%*	N/A
Political Sciences	6 *12.2%*	N/A	N/A	N/A	6	6 *12.2%*	N/A
Sociology & Social Sciences	7 *14.3%*	N/A	N/A	N/A	7	7 *14.3%*	N/A
Geography	6 *12.2%*	N/A	N/A	N/A	6	3 *6.1%*	3 *6.1%*
Total	**38** *77.5%*	**3** *6.1%*	**4** *8.2%*	**4** *8.2%*	**49** *100%*	**42** *85.7%*	**7** *14.3%*
Faculty of Shari'a & Islamic Studies (n=42)							
Usul Al-Fiqh	16 *38.1%*	N/A	N/A	N/A	16	16 *38.1%*	N/A
Usul Addin	3 *7.1%*	N/A	N/A	4 *9.5%*	7	5 *11.9%*	2 *4.8%*
Islamic Economic & Banking	3 *7.1%*	N/A	2 *4.8%*	N/A	5	5 *11.9%*	N/A
Islamic Studies	12 *28.6%*	N/A	N/A	2 *4.8%*	14	11 *26.2%*	3 *7.1%*
Total	**34** *80.9%*	N/A	**2** *4.8%*	**6** *14.3%*	**42** *100%*	**37** *88.1%*	**5** *11.9%*
Faculty of Archaeology & Anthropology (n=38)							
Archaeology	N/A	4 *10.5%*	N/A	13 *34.3%*	17	17 *44.7%*	N/A
Anthropology	N/A	4 *10.5%*	N/A	7 *18.4%*	11	11 *29%*	N/A
Conservation & Management of Cultural Resources	3 *7.9%*	N/A	N/A	N/A	3	3 *7.9%*	N/A
Tourism	N/A	N/A	N/A	7 *18.4%*	7	7 *18.4%*	N/A
Total	**3** *7.9%*	**8** *21%*	**0**	**27** *71.1%*	**38** *100%*	**38** *100%*	N/A
Faculty of Fine Arts (n=32)							
Visual Arts	N/A	3 *9.4%*	N/A	4 *12.5%*	7	4 *12.5%*	3 *9.4%*
Drama	N/A	N/A	4 *12.5%*	4 *12.5%*	8	8 *25%*	N/A
Design	4 *12.5%*	6 *18.7%*	N/A	N/A	10	10 *31.2%*	N/A
Music	4 *12.5%*	N/A	N/A	3 *9.4%*	7	7 *21.9%*	N/A
Total	**8** *25%*	**9** *28.1%*	**4** *12.5%*	**11** *34.4%*	**32** *100%*	**29** *90.6%*	**3** *9.4%*
TOTAL	**83** *51.6%*	**20** *12.4%*	**10** *6.2%*	**48** *29.8%*	**161** *100%*	**146** *90.7%*	**15** *9.3%*

Table 6.5: Countries of Graduation (Other Countries)

Faculty & Department	Country of graduation										
	Spain	Germany	France	Bulgaria	Russia	Pakistan	India	Turkey	Japan	Greece	Malaysia
Faculty of Arts (49)											
Arabic Language & Literature	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
English Language & Literature	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
History	N/A	1	N/A	N/A	N/A	1	N/A	1	N/A	1	N/A
Political Sciences	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sociology & Social Sciences	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Geography	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	N/A	**1**	N/A	N/A	N/A	**1**	N/A	**1**	N/A	**1**	N/A
Faculty of Shari'a & Islamic Studies (42)											
Al-Fiqh & Its Origin	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Usul Addin	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	3
Islamic Economic & Banking	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Islamic Studies	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	1
Total	N/A	N/A	N/A	N/A	N/A	**1**	N/A	**1**	N/A	N/A	**4**
Faculty of Archaeology & Anthropology (38)											
Archaeology	0	6	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Anthropology	3	3	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conservation & Management of Cultural Resources	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tourism	N/A	N/A	4	N/A	N/A	N/A	2	1	N/A	N/A	N/A
Total	**3**	**9**	**12**	N/A	N/A	N/A	**2**	**1**	N/A	N/A	N/A
Faculty of Fine Arts (32)											
Visual Arts	N/A	N/A	N/A	N/A	N/A	N/A	1	1	1	1	N/A
Drama	N/A	N/A	1	2	1	N/A	N/A	N/A	N/A	N/A	N/A
Design	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Music	N/A	N/A	N/A	1	2	N/A	N/A	N/A	N/A	N/A	N/A
Total	N/A	N/A	**1**	**3**	**3**	N/A	**1**	**1**	**1**	**1**	N/A
TOTAL	**4**	**10**	**13**	**3**	**3**	**2**	**3**	**3**	**1**	**2**	**4**

In regards to the distribution of the years of academic experience variable, consistent with the relatively long experience at the university as shown in Table 6.6 where most of scholars (35.4%, 57) have more than 21 years of working experiences. While, scholars who have 1-5 years of working experience comprise 28% (45), followed by those who have 6-10 and 11-15 years of working experience (14.3%, 23). Lastly, only 13 scholars who have 16-20 years of working experience with 8.1%.

In addition, professors who have over 31 years of experience comprise (12.4%, 20). While, associate professors who have 6 to 25 years of experience with the highest percentage (8.1%, 13) who have experience between 16-20 years. Assistant professors who have between 1-15 years of experience and 21-25 years of experience with the highest frequency which is 22 for 1-5 years. Lastly, lecturers only have 1-10 years of experience with majority of them (23 from 26) have 1-5 years of experience.

Table 6.6: Respondents' Distribution Years of Academic Experience

Academic Position / Year of Academic Experience	Professor	Associate Professor	Assistant Professor	Lecturer	Total
1-5 years	N/A	N/A	22 13.7%	23 14.3%	**45** 28%
6-10 years	N/A	10 6.2%	10 6.2%	3 1.9%	**23** 14.3%
11-15 years	N/A	11 6.8%	12 7.5%	N/A	**23** 14.3%
16-20 years	N/A	13 8.1%	N/A	N/A	**13** 8.1%
21-25 years	14 8.7%	3 1.9%	4 2.4%	N/A	**21** 13%
26-30 years	16 9.9%	N/A	N/A	N/A	**16** 9.9%
>31 years	20 12.4%	N/A	N/A	N/A	**20** 12.4%
Total	**50**	**37**	**48**	**26**	**161**

As noted from Table 6.6, the percentages between young scholars who are considered as new generation with the senior scholars who are expertise are almost similar. It can be said that 42.3% (68) of the scholars who have ten years or less of working experience are young scholars, while 57.7% (93) of the scholars has more than ten years of working experience. This means, more than half of the humanities scholars at YU are seniors in terms of age. This shows that YU concerns about its academician resources of humanities scholars where the ratio of young and senior scholars are quite balanced in number.

6.2.1.2 Part Two: Computer and Internet Use

In this part the researcher shows the responses of the sample regarding the computer and Internet use. Table 6.7 provides the frequency of distribution for this part of the survey. Regarding to whether the scholars have computers or laptops in their offices or at homes, as shown in the Table 6.7, all respondents of scholars have computers or laptops at their homes (100%, 161) and the respondents who have computers or laptops in their offices represent 95.7% (154) of the total respondents. It is noted that not only the university is taking upon itself to provide computers for each faculty member, but it is beyond this to provide portable devices for each student, which is part of a project launched by the Ministry of Communications and Information Technology based on the royal directives.

Furthermore, the results show that 41.6% (67) of the respondents has an International Computer Driving License (ICDL). As noted, it is supposed that all scholars have ICDL because YU had established the first ICDL centre in Jordan and offered training course for 3 months. However, the discontinuation of ICDL training courses results in 94 humanities scholars do not have ICDL.

Table 6.7: Respondents' Computer and ICDL Ownership

Computer Ownership	Yes		Total	No		Total
	M	F		M	F	
Home computer ownership	146	15	**161** *100%*	N/A	N/A	**N/A**
Office computer ownership	139	15	**154** *95.7%*	7	N/A	**7**
ICDL computer ownership	59	8	**67** *41.6%*	87	7	**94**

In regards to the number of years using the computer for academic purposes, Table 6.8 shows the results that majority of the respondents who have been using computer for academic purposes for more than five years is 68.3% (110). This is followed by 13% (21) of the respondents who have been using computer for academic purposes for less than 5 years. The remainders of the respondents are those who have been using computer for academic purposes less than four years 6.8% (11) and less than three years 5% (8). It surprises the researcher to find that some scholars 3.7% (6) not only they have been using computer for less than two years, but also that there are some scholars who do not use computer at all 3.1% (5). Meanwhile, for the use of Internet for academic purposes, the results show that 53.4% (86) of the respondents have been using the Internet for academic purposes for more than five years and 17.4% (28) of the respondents did not use Internet for academic purposes. While the remainder being as follow; less than two years and less than three years have the same percentage 4.3% (7), less than four years 8.1% (13), and less than five years 12.4% (20).

Table 6.8: Respondents' Years of Experience in Using Computers and Internet for Academic Purposes

Years of Experience in using Computers and Internet	Not Use	Less Than 2 Years	Less Than 3 Years	Less Than 4 Years	Less Than 5 Years	More Than 5 Years	Total
Use Computer for Academic Purposes	5 *3.1%*	6 *3.7%*	8 *5%*	4/11 *6.8%*	21 *13%*	110 *68.3%*	**161** *100%*
Use Internet for Academic Purposes	28 *17.4%*	7 *4.3%*	7 *4.3%*	13 *8%*	20 *12.4%*	86 *53.4%*	**161** *100%*

As noted above, 17.4% of the respondents who did not use the Internet for academic purposes are the senior scholars, given that they do not feel confident to use the electronic resources and do not prefer to read from the computer screen and they do not believe in the validity and accuracy of the Internet resources. This due to their belief of no control on the validity and accuracy of the Internet resources. This is what the respondents revealed when they were asked about this issue during the interview. Therefore, these findings match the results in Bates' (1996) study; most humanities scholars complained about the difficulty in their search languages and the lack of availability of desired resources. Whereas, Barrett (2005) stated that the lack of availability of primary sources and not feeling confident while dealing with electronic resources were the main reasons for the reluctance of scholars from using the Internet. While Massey-Burzio (1999) concluded that the humanities scholars "definitely feels the pressure to use and deal with technology" and Wiberley & Jones (2000) declared that the senior humanities scholars adapted to the new technology at a slow pace.

Meanwhile, Tables 6.9 and 6.10 show the frequency of the Internet use for academic purposes based on gender and academic position. In Table 6.9, most male and female respondents use the Internet every day (47=male and 12=female). While 35 males use the Internet once a week, 20 males use the Internet in once a month, and 19 males use

the Internet more than once a week. Whereas, there are 25 males and 3 females do not use the Internet for academic purposes. Based on the statistics in Table 6.9, 25 males and 3 females who do not use the Internet for academic purposes are male professors and female associate professors, respectively.

Table 6.9: Frequency of Internet Use for Academic Purposes

Frequency of Internet Use for Academic Purposes	Gender		Total
	M	F	
Every day	47	12	59
Once a week	35	N/A	35
Not use Internet for academic purposes	25	3	28
Once a month	20	0	20
More than once a week	19	0	19
Total	**146**	**15**	**161**

In addition, Table 6.10 shows the frequency of the Internet use for academic purposes based on academic position. The statistics show that the highest frequency of the Internet use which is every day is by the assistant professors and lecturers with 47 males and 12 females (59). The lowest frequency uses the Internet more than once a week is 19 males; professors (2), associate professors (13) and assistant professors (4) only. The statistics show that young generations (lecturers and assistant professors) have more skills and confidence in using the Internet for their academic purposes compared with old generations (associate professors and professors) as they prefer printed materials, such as books.

Table 6.10: Frequency of the Internet Use for Academic Purposes

Frequency of Internet Use for Academic Purposes	Academic Position								Total
	Professor		Associate Professor		Assistant Professor		Lecturer		
	M	F	M	F	M	F	M	F	
Every day	N/A	N/A	N/A	N/A	25	8	22	4	59
Once a week	10	N/A	14	N/A	11	N/A	N/A	N/A	35
Not use internet for academic purposes	25	N/A	N/A	3	N/A	N/A	N/A	N/A	28
Once a month	13	N/A	7	N/A	N/A	N/A	N/A	N/A	20
More than once a week	2	N/A	13	N/A	4	N/A	N/A	N/A	19
Total	**50**		**37**		**48**		**26**		**161**

In terms of favorite location for using the Internet, Table 6.11 shows majority of the respondents prefer to use the Internet in their offices 64% (103), followed by 15.5% (25) of respondents who prefer to use the Internet at their homes, and only 3.1% (5) of respondents prefer to use the Internet in the library. It is clear that most of the respondents prefer to use the Internet in their offices for the appropriate condition and for the good speed of the Internet connection. The results are similar to the previous study done by Tahir, Mahmood and Shafique (2010) who found that humanities scholars prefer to access computer and the Internet from their offices and from homes.

Table 6.11: Favorite Location for Using the Internet

Favorite Location for Using the Internet		
Office	103	*64%*
Do not use Internet for Academic Purposes	28	*17.4%*
Home	25	*15.5%*
Library	5	*3.1%*
Total	**161**	***100%***

6.2.1.3 Part Three: Library Use

This part addresses the library usage (questions 14 and 15 of the survey), as Table 6.12 presents clear descriptive statistics for this section. The respondents were asked two questions about the library usage. They were asked how often they use Al-Husayniyyah Library OPAC, Centre of Excellence Website, physically visit Al-Husayniyyah Library, and the frequency of using libraries online catalogue (Table 6.13).

The results in Table 6.12 indicate that 42.2% (68) of the respondents use Al-Husayniyyah Library Online Public Access Catalogue (OPAC) once a week, followed by 24.2% (39) once a month and the remainder are as follow: 16.1% (26) more than once a weak, 12.4% (20) once in a semester, and 5% (8) does not use.

In respect to the use of the Centre of Excellence OPAC, majority of the respondents 49.7% (80) did not use the Centre of Excellence website, followed by 23.6% (38) of the respondents who use the Centre of Excellence website once a month, and 16.8% (27) of the respondents who use the Centre of Excellence OPAC once a week. As noted, there is a large proportion (49.7%) of the respondents who did not use the Centre of Excellence OPAC because the respondents pointed out that they have no knowledge about the existence of this centre and its services, as mentioned earlier in awareness of library & Centre of Excellence resources part (Chapter 5). In addition, 37.9% (61) of the respondents personally visit Al-Husayniyyah Library once a month, while 33.5% (54) personally visit Al-Husayniyyah Library once a week. It is clear how the electronic resources give impact and reduce the number of humanities scholars who personally visit the library. These results are consistent with the findings of previous studies by Sukovic (2008) and Tahir, Mahmood & Shafique (2010) who found that their respondents who personally visited the library had considerably decreased after the advent of technology.

Table 6.12: Respondents' Use of Library and its Resources
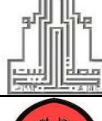
Resource of Information	Frequency	Gender		Age						Total
		F	M	30-35	36-40	41-45	46-50	51-55	>56	
Use Al-Husayniyyah Library OPAC	More than once a week	7	19	4	10	9	N/A	3	N/A	**26** *16.1%*
	Once a week	8	60	7	28	5	6	8	14	**68** *42.2%*
	Once a month	N/A	39	3	3	4	4	7	18	**39** *24.2%*
	Once a semester	N/A	20	N/A	3	4	N/A	8	5	**20** *12.4%*
	Do not use	N/A	8	N/A	N/A	N/A	N/A	N/A	8	**8** *5%*
	Total	**15**	**146**	**14**	**44**	**22**	**10**	**26**	**45**	**161**
Use Centre of Excellence website	More than once a week	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	**4** *2.5%*
	Once a week	11	16	4	14	2	4	3	N/A	**27** *16.8%*
	Once a month	N/A	38	7	7	7	2	7	8	**38** *23.6%*
	Once a semester	N/A	12	N/A	4	4	N/A	4	N/A	**12** *7.4%*
	Do not use	4	76	3	19	5	4	12	37	**80** *49.7%*
	Total	**15**	**146**	**14**	**44**	**22**	**10**	**26**	**45**	**161**
In person (physically) visit Al-Husayniyyah Library	More than once a week	N/A	10	N/A	3	N/A	1	N/A	6	**10** *6.2%*
	Once a week	7	47	3	14	5	6	15	11	**54** *33.5%*
	Once a month	4	57	11	10	12	2	11	15	**61** *37.9%*
	Once a semester	4	24	N/A	17	5	1	N/A	5	**28** *17.4%*
	Do not use	N/A	8	N/A	N/A	N/A	N/A	N/A	8	**8** *5%*
	Total	**15**	**146**	**14**	**44**	**22**	**10**	**26**	**45**	**161**

Regarding to the university libraries online catalogue OPAC used by scholars, Table 6.13 presents it as Al-Husayniyyah Library of YU is the most often library that the respondents use 95.0% (153), followed by Jordan University Library 73.9% (119) and the Hashemite University Library, respectively 32.9% (53).

As noted, the first library that the scholars use frequently is Al-Husayniyyah Library for its various resources and being considered as the deposit centre for Arab journals where it has a digitisation process for most Arab journals and allows its users to browse

it online. While the Jordan University Library occupies the second position because it is considered as a Centre of the deposit of theses from the Arab countries. While the Hashemite University Library occupies the third position because it has many branches of human science disciplinary and has a good collection.

Table 6.13: University Libraries Online Catalogue Frequently Used

Three university libraries that the respondents most often use the online catalogue (Multiple Responses)		Frequency	*Percentage*
	Al-Husayniyyah Library – Yarmouk University	**153**	*95.0%*
	Jordan University Library	**119**	*73.9%*
	The Hashemite University	**53**	*32.9%*
	Jordan University of Science & Technology	**28**	*17.4%*
	Al-Byte University Library	**25**	*15.5%*
	Muta'h University Library	**14**	*8.7%*
	Al-Balqa Applied University Library	**7**	*4.3%*
	German-Jordan University Library	**7**	*4.3%*
	Alhussein Bin Talal University Library	**0**	*0%*
	Tafila Technical University Library	**0**	*0%*

6.2.2 Information Needs and Use of Electronic and Print Resources

The first research question of the study is: *What are the information needs of humanities scholars in an ICT-enriched environment in Jordan?* With one sub-research question (a) *What types of information resources do humanities scholars primarily use for research and teaching?* The data to answer these questions were taken from Section 2, items 16, 17, 18, 19, 20, 21, 22 and 23, and summarized in Table 6.14 to show the descriptive statistics of the main types of information resources most often the humanities scholars need to access.

The type of information needed by humanities scholars are books with 92.5% (149), followed by journals (83.2%, 134), conference proceedings (65.2%, 105), dissertations (52.7%, =85), and Online Databases (49.6%, 80). Meanwhile, audio-visual materials (44.7%, 72), government documents (40.9%, 66) and newspaper (29.8%, N=48) are less popular. An earlier study by Baruchson-Arbib and Bronstein (2007) found that the majority of humanities scholars' researches were based on printed books and scholarly journals.

By crossing the type of information most often needed to access by humanities scholars with the academic position, the results show that professors (50), associate professors (35) and assistant professors (42) answered books as the type of information they most often need to access, while lecturers answered books (22) and dissertation (22). In addition, all respondents answered newspapers as the least often type of information they need to access (professor, 10; associate professor, 11; assistant professor, 16, and lecturer, 11).

Table 6.14: Types of Information Most Often Need To Access

Types Of Information Most Often Need To Access	Professor (50)	Associate professor (37)	Assistant Professor (48)	Lecturer (26)	Total	Percentage
Books	50	35	42	22	149	92.5%
Journals	44	32	38	20	134	83.2%
Conference Proceedings	30	27	31	17	105	65.2%
Dissertations	12	17	34	22	85	52.7%
Databases	11	14	36	19	80	49.6%
Audio-Visual Materials	13	14	29	16	72	44.7%
Government Documents	18	17	18	13	66	40.9%
Newspapers	10	11	16	11	48	29.8%
Total	**50**	**37**	**48**	**26**	**161**	**100%**

In addition, the respondents were asked about the frequency of using different information resources for research purposes and for teaching purposes in questions 17 and 18 of the questionnaire survey. The responses to these questions are summarized in Table 6.15 and 6.16.

Table 6.15: Information Resources Used for Research Purposes over the Last Month

Resources Used For Research Purposes	Never					Rarely					Sometimes					Frequently					Always				
	Academic Position																								
	Prof	Associate Prof	Assistant Prof	Lecturer	Total	Prof	Associate Prof	Assistant Prof	Lecturer	Total	Prof	Associate Prof	Assistant Prof	Lecturer	Total	Prof	Associate Prof	Assistant Prof	Lecturer	Total	Prof	Associate Prof	Assistant Prof	Lecturer	Total
N	50	37	48	26	161	50	37	48	26	161	50	37	48	26	161	50	37	48	26	161	50	37	48	26	161
Printed Books	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	3	8	N/A	4	10	4	18	7	4	12	9	32	43	29	21	10	103
Printed Journals	N/A	N/A	N/A	2	2	N/A	N/A	4	3	7	4	2	8	3	17	9	11	17	7	44	37	24	19	11	91
Online Databases	12	6	N/A	N/A	18	9	4	N/A	N/A	13	16	10	5	2	33	9	10	19	8	46	4	7	24	16	51
Electronic Journals	14	4	N/A	N/A	18	17	5	N/A	N/A	22	11	14	7	2	34	8	8	19	8	43	N/A	6	22	16	44
Electronic Books	13	4	N/A	N/A	17	24	12	7	N/A	43	10	9	12	5	36	3	6	15	7	31	0	6	14	14	34
Directories & Search Engines	14	3	N/A	N/A	17	8	3	N/A	N/A	11	5	6	3	N/A	14	13	12	11	7	43	10	13	34	19	76
Al-Husayniyyah OPAC System	7	2	N/A	N/A	9	6	2	1	N/A	9	9	8	6	4	27	12	11	25	11	60	16	12	16	11	56
Centre of Excellence Website	43	22	20	10	95	3	8	9	6	26	4	7	4	2	17	N/A	N/A	8	4	12	N/A	N/A	7	4	11

Table 6.16: Information Resources Used for Teaching Purposes over the Last Month

Resources Used For Teaching Purposes	Never					Rarely					Sometimes					Frequently					Always				
	Prof	Associate Prof	Assistant Prof	Lecturer	Total	Prof	Associate Prof	Assistant Prof	Lecturer	Total	Prof	Associate Prof	Assistant Prof	Lecturer	Total	Prof	Associate Prof	Assistant Prof	Lecturer	Total	Prof	Associate Prof	Assistant Prof	Lecturer	Total
N	50	37	48	26	161	50	37	48	26	161	50	37	48	26	161	50	37	48	26	161	50	37	48	26	161
Printed Books	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	6	15	5	8	14	6	33	45	29	25	14	113
Printed Journals	N/A	N/A	N/A	N/A	N/A	N/A	2	6	4	12	5	5	15	5	30	11	13	13	7	44	34	17	14	10	75
Online Databases	15	5	N/A	N/A	20	8	6	N/A	N/A	14	15	8	12	5	40	9	10	16	10	45	3	8	20	11	42
Electronic Journals	15	6	N/A	N/A	21	10	6	N/A	N/A	16	14	10	11	5	40	8	8	14	9	48	3	7	23	12	45
Electronic Books	15	5	N/A	N/A	20	10	6	N/A	N/A	16	15	10	9	8	42	7	10	18	8	43	3	6	21	10	40
Directories & Search Engines	14	7	N/A	N/A	21	8	3	N/A	N/A	11	17	13	4	4	38	7	7	17	6	37	4	7	27	16	54
Al-Husayniyyah OPAC System	7	2	N/A	N/A	9	12	4	N/A	N/A	16	6	8	16	7	37	15	11	17	11	54	10	12	15	8	45
Centre of Excellence Website	35	22	20	3	80	9	7	8	10	34	6	8	4	8	26	N/A	N/A	10	3	13	N/A	N/A	6	2	8

As shown in Table 6.15, for the information resources most frequently used for research purposes, professors have the highest frequency for always using the printed books (43), followed by printed journals (37). Associate professors have the highest frequency for always using printed books (29), followed by printed journals (24). These results match earlier study by Reed and Tanner (2001) who found that most of humanities scholars considered books (75%) as an important source for their research purposes. For assistant professors, they always use directories and search engines (34), followed by online databases (24). Whereas, lecturers always use directories and search engines (19), followed by online databases (16), and electronic journals (16) for their research purposes.

On the other hand, findings show that there are some of professors and associate professors mentioned that they never and rarely use electronic resources for research purposes, such as online database, electronic journals, electronic books and directories and search engines. These results confirm with previous study by Wiberley and Jones (2000) and Tahir, Mahmood and Shafique (2010), where junior scholars were more inclined to use the technology than senior scholars.

For the total frequency, the highest frequency of information resources most often used by the respondents are printed books (103), followed by printed journals (91), directories and search engines (76), Al-Husayniyyah OPAC system (56), online databases (51), electronic journals (44), electronic books (34) and Centre of Excellence Website (11).

Moreover, many humanities scholars answered never use 59% (95) the Centre of Excellence Website (professors (43), associate professors (22), assistant professors (20), and lecturers (10)). The respondents reasoned that they had no knowledge about the existence of this Centre and its services, as mentioned earlier in awareness of Library and the Centre of Excellence resources (Chapter 5).

Whereas, in regards to the information resources most often used for teaching purposes, Table 6.16 shows professors have the highest frequency for always using printed books (45), followed by printed journals (34). This frequency is similar to the research purposes. Associate professors have the highest frequency for always using printed books (29), followed by printed journals (17) compared with the research purposes. For assistant professors, they always use directories and search engines (27), followed by printed books (25). However, for lecturers, they always use directories and search engines (16), followed by printed books (14) similar to assistant professors. Table 6.15 also shows that there are some of professors and associate professors mentioned that they never and rarely use the electronic resources for teaching purposes.

For the total frequency of use, from the highest to the lowest frequency are as follow: printed books 70.1% (113), printed journals 46.6% (75), directories and search engines 33.5% (54), Al-Husayniyyah OPAC system 28.0% (45), electronic journals 28.0% (45), online databases 26.0% (42), electronic books 24.8% (40) and the Centre of Excellence website 5.0% (8). Meanwhile, similar frequency for the research purposes where many humanities scholars answered never 49.7% (80) for the Centre of Excellence website (professors 21.8% (35), associate professors 13.6% (22), assistant professors 12.4% (20), and lecturers 1.8% (3)).

In terms of information resources, they perceived as important for research and teaching activities, the respondents were asked to indicate the importance using Likert-type scale responses (from not very important to very important, the responses values from 1 to 5). Item 19 of the questionnaire is taken and summarized in Table 6.17 to provide descriptive statistics about the importance of information resources in research and teaching activities.

Table 6.17: The Importance of Information Resources for Research and Teaching Activities

Resources	Not very important	Not important	Somewhat important	Important	Very important	Mean	Std. Deviation
Printed Materials	N/A	4 2.5%	15 9.3%	60 37.3%	78 48.4%	4.36	0.77
Library OPAC	3 1.9%	N/A	28 17.4%	70 43.5%	60 37.3%	4.13	0.86
Internet Websites	17 10.5%	9 5.6%	25 15.5%	53 33.0%	57 35.4%	4.07	0.94
Online Databases	19 11.8%	6 3.7%	45 28.0%	42 26.0%	49 30.5%	3.95	0.89
E-mails	9 1.9%	17 10.6%	52 36.0%	40 24.8%	43 26.7%	3.61	1.06
Online References	3 1.9%	24 14.9%	55 34.2%	35 21.7%	44 27.3%	3.54	1.11
E-Books	10 6.2%	14 8.7%	58 36.0%	36 22.4%	43 26.7%	3.52	1.17
Personal Collection	28 17.4%	13 8.0%	56 34.8%	35 21.8%	29 18.0%	3.16	1.33
Colleagues	30 18.7%	20 12.4%	73 45.3%	25 15.5%	13 8.1%	2.67	1.06
Government Archives	53 32.9%	28 17.4%	63 39.1%	10 6.2%	N/A	2.20	1.00

The results in Table 6.17 show that the printed materials are the most important information resources in research and teaching activities with an average of 4.36 (SD=0.77) followed by Library OPAC with an average of 4.13 (SD=0.86), followed by Internet websites with an average of 4.07 (SD=0.94), and with the remaining (from the most important to the least important respectively) being as follows: online databases, e-mails, online references, e-books, personal collection, colleagues, and government

archives. In addition, it is noted that there are some scholars who believe that the electronic resources somehow not very important.

In terms of primary information resources the humanities scholars use for research and teaching, item 20, 21, 22 and 23 of the questionnaire are taken and summarized in Table 6.18.

Table 6.18: Primary Information Resources Used for Research and Teaching

Primary Use of Information / Resources of Information	Primary Information Resources Used for **Teaching Undergraduates**		Primary Information Resources Used for **Teaching Graduates**		Primary Information Resources Used for **Field Research**	
	F	%	F	%	F	%
Electronic Monographs	N/A	0.0%	N/A	0.0%	N/A	0.0%
Printed Monographs	120	74.6%	16	10.0%	N/A	0.0%
Electronic Preprints	N/A	0.0%	N/A	0.0%	4	2.5%
Printed Preprints	N/A	0.0%	0	0.0%	0	0.0%
Electronic Textbooks	4	2.5%	11	6.8%	11	6.8%
Printed Textbooks	26	16.1%	103	64.0%	26	16.1%
Electronic Journals	7	4.3%	7	4.3%	34	21.1%
Printed Journals	4	2.5%	19	11.8%	67	41.6%
Electronic Conferences Proceedings	N/A	0.0%	N/A	0.0%	4	2.5%
Printed Conferences Proceedings	N/A	0.0%	5	3.1%	15	9.4%
TOTAL	**161**	*100%*	**161**	*100%*	**161**	*100%*

Table 6.18 shows that the respondents depend heavily on printed monograph as a primary source of information for teaching undergraduates 74.6% (120) compared with only 10% (16) for teaching graduates and 0% (0) for research. Meanwhile, for teaching graduates, the results indicate that the respondents depend heavily on printed textbooks as a primary source of information 64% (103) compared with 16.1% (26) for teaching undergraduates and for research purposes. In respect to primary source of information in the field of research, the importance of printed journals becomes clear with 41.6% (67) of respondents compared with only 11.8% (19) for teaching graduates and 2.5% (4) for

teaching undergraduates. As noted, there are many information resources that are not used by the humanities scholars. For teaching undergraduates, electronic monographs, electronic preprints, printed preprints, electronic conferences proceedings and printed conferences proceedings are not used. For teaching graduates, electronic monographs, electronic preprints, printed preprints and electronic conferences proceedings are not used, too. While, for research, electronic monographs, printed monographs and printed preprints are not used, as well.

Regarding the extent humanities scholars use the electronic and printed resources for research and teaching, responses from item 23 in the questionnaire are taken and summarized in Table 6.19 to answer the research question.

Table 6.19: Respondents' Preferred Information Resource Format

Format	Frequency	Percentage
Printed	85	52.8%
Electronic	76	47.2%
TOTAL	161	100%

Table 6.19 shows that the respondents prefer to use printed resources format over electronic resources format. However, the differences are small in magnitude with 52.8% (85) of respondents preferred the printed resources compared with 47.2% (76) who preferred the electronic resources. As shown in the table above, scholars prefer to use both electronic and printed format of information resources. It is obvious that there is an increase of using electronic resources compared with the previous studies by Rimmer et al. (2006). These results are consistent with the findings of the earlier studies by Baruchson-Arbib and Bronstein (2007) when they made comparison of using printed and electronic resources among the humanities scholars in Israel, the respondents used more printed books and journals than the electronic resources.

Regarding the possible reasons behind humanities scholars' motivation for information needs, the respondents were asked a ranking type question (Item 24 of the survey) in which they rank the reasons for seeking information from the most importance to the least important respectively (the most important purpose take the value of 1 and the least important purpose take the value of 7). Table 6.20 provides descriptive statistics for the purposes of information-seeking.

Table 6.20: Importance of Purposes of Using Information Resources in Research and Teaching Activities

Importance of Purpose	Mean	Std. Deviation
Prepare for Class Discussion	2.4524	1.64098
Complete Research	2.8810	2.00247
Seminars / Workshops	3.6905	1.61529
Check Information	4.0476	1.63726
Earn New Knowledge	4.2619	1.66835
Participate at Conference	4.6190	1.78000
Exchange Correspondence on Publications	6.0476	1.46425
1=Most Purpose – 7=Least Purpose		

The results indicate that preparing for class discussion is the most important reason for information seeking (Mean=2.45, SD=1.64), followed by completing research (Mean=2.88, SD=2.00), followed by seminars/workshops (Mean=3.69, SD=1.62) with the remaining from the most important to least important being as follows: checking information, acquiring new knowledge, participating in conference, and exchanging correspondence on publications.

In terms of language used by the respondents (Item 25 of the survey) when they search for information, Table 6.21 and 6.22 provide the frequency distribution for the language that the respondents use when they search for information.

Table 6.21: Language Use When Searching For Information

Languages	Frequency	Percentage
Arabic	66	40.9%
Arabic & English	47	29.2%
Arabic, English & French	10	6.2%
Arabic & German	10	6.2%
English	9	5.6%
Arabic & Turkish	4	2.5%
Arabic & French	3	1.9%
Arabic, English &Russian	3	1.9%
Arabic, English & Spanish	3	1.9%
Arabic, English & Bulgarian	3	1.9%
Arabic, English & Greece	2	1.2%
Arabic & Japanese	1	0.6%
TOTAL	**161**	*100%*

Table 6.21 shows that majority of the respondents use Arabic (their native language) when searching for information 40.9% (66), followed by using two languages simultaneously Arabic and English 29.2% (47), while Arabic, English & French and Arabic and German occupied the third place with 6.2% (10), followed by English 5.6% (9) alone in the fourth place, then scholars using Arabic and Turkish 2.5% (4) as fourth choice. While in fifth place both of Arabic and French, Arabic, English and Russian and Arabic, English and Bulgarian as 1.9% (3). Then in the sixth place Arabic, English and Greece with 1.2% (2) and lastly using Arabic and Japanese (0.6%, 1).

Table 6.22: Language Use When Searching For Information

Language	Academic Position				Frequency	*Percentage*
	Prof	Assc. Prof	Asst. Prof	Lecturer		
Faculty of Arts (n=49)						
Arabic & English	7	8	7	N/A	22	*45.0%*
Arabic	10	7	N/A	N/A	17	*34.7%*
English	3	1	1	2	7	*14.3%*
Arabic & German	N/A	1	N/A	N/A	1	*2.0%*
Arabic & Turkish	N/A	N/A	N/A	1	1	*2.0%*
Arabic, English & Greece	0	0	1	0	1	*2.0%*
Total	**20**	**17**	**9**	**3**	**49**	*100%*
Faculty of Shari'a & Islamic Studies (n=42)						
Arabic	13	9	12	4	38	*90.5%*
Arabic & English	N/A	3	N/A	N/A	3	*7.2%*
Arabic & Turkish	N/A	N/A	1	N/A	1	*2.3%*
Total	**13**	**12**	**13**	**4**	**42**	*100%*
Faculty of Archaeology & Anthropology (n=38)						
Arabic & English	1	N/A	5	4	10	*26.3%*
Arabic, English & French	4	1	3	1	9	*23.7%*
Arabic & German	2	2	3	2	9	*23.7%*
Arabic	3	N/A	N/A	N/A	3	*7.9%*
Arabic & French	N/A	N/A	1	2	3	*7.9%*
Arabic, English & Spanish	N/A	1	2	N/A	3	*7.9%*
Arabic & Turkish	N/A	1	N/A	N/A	1	*2.6%*
Total	**10**	**5**	**14**	**9**	**38**	*100%*
Faculty of Fine Arts (n=32)						
Arabic & English	3	N/A	3	6	12	*37.5%*
Arabic	4	1	3	N/A	8	*25.0%*
Arabic, English & Russian	N/A	N/A	2	1	3	*9.4%*
Arabic, English & Bulgarian	N/A	2	N/A	1	3	*9.4%*
English	N/A	N/A	1	1	2	*6.3%*
Arabic, English & French	N/A	N/A	N/A	1	1	*3.1%*
Arabic & Japanese	N/A	N/A	1	N/A	1	*3.1%*
Arabic & Turkish	N/A	N/A	1	N/A	1	*3.1%*
Arabic, English & Greece	N/A	N/A	1	N/A	1	*3.1%*
Total	**7**	**3**	**12**	**10**	**32**	*100%*

For the frequency of the language use when searching for information according to faculty, Arabic and English 45.0% (22) and Arabic 34.7% (17) are the two highest frequencies for the Faculty of Arts. For the Faculty of Shari'a & Islamic Studies, 90.5% (38) of the scholars use Arabic, followed by Arabic and English 7.2% (3) and Arabic and Turkish 2.3% (1). While for the Faculty of Archaeology & Anthropology, Arabic and English have the highest frequency with 26.3% (10), followed by Arabic, English and French and Arabic and German with 23.7% (9). Lastly, for the Faculty of Fine Arts,

Arabic and English are the main languages in use when searching for information with 37.5% (12). This is followed by Arabic with 25.0% (8).

When crossing over the results of the main languages that humanities scholars use while searching for information with the academic positions, the main language used by professors is Arabic (30), followed by Arabic and English (11). For associate professors, the main language used is Arabic (17), followed by Arabic and English (11). For assistant professors, Arabic (15) and Arabic and English (15) are the two highest frequency of languages used. Lastly, for lecturers the main languages used are Arabic and English (10), followed by Arabic (4).

6.2.3. Identifying and Locating Relevant Information

The second research question of this study is: *How do humanities scholars fulfil their information needs?* With two sub-research questions (a) *How do humanities scholars identify and locate relevant information for their academic tasks?* (b) *How do humanities scholars obtain relevant information resources?*

In terms of how do humanities scholars identify and locate relevant information for research and teaching, data from Items 26, 27, 28 in the questionnaire are taken to answer the research question. Table 6.23 provides the frequency distribution for respondents' response to the methods to search for answers to a specific question on the Internet. Results show that 40.3% (65) of the respondents enter a general query at a search engine followed by 23.0% (37) of the respondents enter a specific query at a search engine. While 20.5% (33) of the respondents go to a topic specific webpage and perform a search there, followed by 16.1% (26) of the respondents go for searching academic database.

Table 6.23: Search for Answers to a Specific Question on the Internet

Search for Answers to a Specific Question on the Internet	Frequency	Percentage
Enter a general query at a search engine	65	40.3%
Enter a specific query at a search engine	37	23.0%
Go to a topic specific webpage and perform a search there	33	20.5%
Searching academic databases	26	16.2%
Total	**161**	**100%**

As noted, the searching process at academic databases occupied the last option. When the researcher asked the respondents about this issue during the interview, scholars said that they did not know how to use the academic databases and several of them did not know about the availability of the academic databases. It is clear that there is a lack of provision of library training programme for scholars, and there is a lack regarding the announcement and information to the scholars about these services.

In regards to the most often used methods when accessing relevant information, Table 6.24 provides the frequency distribution.

Table 6.24: Methods Most Often Used when Accessing Relevant Information

	Reading the Abstract	Reading a Chapter of Book/Resource	Reading the Important Points	Reading each Resource in Full	Browsing the Index for Relevance Resources	Skimming each Resource for Relevance and Reading it in Full later	Skimming each Resource in Full
Preferred Third	0	10	13	38	38	62	0
Preferred Second	0	18	59	52	32	0	0
Preferred First	73	56	28	0	0	4	0
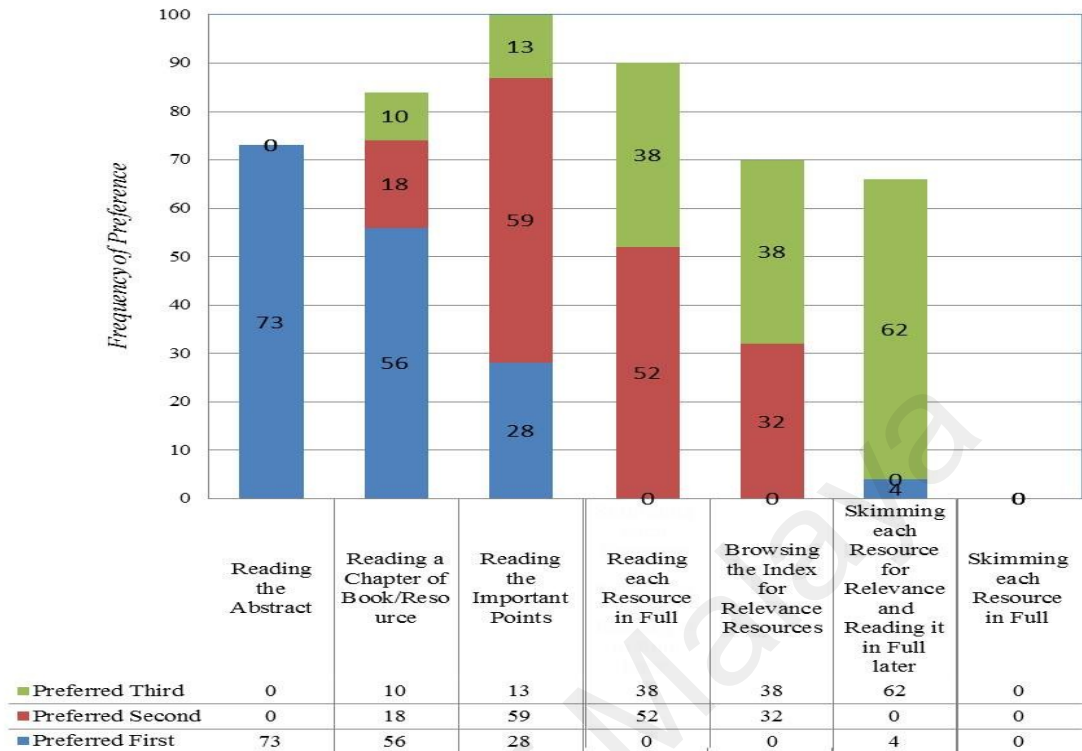
Table 6.24 shows the most often used methods when accessing relevant information are three preferences. The first preference, the highest frequency rank by the respondents is reading the abstract with 45.3% (73), followed by reading a chapter of book/resource with 34.8% (56), reading the important points with 17.4% (28) and skimming each resource for relevance and reading it in full later with 2.5% (4). The second preference, the highest frequency rank is reading the important points 36.6% (59), followed by reading each resource in full 32.3% (52), browsing the index for relevance resources 19.9% (32) and reading a chapter of book/resource 11.2% (18). Lastly, the third preference, the highest frequency rank is by skimming each resource for relevance and reading it in full later 38.5% (62), followed by reading each resource in full 23.6% (38) and also browsing the index for relevance resources, also with 23.6% (38), followed by reading the important points 8.1% (13) and reading a chapter of book/resource 6.2% (10). Lastly, it is important to note that none of the respondents ranked skimming each resource in full as one of the most three preferred methods used

when accessing the relevant information. Furthermore, Table 6.25 provides the frequency distribution to responses related to how the respondents locate the electronic relevant information.

Table 6.25: Locating Relevant Information

Locating Relevant Information	Frequency	*Percentage*
Printing a copy	95	*59.0%*
Saving a copy on a hard drive	77	*47.8%*
Reading it on screen	70	*43.5%*
E-mailing a copy to myself	42	*26.1%*
Writing down the information needed on paper or on the computer document	30	*18.6%*
Bookmarking the site	21	*13.0%*
Saving a copy on a portable medium	7	*4.3%*
E-mailing the webpage link to myself	4	*2.5%*
Reading a copy in a portable medium	N/A	*0.0%*

Table 6.25 shows that the most popular method to locate relevant information is printing a copy with 59.0% (95), followed by saving a copy to the hard drive 47.8% (77) with the remaining from highest to the lowest respectively being as follows: reading it on screen 43.5% (70), e-mailing a copy 26.1% (42), writing down the information needed on paper or on a different computer document 18.6% (30), saving a copy in a portable medium 4.3% (7), while the last method is e-mailing the webpage link 2.5% (4). Based on the frequency, humanities scholars prefer to read printed form and this verdict underpinned the findings from the earlier study by Tahir, Mahmood and Shafique (2010) at the universities in Pakistan which they found that humanities scholars still favour printed papers and books than electronic copy of the same text. According to Massey-Burzio (1999), humanities scholars feel uncomfortable to read from a computer screen for a long time.

6.2.4 Sources Used to Obtain Information

This section presents the findings related to the methods most often humanities scholars used to obtain information. The sub-research question is (b) *How do humanities scholars obtain relevant information resources?* Responses from section four of the questionnaire (items from 29 to 33) are taken to answer this question. Table 6.25 provides descriptive statistics about the methods most often used by the respondents for seeking information.

Table 6.26: Methods Respondents Use for Seeking Information (n=161)

Methods of seeking information	Never	Rarely	Sometimes	Frequently	Always	Total	Mean	SD
Reading textbooks in my field	26 16.1%	25 15.5%	30 18.6%	36 22.4%	44 27.4%	161 100%	4.2	1.0
Reading professional journals in my field	24 14.9%	26 16.1%	33 20.5%	36 22.4%	42 26.1%	161 100%	4.1	0.9
Reading conference and meeting papers	24 14.9%	28 17.4%	38 23.6%	35 21.7%	36 22.4%	161 100%	3.7	1.0
Using an Internet search engine	20 12.4%	20 12.4%	39 24.3%	43 26.7%	39 24.3%	161 100%	3.3	1.3
Searching bibliographic databases	28 17.4%	32 19.9%	46 28.6%	27 16.8%	28 17.4%	161 100%	2.9	1.0
Attending conferences and meeting	25 15.4%	37 23.1%	41 25.5%	32 19.9%	26 16.1%	161 100%	2.9	0.9
Talking to colleagues or experts in my own department	25 15.4%	40 24.9%	41 25.5%	28 17.4%	27 16.8%	161 100%	2.9	0.9
Asking librarians or information specialists	30 18.6%	44 27.4%	30 18.6%	30 18.6%	27 16.8%	161 100%	2.5	1.1
Writing to a colleague or expert at another university	28 17.4%	40 24.9%	41 25.5%	26 16.1%	26 16.1%	161 100%	2.5	0.9

Table 6.26 shows that reading textbooks in the field of specialization is the most often used method for seeking information (Mean=4.2, SD=1), followed by reading professional journals in the field of specialization (Mean=4.1, SD=0.9), followed by reading conference and meeting papers (Mean=3.7, SD=1). Also, attending conferences and meeting, searching bibliographic databases and talking to colleagues or experts in one's own department occupied the same rate (mean=2.9, SD=0.9). While asking

librarians or information specialists and writing to a colleague or an expert at another university being the least frequent method with both having a mean of 2.5.

Respondents were also asked in this section of the survey about what methods do they use to obtain relevant information. Table 6.27 provides the frequency distribution.

Table 6.27: Methods Respondents Use to Obtain Relevant Information

Methods used to obtain relevant information	Frequency	Percentage
Browse printed journals	102	63.4%
Browse relevant Internet resources	84	52.2%
Browse electronic journals	77	47.8%
Browse the library catalogue	60	37.3%
Browse the shelves at the library	53	32.9%
Refer to sources in your own collection	32	19.9%
References from your Colleagues	7	4.3%
Search bibliographies of relevant articles	N/A	0.0%

Table 6.27 shows that 63.4% (102) of the respondents browse printed journals to obtain relevant information, followed by browsing relevant Internet resources 52.2% (84), followed by browsing electronic journals 47.8% (77) and the remainder (from the highest to lowest) are as follow: browsing the library catalogue 37.3% (60), browsing the library shelves 32.9% (53), referring to sources in one's own collection 19.9% (32). Table 6.28 provides the frequency distribution of the responses to methods used to obtain journal articles.

Table 6.28: Methods Respondents Use to Obtain Journal Articles

Methods	Frequency	Percentage
Browse free e-journals	88	54.7%
Read library's copy	88	54.7%
Personal print subscription	67	41.6%
Inter-library loan	42	26.1%
Photocopy library's copy	39	24.2%
Read library's electronic version	32	19.9%
Colleagues	25	15.5%
Documents delivery service	7	4.3%
Personal subscription to e-journals	4	2.5%

The results in Table 6.28 indicate that browsing free e-journals and reading library's copy are the most often used methods to obtain information with more than half of the respondents using each one of them 54.7% (88). The remainder from the most often used to the least often used are as follow: personal print subscription 41.1% (67), inter-library loan 26.1% (42), read library's electronic version 19.9% (32), colleagues 15.5% (25), documents delivery service 4.3% (7) and personal subscription to e-journals 2.5% (4) is the least popular way to obtain journals articles.

Furthermore, the frequency distributions of responses of the five library sources that the respondents currently use are summarized in Table 6.29.

Table 6.29: Library Resources Respondents Currently Use

Library Resources Currently Use	Professor (50)		Assc. Prof. (37)		Asst. Prof (48)		Lecturer (26)		Total (161)	
	f	%	f	%	f	%	f	%	f	%
Reference Books	43	86%	34	91.9%	45	93.8%	22	84.6%	144	89.4%
Electronic Journals	19	38%	20	54.1%	20	41.7%	23	88.5%	82	51.0%
Electronic Databases	14	28%	18	48.6%	18	37.5%	20	77.0%	70	43.5%
Printed Journals	33	66%	9	24.3%	8	16.7%	7	26.9%	57	35.4%
Non-references Books	23	46%	17	45.9%	11	22.9%	4	15.4%	55	34.2%
Archives	14	28%	6	16.2%	26	54.2%	7	26.9%	53	32.9%
Dissertation	29	58%	7	18.9%	8	16.7%	7	26.9%	51	31.7%
Audio-Visual	13	26%	10	27%	10	20.8%	11	42.3%	44	27.3%
Inter-library Loan or Document Retrieval	11	22%	7	18.9%	11	22.9%	11	42.3%	40	24.8%
Reference Services	8	16%	11	29.7%	6	12.5%	4	15.4%	29	18.0%
Newspapers (*Online or Printed*)	11	22%	6	16.2%	11	22.9%	N/A	0.0%	28	17.4%

Majority of the humanities scholars are using reference books 89.4% (144), followed by electronic journals 51.0% (82) and electronic databases 43.5% (70). The three lowest library resources that are currently in use are reference services with 18.0% (29), followed by newspaper (online or printed) with 17.4% (28). As noted above, humanities

scholars have the highest proportion of users who use the library resources and this result is similar to the previous study by Whitmire (2002) who found that humanities scholars demonstrate a significantly higher use of library facilities than other scholars.

Moreover, the frequency of library resources currently in use according to the academic position, the results show that reference books has the highest percentage used by professors 86% (43), associate professors 91.9% (34) and assistant professors 93.8% (45). Whereas, lecturers use electronic journals 88.5% (23) more than reference books 84.6% (22). Moreover, the second most frequency library resource used by professors is printed journals 66% (33), the second frequency for associate professors is electronic journals 54.1% (20) and the second frequency for assistance professors is archives 54.2% (26). However, for the least frequency of library resources currently used by professors is reference services 16% (8), while for associate professors, the least frequency is archives and newspapers (online or printed) 16.2% (6). For assistant professors, the least frequency is reference services 12.5% (6). Lastly, for lecturers none of them use newspapers (online or printed).

This results show that majority of humanities scholars still prefer printed materials, such as reference books. At the same time, electronic resources, such as electronic databases and journals are preferred by junior humanities scholars (assistant professors and lecturers).

Regarding to the use of electronic databases, Table 6.30 summarizes the responses of humanities scholars on the frequency of use.

Table 6.30: Respondents' Use of Electronic Databases

Database	Frequency	*Percentage*
Arabic library resources	78	*48.4%*
EbscoHost	53	*33.0%*
ERIC	41	*25.5%*
ProQuest	38	*23.6%*
Emerald	35	*21.7%*
Science Direct	35	*21.7%*
SCOPUS	30	*18.6%*
Do not use	22	*13.6%*
Others (please specify)	20	*12.4%*
Translation journals	18	*11.2%*
LISA	13	*8.0%*

Table 6.30 shows that Arabic library resources 48.4% (78) is the most common used of electronic database. Other electronic databases used are EbscoHost 33.0% (53), followed by ERIC 25.5% (41) and ProQuest 23.6% (38). While Emerald and Science Direct came equally with 21.7% of the respondents (35). Other electronic databases used are SCOPUS, Translation Journals, LISA and some other databases that the university did not provide. Furthermore, 13.6% (22) of the scholars indicate that they do not use electronic database. When the researcher asked scholars to indicate the reasons for not using the electronic database, they indicated that the lack of technological skills of how to use the electronic database and have an aversion to read from screen and prefer to read printed materials are the main reasons for not using the electronic database. Actually, this finding underpinned the findings from earlier studies by Massey-Burzio (1999) and Toms and O'Brien (2008).

6.2.5 **Issues Faced Regarding Information-Seeking Behaviour**

The third research question of this study is: *What are the barriers encountered by humanities scholars while seeking for information?* With two sub-research question (a) *What are the barriers that influence humanities scholars' information-seeking behaviour?* And (b) *How satisfied are humanities scholars with the library and Centre of Excellence resources?*

Responses from section five of the questionnaire (items from 34 to 43) are taken to answer the third research question with sub-research question (a). Table 6.31 presents the difficulties encountered by the respondents while seeking information.

Table 6.31: Difficulties Encountered while Seeking for Information
that Influence the Seeking Behaviour

Item Statement	Responses	Frequency	*Percentage*
Not having enough time to seek information by oneself	Yes	99	*61.5%*
	No	62	*38.5%*
Need assistance during seeking information	Yes	116	*72.0%*
	No	45	*28.0%*
Multitude assistance seeking	Research assistance	42	*36.2%*
	Library assistance	35	*30.2%*
	Colleague	35	*30.2%*
	Other (Family members)	4	*3.4%*
Level of Internet searching skills	Less than adequate	22	*13.7%*
	Adequate	7	*4.3%*
	Somewhat proficient	49	*30.4%*
	Proficient	53	*33.0%*
	Very Proficient	30	*18.6%*
Relevancy of searching result	Very irrelevant	37	*23.0%*
	Irrelevant	10	*6.2%*
	Somewhat relevant	67	*41.6%*
	Relevant	37	*23.0%*
	Very relevant	10	*6.2%*

The above table shows that 61.5% (99) of the respondents have enough time to seek information and 38.5% (62) do not have enough time to seek information by

themselves. Thus, 72% (116) of the respondents have asked for assistance during the process of information-seeking. The reason for this result is because humanities scholars allocate their time on lecturing. Thus, they do not have ample time to select the best suitable information from the vast searched information. It is clear that time is considered as one of the barriers or factors militating against using the electronic resources and influencing the information-seeking behaviour of the humanities scholars. Hence, the time issue is frequently the sign of deeper dilemma.

From the total respondents who asked for assistance during information-seeking process 36.2% (42) asked research assistance, while 30.2% (35) for both asked library assistance and asked their colleagues, and 3.4% (4) asked the other (family members) like asking their children. In terms of the Internet searching skills 33% (53) of the respondents are proficient and somewhat proficient is 30.4% (49). While, very proficient is 18.6% (30), adequate is 4.3% (7) and 13.7% (22) indicates that their Internet searching skills are less than adequate. In respect to the relevance of search results 23% (37) of the respondents reported that their searching result are very irrelevant compared with only 6.2% (10) who reported that their search results are irrelevant. As noted, there is a gap between what the scholars said in terms of their Internet searching skills (33%) as a proficient and their relevant of searching result (23%) which is very irrelevant results. It is clear that they need more training on the Internet searching skills.

In respect to the training received by the respondents, they were asked whether if they have received any training or if they are willing for more training in the four established electronic information resources; OPAC, CD-ROMs, Online Databases and the Internet. Most of the respondents were quite worried because most of them affirmed

that they have not received any official training in using the electronic information resources. On the other hand, majority of the respondents are willing for more training, and Table 6.32 shows the detail breakdown.

Table 6.32: Training Received and Willingness for More Training

Training	ICT Skill	Professor (50)		Associate Prof (37)		Assistant Prof (48)		Lecturer (26)		Total	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
		%	%	%	%	%	%	%	%	%	%
Training Received	Using OPAC System	11	39	18	19	16	10	15	33	60	101
		22.0	78.0	48.6	51.4	61.5	38.5	31.3	68.7	37.2	62.8
	Searching CD-ROMs	14	36	6	31	8	18	11	37	39	122
		28.0	72.0	16.2	83.8	30.8	69.2	22.9	77.1	24.2	75.8
	Searching Online Databases	7	43	14	23	15	11	16	32	52	109
		14.0	86.0	37.8	62.2	57.7	42.3	33.3	66.7	32.3	67.7
	Searching on the Internet	12	38	10	27	15	11	16	32	53	108
		24.0	76.0	27.0	73.0	57.7	42.3	33.3	66.7	32.9	67.1
Willingness for more training	Using OPAC System	35	15	19	18	8	18	30	18	92	69
		70.0	30.0	51.4	48.6	30.8	69.2	62.5	37.5	57.1	42.9
	Searching CD-ROMs	34	16	27	10	8	18	32	16	101	60
		68.0	32.0	73.0	27.0	30.8	69.2	66.7	33.3	62.8	37.2
	Searching Online Databases	42	8	22	15	12	14	29	19	105	56
		84.0	16.0	59.5	40.5	46.2	53.8	60.4	39.6	65.2	34.8
	Searching on the Internet	39	11	23	14	8	18	30	18	100	61
		78.0	22.0	62.2	37.8	30.8	69.2	62.5	37.5	62.1	37.9

The results indicate that majority of the respondents did not receive any training on ICT skills on different electronic information resources, and the respondents who were trained on using OPAC is low which represents 37.2% (60) as opposed to 62.8% (101) who had not received training on using OPAC and this result is disappointing where OPAC is the key to find library resources, and if the scholars do not know how to use it, then they are missing out on one of the university fundamental guides to information resources. However, the training received on the use of OPAC system is higher 37.3% (60) compared to training received on searching on the Internet 32.9% (53), searching Online Databases 32.3% (52) and searching CD-ROMs 24.2% (39). The percentage of training received for searching CD-ROMs is quite worrying given the fact that Al-Husayniyyah Library has more than 2000 CDs in its collections but the scholars did not use it as mentioned by the databases administrator in Al-Husayniyyah library.

With regards to the Online Databases, 67.7% (109) of the respondents stated that they had not received training. The result has been expected since there is lack of information about the availability of these electronic databases particularly among the senior scholars. Therefore, scholars are rarely trained on using the Online Databases. Thus, the researcher believes that the library should provide at least some kind of point-of-need guides and distribute it to the scholars or attach a copy at the computer workstations for those scholars to avoid asking for help when searching on the Online Databases. Regarding to the training on searching on the Internet, 67.1% (108) had not received the training. It is also disappointing since YU Street has entered the Guinness World Records in 2008 as the most crowded street of Internet Cafes in the world while scholars suffer from the inability to search using the Internet.

Whereas, the statistics for willingness to receive training, 65.2% (105) of the respondents are willing to receive training on searching Online Databases, followed by 62.8% (101) on searching CD-ROMs. While, the willingness to receive training for searching on the Internet is 62.1% (100) and for using OPAC is 57.1% (92). Training on using the electronic information resources in the most universities' libraries in Jordan is optional (YU is one of the universities) and some universities' libraries offer training only when there is a requirement of training from end users. Meanwhile, it is noted that there is a large proportion up to 85% of professors and associate professors who did not receive any type of searching training. However, this picture is somehow better with assistant professors and lecturers, where they have more chances to receive training. Furthermore, most of the scholars show their willingness to receive more training.

The overall picture projected by this result is that the humanities scholars who are not frequent users of the computer may not want to learn the Internet through trial and error as they prefer things with which they are familiar. At the same time, they want training, but timidly, where most of them prefer to be trained individually; one-to-one and confidentially. This was declared by the scholars during the interview. This finding is inconsistent with the findings of previous studies by (Basri, 2002) who found that scholars preferred one-to-one instruction training.

In terms of searching speed for the electronic resources, Table 6.33 summarizes the respondents rating for the Internet searching speed from very slow to very fast (item 41 in the questionnaire survey).

Table 6.33: Search Speed for Electronic Resources

Search Speed for Electronic Resources	Very slow	Slow	To some extent fast	Fast	Very fast
Frequency	12	21	68	39	21
	7.6%	*13.0%*	*42.2%*	*24.2%*	*13.0%*

As Table 6.32 indicates that 79.5% (128) of the respondents rank their speed in the range from to some extent fast to very fast, and 20.5% (33) rank their searching speed as very slow and slow. By comparing Table 6.33 and 6.32, it is clear that who received training before are faster in searching electronic resource than those who did not receive training in searching the electronic resources.

Regarding to the factors that influence respondents' information-seeking behaviour (items 42 to 43 in the survey) is summarized in Table 6.34.

Table 6.34: Barriers Influencing Information-Seeking Behaviour

Influencing Factors	Never	Rarely	Sometimes	Frequently	Always
Electronic sources meet the information need	28	18	39	65	11
	17.4%	*11.2%*	*24.2%*	*40.4%*	*6.8%*
Access to the electronic resources	28	5	59	66	3
	17.4%	*3.1%*	*36.6%*	*41.0%*	*1.9%*

Table 6.34 shows that 40.4% (65) of the respondents found that electronic sources frequently meet their information needs, followed by 24.2% (39) found that electronic resources sometimes meet their information needs, 17.4% (28) for never, 11.2% (18) for rarely and 6.8% (11) for always.

Similar sequence of percentage is shown for frequency on how often they can access electronic resources with the highest to lowest percentage as follows: 41% (frequently), 36.6% (sometimes), 17.4% (never), 3.1% (rarely), and 1.9% (always). Both percentages show that there is a relation between these two factors:

a) Do electronic sources meet your information needs?

b) How often do you access electronic resources?

6.2.6 Perception and Satisfaction of Information Obtained

This section intends to answer the sub-research question (b) of third research question: *How satisfied are humanities scholars with the library and Centre of Excellence resources?* To answer this question, data from items 44, 45, 46, 47, 48, and 49 in the questionnaire are taken and summarized in Tables 6.35 and 6.36.

Table 6.35: Satisfaction of Information Obtained from Various Sources

Information Satisfaction	Very Dissatisfied	Dissatisfied	Somewhat Satisfied	Satisfied	Very Satisfied	Mean
Internet Website	N/A *0.0%*	18 *11.2%*	59 *36.6%*	51 *31.7%*	33 *20.5%*	3.6
Al-Husayniyyah Library	N/A *0%*	14 *8.7%*	68 *42.2%*	57 *35.4%*	22 *13.7%*	3.5
E-Journal	4 *2.5%*	26 *16.1%*	82 *50.9%*	34 *21.1%*	15 *9.3%*	3.2
E-Books	11 *6.8%*	40 *24.8%*	51 *31.7%*	40 *24.8%*	19 *11.8%*	3.1
Full Text Database	4 *2.5%*	41 *25.5%*	79 *49.1%*	30 *18.6%*	7 *4.3%*	2.9
Centre of Excellence	30 *18.6%*	61 *37.9%*	44 *27.3%*	26 *16.1%*	N/A *0.0%*	2.4

Table 6.35 indicates that the respondents are somewhat satisfied and satisfied with the electronic resources of information in general except for the Centre of Excellence - dissatisfied 38.0% (61) and very dissatisfied 18.6% (30) compared with other electronic resources. This is due to the lack of knowledge of scholars about the real fact of services provided by the Centre of Excellence. The highest mean for information satisfaction is the Internet website (Mean = 3.6), followed by Al-Husayniyyah Library (Mean = 3.5), E-Journal (Mean = 3.2), E-Books (Mean = 3.1), Full Text Database (Mean = 2.9), while the Centre of Excellence has the lowest mean of 2.4.

This result is consistent with the results in Table 6.32 that 32.3% of the respondents received training on using Online Databases and 65.2% are willing to receive training on Online Databases. In addition, none of the respondents feel very dissatisfied with the Internet website and Al-Husayniyyah Library.

Additionally, Table 6.36 summarizes the frequency distribution of responses based on Likert-scale type questions (items 47, 48, and 49 in the questionnaire survey) regarding their level of agreements in respect to the three statements about the adequacy of information resources services and training received.

Table 6.36: Satisfaction of Information Services

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
Do you agree that **Al-Husayniyyah library** provides adequate access to electronic resources					
N/A	33	66	42	20	1.6
0%	20.5%	41.0%	26.1%	12.4%	
Do you agree that **Center of Excellence** provides adequate access to electronic resources					
70	22	38	27	4	2.2
43.5%	13.7%	23.6%	16.7%	2.5%	
Do you agree that **Al-Husayniyyah library** provides adequate training to use electronic resources					
75	19	10	36	21	2.4
46.6%	11.8%	6.2%	22.4%	13.0%	

Table 6.36 shows that 26.1% (42) of the respondents agree and 12.4% (20) strongly agree that Al-Husayniyyah Library provides adequate access to the electronic resources, compared with only 16.7% (27) of the respondents who agree and strongly agree 2.5% (4) that the Centre of Excellence provides adequate access to the electronic resources. In respect to the adequacy of the training received on using the electronic resources, only 22.4% (36) of the respondents agree and strongly agree 13% (21) that Al-Husayniyyah Library provides adequate training on using the electronic resources. Meanwhile, 46.6% (75) of the respondents were strongly disagree and 11.8% (19) disagree.

It is clear that the percentage of strongly agree that Al-Husayniyyah Library provides adequate access to the electronic resources is not high because not all of the electronic resources provided has full access. Meanwhile, the Centre of Excellence result was expected as mentioned before. In addition, Al-Husayniyyah Library does not provide any more training session for the past ten years.

6.3 Inferential Statistics

Inferential statistics involve generalizing or making inferences from sample statistics to population parameters. This section discusses the inferential statistics of this research and answers the forth research question: *What is the relationship between demographic information and the information behaviour process?* With two sub-research questions, (a) *What is the relationship between independent variables (gender, age, academic position, country of graduation, department and years of experience) with types of information need?* And (b) *What is the relationship between independent variables (gender, age, academic position, country of graduation, department and years of experience) with format of resources?*

The researcher uses the independent samples t-test and chi-square test of independence to determine the relationship between the independent and dependent variables. The independent variables are the demographic variables, specifically: gender, age, academic qualification, country of graduate, academic position, department, and length of service. While, the dependent variables are: types of information need and preference for printed or electronic format.

6.3.1 The Relationship between Demographic Variables and Types of Information Need

In this section, the researcher answers the question of the relationship between demographic variables and types of information need. The first set of analysis is a set of chi-square tests for the independence between the categorical demographic variables and the types of information need.

Chi-square Test of the Independence between Categorical Demographic Variables and Types of Information Need

Types of Information Need	Gender	Age	Academic Qualification	Country of Graduation	Academic Position	Department
Journals	χ2(1) = 1.324	χ2(5) = 10.265	χ2(1) = 0.078	χ2(2) = 0.461	χ2(3) = 1.063	χ2(3)= 2.527
	P = .250	P = .068	P = .780	P = .927	P = .786	P = .471
Books	χ2(1) = 0.616	χ2(5)= 7.606	χ2(1) = 0.616	χ2(2) = 3.823	χ2(3) = 0.780	χ2(3) = 1.483
	P = .432	P = .179	P = .432	P = .281	P = .854	P = .686
Conference Proceedings	χ2(1) = 0.198	χ2(5) = 7.269	χ2(1) = 1.593	χ2(2) = 2.269	χ2(3) = 4.074	χ2(3)= 5.085
	P = .656	P = .201	P = .207	P = .519	P = .254	P = .166
Dissertations	χ2(1) = 0.002	χ2(5) = 8.190	χ2(1) = 2.800	χ2(2) = 5.175	χ2(3) = 5.281	χ2(3) = 5.357
	P = .965	P = .146	P = .094	P = .159	P = .152	P = .147
Databases	χ2(1) = 0.120	χ2(5) = 20.970	χ2(1) = 6.333	χ2(2) = 3.362	χ2(3) = 11.481	χ2(3) = 5.280
	P = .729	P = .001*	P = .012*	P = .344	P = .009*	P = .152
Audiovisual Materials	χ2(1) = 0.693	χ2(5) = 10.938	χ2(1) = 0.654	χ2(2) = 0.483	χ2(3) = 6.754	χ2(3) = 0.494
	P = .405	P = .053	P = .419	P = .923	P = .080	P = .920
Government Documents	χ2(1) = 0.220	χ2(1) = 9.739	χ2(1) = 1.041	χ2(2)= 3.406	χ2(3)= 3.008	χ2(3)= 5.708
	P = .639	P = .083	P = .308	P = .333	P = .39	P = .127
Newspaper	χ2(1) = 0.376	χ2(1) = 9.965	χ2(1) = 0.240	χ2(2) = 3.730	χ2(3) = 4.775	χ2(3) = 6.977
	P = .540	P = .076	P = .624	P = .292	P = .191	P = .073

*significant at 0.05 level

A series of chi-square tests were conducted to evaluate whether gender is related to information need (column 1). The results indicate that there is no difference in gender between those who did see/search and did not see/search for journals (χ2(1) = 1.324, P =.250), books (χ2(1) = 0.616, P = .432), conference proceedings (χ2(1) = 0.198, P = .656), dissertations (χ2(1) = 0.002, P = .965), databases (χ2(1) = 0.120, P = .729), audiovisual materials (χ2(1) = 0.693, P = .405), government documents (χ2(1) = 0.220, P = .639), and newspaper (χ2(1) = 0.376, P = .540).

In respect to the relationship between age and types of information needs, the results (column 2) show that there are no differences in age between those who saw and did not see journals ($\chi2(5)$ = 10.265, P =.068), books ($\chi2(5)$ = 7.606, P = .179), conference proceedings ($\chi2(5)$ = 7.269, P = .201), dissertations ($\chi2(5)$ = 8.190, P = .146), audiovisual materials ($\chi2(5)$ = 10.938, P = .053), government documents ($\chi2(5)$ = 9.739, P = .083), and newspaper ($\chi2(5)$ = 9.965, P = .076). On the other hand, there are significant differences between respondents at different age levels in terms of whether or not they saw the databases ($\chi2$ (5) = 20.970, P = .001) as information needs. Specifically, 85.7% of the respondents in 30-35 years old group saw databases as information need, compared with 59.1% in 36-40 years old group, 59.1% in 41-45 years old group, and 60% in 46-50 years old group, 23.1% in 51-56 years old group, 35.6% in older than 56 years old group. It is clear that the junior scholars are looking for database at the highest level, while the percentage becomes down with the senior scholars. This means, the junior scholars are closer to the technology than the senior scholars.

In regards to the academic qualification, the results show that there are no differences in academic rank between those who saw and those who did not see journals, conference proceedings, dissertations, audiovisual materials, government document, and newspaper as information need. Whereas, databases are the only exception with ($\chi2$ (1) = 6.333, P = .012) that show significant difference in academic qualification between those who saw and those who did not see databases as information need. Specifically, 80% of the master degree respondents saw that databases as information need compared with doctor of philosophy degree respondents (PhD) with 45.9% who saw databases as information need. As noted, most of the Master holders are junior scholars and they graduated after the Internet revolution, and they are already familiar with the electronic resources during their study, so they rely very much on it than other scholars.

In regards to the country of graduation, the researcher reclassifies the responses into three meaningful groups as follow: Arab countries, United States and United Kingdom, and other countries. The results (column 4) show that there is no significant difference between those who saw and those who did not see journals, books, conference proceedings, dissertation, databases, audio-visual materials, government document, and newspaper as information need.

In respect to the relationship between academic position and types of information need, the table (column 5) shows that there are no differences between individuals who saw and individuals who did not see journals, books, conference proceedings, dissertation, audio-visual materials, government document, and newspaper as information need. On the other hand, there are significant differences in academic position between those who saw the databases and those who did not see the databases $(\chi 2\ (3) = 11.481,\ P = .009)$ as information need. Again, it confirms that professors are using electronic resource (database) less than other scholars.

The next series of chi-square tests (column 6) were conducted to test the independence between department and different types of information need. In order to create a meaningful number of groups for the chi-square tests, the researcher reclassifies departments according to the faculty that they belong to. The results indicate that there are no differences between individuals who considered and those who did not consider journals, books, conference proceedings, dissertation, databases, audiovisual materials, government document, and newspaper as information need.

6.3.2 The Relationship between Demographic Variables and Format of Resources

In this section, the researcher examines the independence between demographic categorical variables (gender, age, academic position, country of graduation, department and years of experience) and the preferred format of information resources. Table 6.38 summarizes a series of chi-square tests of independence demographic variables and the preferred format of information resources.

Table 6.38: Chi-square Test of the Independence between Categorical Demographic Variables and Format of Resources

Format of Resources	
Gender	$\chi2(1) = 0.015$
	$P = .902$
Age	$\chi2(5) = 78.416$
	$P = .000*$
Academic Qualification	$\chi2(1) = 14.139$
	$P = .000*$
Country of Graduation	$\chi2(2) = 7.624$
	$P = .054$
Academic Position	$\chi2(3) = 45.793$
	$P = .000*$
Department	$\chi2(3) = 0.733$
	$P = .865$

In respect to the relationship between gender and format of resources, the results show that there is no significant difference between males and females regarding the preferred information formats ($\chi2$ (1) = 0.015, P = .902). In terms of age, the results show significant differences in individuals' preferred format of information resources between different age levels ($\chi2$ (5) = 78.419, P = .000). Specifically, 100% of the respondents in the 30-35 years old group preferred electronic resources compared with 88.9% of the respondents in the 36-40 years old group, 100% in the 41-45 years old group, 28.6% in the 46-50 years old group, and 0% for 51-55 and older than 56 years old group.

In respect to the academic qualification, the results show significant difference in the preferred format between respondents in different academic qualification ($\chi2$ (1) = 14.139, P = .000). M.A holders are more likely preferred electronic format than PhD holders, and 100% of M.A holders preferred electronic resources compared with only 42% of PhD holders.

In regards to the country of graduation, there is no significant difference between respondents who graduated from different countries in terms of the format of resources that they prefer ($\chi2$ (2) = 7.624, P = .054). In terms of the academic position, the results show significant difference between respondents in different academic positions in terms of their preferred format of information resources ($\chi2$ (3) = 45.793, P = .000). Specifically, 100% of the lecturer's preferred electronic format compared with 59.3% of the assistant professors, 61.1% of the associate professors, and 8.3% of professors.

In terms of departments, the results indicate no significant differences between respondents who belong to different faculties in terms of their preferred format of information resources ($\chi2$ (3) = 0.733, P = .865). Finally, the results indicate significant differences between respondents in terms of the number of years employed and their preferred format of information resources (t (161) = 10.45, P = .000). Specifically, the average number of years employed for respondents who prefer printed format is 23.7 years compared with 7.4 years for respondents who prefer electronic resources. It means that who has experience more than 24 years, we can categorize them as senior scholars and they do not prefer to use electronic resources.

6.4 Summary of Chapter 6

This chapter has presented the result of quantitative findings by answering the research questions. It has provided understanding of information about humanities scholars' information behaviour which was presented into six sections. The first section answered the forth research question by using inferential statistics of independent samples t-test and chi-square test. It was analyzed by crossing demographic information variables with their type of information need and the format of information preferred to use. The second section presented the findings about information needs and use of electronic and printed information resources for their teaching and searching activities. Furthermore, the third and fourth section presented valuable information about the scenario of information-seeking which reflects their methods in identifying, locating and obtaining desired information. In addition, the fifth and sixth section provided clear picture about the barriers faced while seeking information. These sections also have pictured their perception and satisfaction towards the availability of information resources and services provided by Al-Husayniyyah Library and the Centre of Excellence. In addition, the analysis and finding of the quantitative survey showed that the scholars can be categorized into two main demographic which are the senior and junior scholars. This was precisely resembled the analysis and finding of the statistic where the demographic variables of age, academic qualification, academic position and years of experience showed two distinct information seeking behaviour between the senior and junior scholars. Consequently, the quantitative result has validated the qualitative result – the senior and junior personas as discussed before.

CHAPTER 7: DISCUSSIONS AND CONCLUSIONS

7.1 Introduction

This chapter summarizes the findings of the current study based on the research questions posed and presents a discussion of the results. The findings of this study are discussed and compared with previous literature in order to illustrate the information needs and behavior of humanities scholars in the context of an emerging digital environment in an Arab nation. It draws conclusion from the results and discusses the limitations and the significance of the study. At the end of the chapter, the research contributions and recommendations for future studies are described.

The purpose of the research was to understand the information needs and behavior of humanities scholars at Yarmouk University in Jordan. This study adopted and adapted a few established information behavior models in order to realize the following objectives:

1) To understand the information needs and behaviour of humanities scholars in an ICT-enriched environment in Jordan.

2) To ascertain the information needs and information- seeking tasks performed by the humanities scholars for teaching and research.

3) To identify the barriers encountered by humanities scholar while they seek for and use information for teaching and research.

4) To investigate the relationship between demographics information and the humanities scholars' information-seeking processes.

7.2 Discussion of Findings

Discussion of findings are segmented into two sections namely, passive information-seeking and active information-seeking, which reflects the proposed model of this research. The section on passive information-seeking covers information needs and behaviour with 5 sub-sections; (a) availability of information, (b) identification of information needs, (c) language used, (d) format preferred, and (e) location of information. The section on active information-seeking covers 4 sub-sections; (a) information used, (b) information-seeking, (c) barriers to information, and (d) satisfaction of information. Figure 7.1 depicts the proposal model where all the research objectives are addressed.
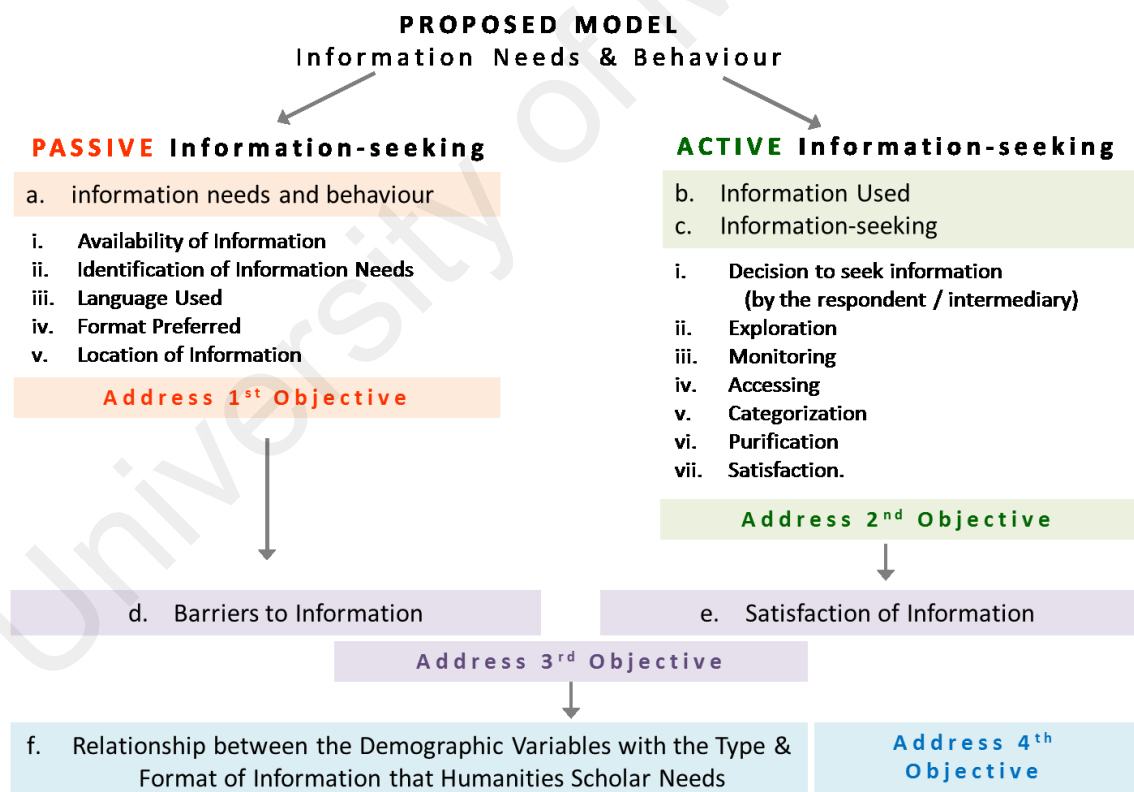
PROPOSED MODEL
Information Needs & Behaviour

PASSIVE Information-seeking

a. information needs and behaviour

i. Availability of Information
ii. Identification of Information Needs
iii. Language Used
iv. Format Preferred
v. Location of Information

Address 1st Objective

ACTIVE Information-seeking

b. Information Used
c. Information-seeking

i. Decision to seek information (by the respondent / intermediary)
ii. Exploration
iii. Monitoring
iv. Accessing
v. Categorization
vi. Purification
vii. Satisfaction.

Address 2nd Objective

d. Barriers to Information

e. Satisfaction of Information

Address 3rd Objective

f. Relationship between the Demographic Variables with the Type & Format of Information that Humanities Scholar Needs

Address 4th Objective

Figure 7.1: Relationship between Research Objectives and the Proposed Model

7.2.1 Passive Information-seeking

This section is written to address the first research objective on the humanities scholars' information needs and behaviour - passive information-seeking mental activities.

a) The findings revealed that, in a given context of teaching and research, the humanities scholars recognized that their information needs were evoked by information events. All humanities scholars affirmed that the conferences and seminars, as well as the invisible colleagues were the dominant information events that triggered their information needs. For those who were educated abroad, information needs were also triggered by contacting their previous research supervisors. For those who are internet-savvy, their information needs were continuously triggered by browsing online information. Reading and watching the television were important to those who have the passion and time to spend in doing these activities.

These findings are corroborating with the findings in previous studies, however the previous studies recognized these triggered-events as useful channels for acquiring up-to-date information need. For example, Al-Shanbari and Meadows (1995), Tahir, Mahmood and Shafique (2010) and Bhatti (2012) reported that the scholars in their studies preferred to use informal channels for acquiring up-to-date information such as discussing with the senior colleagues, communicating with colleagues, consulting with the specialists and experts in the subject fields, attending conferences, seminars and workshops, as well as browsing the Internet.

b) Likewise, humanities scholars in this study stressed that they need to know about and how to use the available information systems. They showed different level of awareness

on the availability of information resources and services of the library and the Centre of Excellence which are identified as lack of awareness, partial awareness and full awareness of the library resources and they are either ignorant or familiar with the Internet resources and the services of the Centre of Excellence. With this respect, this study clearly showed that the availability of printed and electronic resources has a significant impact on the humanities scholars' information-seeking behaviour. This finding is consistent with other studies conducted in other parts of the world such as those by Msagati and Nelson (2014), Baro and Zuokemefa (2011), Tahir, Mahmood and Shafique (2010), and Okello-Obura and Magara (2008) who confirmed that the lack of awareness on the availability of the library electronic resources was the main factor influencing the ineffective use of it. In this study, the reason of having three detailed levels of awareness is due to the use of Persona method which has resulted in more precise and resemblance of the analysis. This part has further extended the aspect of awareness in the previous studies. On the contrary, OKIKI (2013) accentuated that there was no substantial connection between the awareness of the availability of the library electronic resources and the awareness in using them in the academic research.

c) Humanities scholars also have different preferences for information sources. They have the need to receive information in the right format, location and understandable language. This affects their decision when seeking for information either by themselves or by the intermediaries later on. Interesting finding revealed that in reality, the humanities scholars preferred to use both printed and electronic resources - as small magnitude of difference percentage was discovered. This finding to some extent is similar to that by Xuemei (2010) who discovered that most the senior scholars preferred printed materials while the junior scholars used both printed and electronic simultaneously. It is obvious that there is an increase of using electronic resources

among scholars in this study, which is contrast with the previous studies by Tahir, Mahmood and Shafique (2008), Baruchson-Arbib and Bronstein (2007), Rimmer et al. (2006), Ellis and Oldman (2004) and Romanos di Tiratel (2000). These researchers discovered that most of the humanities scholars in their studies preferred printed materials. Additionally, the senior scholars in this study, who are not connected with the use of online resources, prefer to seek information at their home-office where they have their own printed collections. They claimed that it was easily accessible, given reading as a favorite pastime as well as lack of skills to access the digital resources.

Similarly, this finding is consistent with the previous studies by Wenderoth (2007), Tahir, Mahmood and Shafique (2008), and Mostofa (2013). They claimed, most of the humanities scholars conducted information-seeking at their home than other places. Whereas, the junior scholars who are "connected", comfortable and adept in using the computer and the Internet, preferred to seek for information at their university office where they can access the online resources easily and use the OPAC remotely. In addition, the senior scholars only use information resources in the Arabic language because they predominantly read and write in their mother-tongue only. Nevertheless, the junior scholars use both Arabic and English language in their information-seeking and publication of research, as they were educated abroad, and they also use other foreign languages relevant to their academic area.This finding concurred with the study by Broadus (1987), Cullars (1989), Cullars (1992), Romanos de Tiratel (2000), and Tahir, Mahmood and Shafique (2008). Their studies found that most humanities scholars preferred reading information in their mother-tongue and other languages especially English where most academic articles are written in.

d) Humanities scholars oriented themselves to known materials based on their context of use. The finding indicated that the humanities scholars, in a given context of using materials for teaching and research purposes, showed differences in the types of format they used. They recognized the format of information resources needed which was evoked by the information event. Generally, the printed materials particularly books and journals are always used and are the most important information resources in their research and teaching activities. This was followed by the OPAC and electronic resources. For teaching purpose, textbook (monograph) was the primary type of information used for teaching the undergraduate students. For teaching the postgraduate students, the senior scholars used printed textbooks, journals and ready reference sources. However, the junior scholars familiarized themselves with both printed and electronic resources. This finding concurred with Mostofa (2013), Tahir, Mahmood and Shafique (2008), Romanos de Tiratel (2000) and Wiberley and Jones (2000) about printed resources being the most important resource for teaching. Similar finding about the use of both resources was found by Bass et al. (2005) and Warwick et al. (2008) while Harley (2007) found the predominant use of the electronic resources for teaching among the junior scholars.

Whereas, for research purpose, the humanities scholars in this study used either printed resources, both printed and electronic resources, electronic resources, personal experiences and academic background, person with similar research interest, and knowledgeable person such as previous supervisors. Parallel findings on the use of printed resources for research was also reported by Baruchson-Arbib and Bronstein (2007), Research Partnership (2002) and Reed and Tanner (2001). Another comparable finding on the use of electronic resources for their research was by Ellis and Oldman (2004). Another related finding was by Tahir, Mahmood and Shafique (2008) who

stated contacting knowledgeable person or expert for research use. Finally, humanities scholars who had comparatively better information literacy skills than the others were prone to use online resources for research purpose, disregarding other situational factors.

e) In addition, this study has identified the possible reasons behind humanities scholars' motivation for information needs, based on the context of their research, teaching, information literacy skills and interpersonal information needs. Research information needs are associated with activities such as tracking specific scholars and their work, getting the current research literature, embarking on a new research topic, enriching and refining the research. Whereas, in the context of teaching information needs, humanities scholars update themselves with the latest curriculum from foreign universities and current information in their field of teaching. Besides, the motivation for information literacy skill needs is for checking students' plagiarism, verifying information and clarifying the known information. Lastly, humanities scholars indicated the motivation for interpersonal information needs to get feedback and moral support from their colleagues about their research. Motivation for information needs based on the context of information literacy and interpersonal contributed a significant finding because previous studies mainly highlighted the motivation for research and teaching information needs among the humanities scholars.

Likewise, previous literature reported the main reasons of the humanities scholars' information-seeking activities: Ileperuma (2002) revealed that humanities scholars' information-seeking for three main types of activities - teaching, research and administration. Similarly, Tahir, Mahmood and Shafique (2008) discussed that the main purpose for information-seeking by the humanities scholars was sequentially for

teaching or lecture preparation, to guide researchers and students, to support research work, to develop competence, and to keep up with current developments.

Changes in Information Search Methods

Despite in the less use of digital resources among the humanities scholars than any other disciplines, unequivocal result revealed that the humanities scholars have different affirmative outlook of changing information searching. It could be due to the lack, partial or fully awareness, particularly among the junior scholars. Their searching methods have changed and affected by the ubiquity of the Internet, electronic resources and became indispensable research tools. The major changes happened to their behaviour in locating information since they started their research during the emerging ICT development and increasing use of computer and online information. In particular, it became more efficient and accessible, faster, comprehensive, easier than before and time-saving for searching and preparing their papers. Consequently, humanities scholars who have comparatively better information literacy skills are more efficient in searching because their information search methods have been changed accordingly.

This finding resembled that by Tahir, Mahmood and Shafique (2010) and Ellis and Oldman (2004) where the behaviour of information-seeking among humanities scholars changed significantly – academic works become easier with the technology in terms of more pleasant, easy, accessible and up-to-date especially in the use of online library catalogue and the Internet. In contrast to previous finding which outlined general description of awareness, the reason of having three detailed level of awareness is due to the use of Persona method. It gives more precise and resemblance of the analysis which has further extended the findings from previous studies.

7.2.2 Active Information-seeking

This section addresses the second research objective on the humanities scholars' active information-seeking activities. This study has been conducted based on a conceptual framework of the existing information behaviour models of Ellis (1989), Kuhlthau (1991), Wilson (1996), Niedźwiedzka (2003) and Foster (2005). The finding of this study showed that the seven stages of the proposed conceptual model correspond to the humanities scholars' information-seeking activities. These stages include decision to seek information (by the respondent or intermediary), exploration, monitoring, accessing, categorization, purification, and satisfaction. The activities showed how the humanities scholars interact with their information needs in active seeking phase. The key findings of this research in relation to seven specific stages of the model are as follows:

Decision to seek information

Humanities scholars highlighted the importance of the *decision* stage to seek for information. They showed a variant decision of information-seeking due to computer literacy and availability of resources. All scholars became fully independent seeker when they seek for printed resources. However, when seeking for electronic resources, the junior scholars became semi-independent seeker and the senior scholars became entirely dependent to intermediate seeker where they frequently asked for help from others who are familiar or expert in electronic resources such as librarian, colleague, family member, secretary and previous research supervisor.

Exploration

In the *exploration* stage, it was discovered that the humanities scholars had different order of methods. They undergo the exploration stage by referring to various

information sources such as textbooks, journals, conferences papers and Internet resources. Subsequently, humanities scholars consulted with other information sources until their information needs are satisfied. Generally, the result indicated that the senior scholars still adhere to their research habits when exploring information. They prefer browsing their own collection (books), tracking references, browsing library shelves for related printed information resources and working solitarily than their junior colleagues. On the contrary, the junior scholars who relied more on the electronic resources than their senior, entering a general query at the search engine to explore for specific answer. Then, to make their exploration more specific, they enter a specific query in the search engine. However, due to the unavailability of desired information at Al-Husayniyyah Library, the junior scholars who graduated from overseas had more chance to explore the information online, especially those in the electronic format. They could consult a number of senior academicians and their previous research supervisors from abroad.

Monitoring

This study found that the importance of *monitoring* stage during information-seeking was recognized by the humanities scholars. Humanities scholars used different monitoring tools and techniques when they monitor information sources; they used formal and informal resources to keep themselves updated. The senior scholars monitored printed resources, whereas the junior scholars used the electronic sources as a central tool in facilitating the process of monitoring stage. The tools that all personas of humanities scholars used were searching index and abstracts citations, as well as the references in reading materials, and communicating with colleagues and friends.Unlike the finding by Al-Suqri (2007) who reported similar monitoring tools and techniques were used by the social science scholars, while the humanities scholars used different monitoring tools and follow different monitoring techniques.

Accessing

In the *accessing* stage, humanities scholars emphasized to have the full text of the desired information resources. However, due to the unavailability of the information they need at Al-Husayniyyah Library, and denial of access to the full text, humanities scholars used different tools and methods to obtain their desired materials. The senior scholars read a free library copies, traveled to the location of the existing materials, contacted publisher for individual subscription and contacted their colleagues. Whereas, the junior scholars browsed free library electronic journals, subscribed electronic databases, used other libraries and academician websites, contacted previous research supervisors abroad and contacted their colleagues. Regarding the access to the online resources, the junior scholars preferred to read from the screen, bookmark, download, subscribe to electronic databases and print a copy. In contrast, the senior scholars did not prefer to access the online resources and faced difficulty to read from the screen while accessing to those particular resources due to their lack of comfort and confidence with the information technology.

Categorization

In the *categorization* stage, humanities scholars vividly used similar methods to categorize their desired printed materials. The categorization involved organization of resources in physical folders from general to specific subject and relevance of the resources to the research topic. It also involved labeling of resources according to the subject heading and sub-labeling according to the alphabetical order of author's name and temporal order of publication. Generally, the ICT tools permit humanities scholars to use more complex and flexible system of categorization. For example, information could be stored in many locations such as the computer hard drive, desktop, USB memory drive or the e-mail folders. In contrast, dissimilar methods for categorization of

desired electronic materials were used. Besides, there is a small difference in categorizing information practices between the senior and junior scholars. The senior scholars emphasized the importance of categorization towards their information-seeking process in terms of contribution of organized materials and overall efficiency of the research process. For the less important materials, humanities scholars skimmed and stored the materials for later retrieval if necessary.

Purification

The result showed that the senior and junior scholars went through different purification stages. Many methods were used by the humanities scholars in purifying information that is most relevant from the retrieved resources. This purification stage involved skimming the keywords of the information need of the resources. Skimming method enables humanities scholars to get a brief overview and key ideas of the resources.

The first preferred skimming method starts by reading the abstract, index, table of contents, skimming resource for more relevant information and reading it later, reading introduction and conclusion, reading main points, reading particular chapters and lastly reading the entire material. Significantly, all humanities scholars indicated similar initial step of purification - reading the abstract and the final step - reading the entire material. Remarkably, variation of steps was used in between the mentioned initial and final step which differs between the senior and junior scholars.

Satisfaction

Satisfaction is the final stage of the active information-seeking activities. Humanities scholars expressed their satisfaction by obtaining and requesting directly the appropriate

materials. The senior scholars used the obtained material by writing the essential information on a card or at the margin of the material. The junior scholars on the other hand preferred to highlight the essential information to be formulated and used it later - after they have finished searching. Lastly, the scholar who have better information literacy skills and know more than one language, have more chance to seek for information in various location and format. Consequently, they would be more satisfied with the information they obtained compared to other scholars.

7.2.3 Barriers to Information

This section provides a discussion for the third research objective that corresponds to the barriers that affected humanities scholars' information-seeking behaviour. It discusses how the humanities scholars overcome those barriers that reflect their satisfaction level towards the resources and services provided by the Al-Husayniyyah Library and the Centre of Excellence. This study revealed that the humanities scholars at YU had variation of barriers that influenced their information-seeking either the problems with the library resources, university environment barriers or personal barriers. Table 7.1 summarized the barriers faced by the humanities scholars while they seek for information.

Table 7.1: Barriers Affecting Humanities Scholars in Information-seeking

Barriers in information-seeking		
Library resources and services barriers	**University environment barriers**	**Personal barriers**
Library restrictions	Insufficient of time	IT skills
Impractical classification of resources	Inadequate funding	Personal conviction
Poor organization of resources	Prolonged assessment process of journal publication	Abundant online information retrieval
Limited accessibility		Cultural constraint
Lack of resources in specialized field		
Difficulty in tracking the resources		

The significant differences of barriers found other than those reported in previous studies (Table 2.3) are the library restrictions, impractical classification of resources and poor organization of resources which are associated with the barriers of library resources and services. Other noteworthy dissimilarities are inadequate funding and prolonged assessment process of journal publication which are associated with the university environment barriers. Cultural constraint is related to personal barriers. The main reason behind the library restriction barriers becomes clear when it is acknowledged that the Al-Husayniyyah Library at YU is considered as the depository centre for journals of all universities in the Arab countries, while the Jordan University is considered as the depository centre for dissertations of all universities in the Arab countries. However, as there is no mutual collaboration between these two universities in sharing their resources, they have denied their users to access their online resources from outside. Thus, it is suggested that the Ministry of Education play an active intermediate role for the mutual collaboration in information and knowledge sharing for greater benefit to all libraries in Jordan.

Furthermore, the impractical classification of resources can be explained when we acknowledged that the Al-Husayniyyah Library organized its dissertation collection by date which did not reflect the dissertation subjects. Moreover, poor organization of resources is understandable when the students return the resources at the wrong place. With regards to the university environment, the inadequate funding barriers is understandable when there was limited financial support from the Ministry of Education which resulted in limited financial support from the university to the academicians. Furthermore, prolonged assessment process of journal publication could be overcome if the university publisher revises their publication procedure to be more efficient. Lastly, the humanities scholars should plan their time to overcome the cultural barriers.

Additionally, this study provides a substantial finding on the solution and reaction that had been taken by the humanities scholars to overcome the barriers. Unlike the previous studies that only highlighted the barriers without providing any suggestion or solution. The humanities scholars may overcome the barriers in finding certain resources by asking their overseas supervisors, colleagues and friends, contacting the authors or publisher, asking secretary, research assistant, family members and others, asking university librarian, using other library websites, finding a similar information, and registering individual membership and subscription to scholarly electronic resources. Some of the solutions are similar to Meho (2001) who mentioned that the seekers overcome their barriers by asking help from their colleagues, friends, family members, and librarians.

7.2.4 Satisfaction of Information

The finding revealed that the satisfaction of information experienced by humanities scholars reflects the excellence of the staffs and services of the Al-Husayniyyah Library. Humanities scholars to some extent showed that they were satisfied with the provision of the resources and services at the Al-Husayniyyah Library. However, certain improvement of services is needed on the complaint of inadequate full access to the electronic resources.

In contrast, dissatisfaction was portrayed towards the services of the Centre of Excellence on the little or lack of information known among the humanities scholars on the provision of services of the Centre of Excellence. Besides, humanities scholars showed their willingness for training session on information-seeking even though Al-Husayniyyah Library has stopped such training for more than ten years ago. The humanities scholars are willing to attend information skills training to improve their

searching skill and to overcome the unrelated searching results. Other provisions that can escalate humanities scholars' satisfaction level were provision of desired information resources, access point, and appropriate environment for teaching, learning and research.

This finding confirmed the previous finding by Simmonds and Andaleeb (2001), Martensen and Gronholdt (2003), King (2005), and Adeniran (2011) about the increased satisfaction level of library users through the indication of frequent visit and use of library resources. The identified factors were provision of needed resources and quality services, easy access point to the library collection, and convenient setting of the library.

7.2.5 Relationship between the Demographic Variables with the Type and Format of Information that Humanities Scholar Needs.

This section addresses the forth research objective which corresponds to the relationship between demographic variables with the type and format of information that humanities scholars need. The study showed a significant difference in academic qualification and academic position among those who perceived and did not perceive electronic resources such as databases as information need. Most junior scholars who are familiar with the electronic resources preferred and relied very much on the electronic resources than the senior scholars who did not prefer and use less of these materials. This finding confirmed the finding by Xuemei (2010), that the junior scholars used electronic resources more than the senior scholars, and the finding by Wiberley and Jones (2000) that the senior scholars adopted the new technology at a slow pace. It was also highlighted by Tahir, Mahmood and Shafique (2008) that the humanities scholars used less online databases because they have less skill in using the online resources.

7.3 Contribution of the study

The finding from this study contributes to the current library and information science literature from the point of theory, method used and practice.

7.3.1 Theoretical Contribution

Various models of information needs and behaviour have been developed and studied in order to promote and improve the understanding of the scholars' information-seeking activities, the barriers they faced while seeking information and the factors affecting their seeking. Nevertheless, most of these models were based on studies covering other subjects other than the humanities scholars, and conducted in the more developed Western countries, other than a developing Middle-East Arab nation.

Moreover, the studies were carried out before the growth of the Internet and are considered to be irrelevant in the context of the present emerging digital environment. It is because the effect and impact of the digital information environment on the humanities scholars' information needs and behavior are still not well understood. The lack of studies that address the information behaviour of the humanities scholars in the non-Western, non-English speaking developing nation, such as in the Arab nation in general, and in Jordan specifically, are vague and incomprehensible. Different result and outcome might be expected on the information behaviour of the humanities scholars in the developing Arab nation than the developed Western nation. The differences in language, culture, education system and provision of the ICT resources might contribute to the conditions of dissimilarity. The different conditions indicated that the existing theories and models of information behaviour could have main ingrained restrictions, since their pertinence on the information behaviour of humanities scholars in developing nations of non-English speaking is not well-known. The existing theories

and models offered generic model of information behaviour that only reflect the developed Western nations. The theories and models also did not consider particular information behaviour of humanities scholars as opposed to other academic disciplines. Moreover, it did not reflect the recent changes in the information environment. Therefore, it is clear that there are major theoretical gaps in information behaviour research topic among the humanities scholars in the Western developed countries on one side, and in the developing Middle-East countries (non-English speaking) on the other side.

The context of this study was the humanities scholars at YU where the researcher has investigated their information behaviour based on the proposed conceptual framework model (Figure3.1). The proposed model was designed and developed by integrating and synthesizing the elements of the existing information behaviour models of Ellis (1989), Kuhlthau (1991), Wilson (1996), Niedźwiedzka (2003) and Foster (2005). In addition, new elements represent the context of information behaviour such as factors that attract scholars' attention to seek information, passive seeking behaviour, active seeking behaviour, decision to seek information, languages and format of information resources were integrated in the proposed model. It can assist in improvising the existing theoretical and conceptual models of information behaviour in the field of Library and Information Science. The proposed model has been used in this study as a road map of information behaviour process of the humanities scholars. Furthermore, the use the model has allowed the researcher to develop a research instrument and methodology that was useful to investigate the applicability of several elements of the existing information behaviour models on the information behaviour of humanities scholars in Jordan. It is also useful in investigating the effect of the contextual factors that match exactly to the population of study.

Likewise, this study has made another theoretical contribution by examining the impact of socio-demographic variables such as the age, academic position, search language and gender. Whereas, most information behaviour research have been primarily descriptive and did not adequately examined the relationship between information-seeking behaviour and the socio-demographic factors. Besides, previous studies only concentrated on examining the relationship between information behaviour in other diverse disciplinary backgrounds other than the human science discipline.

7.3.2 Methodological Contribution

This study uses personas as a unique and promising method to illustrate the information needs and behavior of the humanities scholars, who are users of scholarly information. There has been no empirical study in this topic, which profiles and illustrates people's information needs and behavior in the form of personas. This study has shown that personas are a unique and promising design method, and researchers should not neglect the promising anecdotal evidence that currently exists. By thinking about the needs of the four fictional personas in this study, academic library management may be better able to infer what a real person the humanities scholars might need in terms of the information sources and services rendered.

When any persona of humanities scholars decide to use the library collection and services, the librarian directly can recognize to which persona this particular user (humanities scholar) belong to, as persona can make users seem like real people in the eyes of the librarians. Actually, personas can build empathy for target user through the details narrative and overcome our natural tendency to be self-centered on our own need and preferences. So the persona help the librarian stop talking about the general user and by this the librarian can provide a suitable information need for this scholar.

7.3.3 Practical Contribution

The provision of detailed explanation of information-seeking behaviour model on humanities scholars at YU provides a practical value for the Al-Husayniyyah Library and the Centre of Excellence in planning and developing comprehensive services and resources to the scholars. The accurate information of information behaviour will lead to the appropriate services and resources provision. Without this information, the desired services and resources may not be delivered effectively by the Al-Husayniyyah Library and the Centre of Excellence to the users - especially the humanities scholars. For example, the provision of particular electronic resources exceeds the demand, while the provisions of the printed resources are insufficient despite the fact that the need for it is high, or the otherwise. The lack of certain services and resources will hinder the information need of the scholars as they faced barriers in their information-seeking activities. Consequently, ineffective information-seeking will lead to dissatisfaction and under used of the services and resources of Al-Husayniyyah Library and Centre of Excellence. The end goal of the provision of good services and resources of the library is satisfaction of the users. Not only the users will be satisfied with the excellent services, the library as a services and resources provider will be satisfied also. Satisfaction of services and resources is a mutual relation that not many authors had highlighted.

By profoundly understanding the information behaviour of the scholars which was taken as an initial and prior process of planning the services and resources of library management will assist them to operate efficiently in terms of the cost. Cost-efficient operation involved the reduction of less frequent used sources and resources of information that are tailored with the information need and information-seeking behaviour of the humanities scholars. In addition, the finding of this study will help the

library management in figuring and conducting suitable training on how to use the library services and resources in the most practical way. This is because, the overall picture projected by this result shows that there is a relationship between the level of skills and willingness for training. The scholars who have lack skills are more willing to receive training in all skills than who have skills or earn their skills through trial and error. In the same time, they want training, but timidly, most of them prefer individual training; one-to-one and confidential.

Other than direct contribution mentioned above, indirect practical contribution can be achieved when the information-seeking process is being constructively elevated among the scholars. Scholars who are satisfied with their information need can use that information for further action – teaching and research. Fulfilled information needs can lead to excellent material of teaching and research which later can benefit other parties – students, universities, libraries, society and the country. In summary, fulfilled information needs will lead to excellent education system.

7.4 Implication of the Findings

This section highlights the main implication of this study in creating effective information delivery systems for humanities scholars based on the identification of the humanities scholars' personas:

a) The need for active and selective information events to trigger information needs: Findings from these personas indicated that the humanities scholars, in the given context of teaching and research, recognized that their knowledge is inadequate to satisfy their information needs. They recognized their information needs and the needs are evoked by the information events. The study has identified six (6) types of

information events that brought the attention of these four personas to their information needs: conferences, invisible college, communication with ex-supervisors, mass media, Internet, and reading. For all personas, conferences and seminars as well as the invisible colleague are the dominant information events that trigger their information needs. For those who were educated abroad, information needs is also triggered by contact with their ex-research supervisors. For those who are Internet-savvy, their information needs is continuously triggered by browsing online information. Reading and watching the television are important for those who have the passion and time to spend doing these activities.

b) The need to get information easily and inexpensively: The older personas have been shown to rely on books as an important source, whereas the younger personas use both printed and electronic resources. One plausible explanation is that individuals need to get information easily. In this case the older personas relied on their personal collections which are easily accessible, given reading as a favorite pastime as well as a lack of skills to access digital resources. The younger personas who are "connected", comfortable and adept at using computers and the Internet will get information easily and inexpensively using these resources.

c) The need to browse for information: Perusal of peripheral documents allows the humanities scholars to fulfill their research information needs that have not yet been formulated. This can be in terms of browsing online to get the current research literature or work in progress, or browsing reviews and reading lists to track specific scholars and their works, the information for browsing need to be brief, highly readable and specific.

d) The need to know about and how to use available information systems: Humanities scholars in this study have different level of awareness and familiarity of the availability of information sources and services provided by the academic library and Centre of Excellence. Studies have shown that social scientists and humanities scholars do not confront the librarians about dealing with their information needs. Studies have also shown that people are often unaware of the information they need until after they receive it. Humanities scholars are no exception to this rule. The humanities scholars, particularly the older personas, feel that they do not need technology. This can be best addressed by directing the right information to the right person before he asks for it for example by providing the scholars with sources such as bibliographies and reading lists, and services such as selective dissemination of information and current awareness.

e) The need for receiving information in the desired format and in understandable language: Scholars in this study have different preferences for information sources. It was found that the language used for seeking information, as well as the format and type of information sources affect their decision when seeking information.

f) The need for information based on different motivation: This study has identified the possible reasons behind humanities scholars' motivation for information needs, in the context of research, teaching, literacy and interpersonal information needs.

This study has generated many findings that highlighted the humanities scholars' information-seeking behaviour in the ICT-enriched environment at YU and has the following practical value not only to the Al-Husayniyyah Library, but also for other academic libraries and information providers in the Arab nations of the Middle-East and other developing countries.

a) The development of a new conceptual model and the additional elements of the theories on humanities scholars' information-seeking activities can be applied to the Arab nations specifically and to the Western countries generally. Through the adoption of the theories and models, it will give opportunity for the libraries and information providers to use it as a framework and road map in planning their services and resources, and deliver their services in the best way.

b) Barriers faced by the humanities scholars at YU have been highlighted in this study due to the library resources, university environment or personal barriers. For example, and not limited to, the library resources barriers, humanities scholars indicated that Al-Husayniyyah Library has restricted them from accessing the online YU theses from their office and the resources was classified by date and not by subject which makes their task arduous in finding particular theses. To overcome these barriers, Al-Husayniyyah Library should re-classify its theses by subject and allow the humanities scholars to access the online theses from their offices. The barriers revealed will be the sole guarantor for the development of the library services and will improve the humanities scholars' information-seeking activities and its environment. The Al-Husayniyyah Library needs to understand the barriers faced by the scholars to ensure its management of resources and services has been addressed accurately and holistically. The preferred resources that humanities scholars needs and use for their academician tasks can help the Al-Husayniyyah Library to operate cost-efficiently. The Al-Husayniyyah Library can reduce the less frequently used information resources and the methods of information retrieval. Instead, Al-Husayniyyah Library is encouraged to provide the most frequently used of information resources according to the humanities scholars needs and their information-seeking behaviour and practices.

c) From the administrative perspective, the chief librarian can support and address the information need of the humanities scholars through the actual understanding of the information found in this study. For instance, the provision of appropriate and suitable training to humanities scholars have to take consideration of the Arab culture and the scholars' schedule. This can improve the use of Al-Husayniyyah Library resources and services and its technology. With sufficient training, the scholars can become proficient user in the electronic and Internet resources and it will be easy for them to discover their students' plagiarism. In the long-term, this can motivate their students to do research and study hard, and it can raise the quality of the education and the students' research simultaneously.

d) The findings of this study are set to be a basis of a set of recommendation that can be developed and provided for a better future of Al-Husayniyyah Library and information services in Jordan and in other university libraries of developing nations. There is no a doubt that not all recommendations can be implemented within the short-term due to various factors, for example, the constraint of budget and policy of the university. Besides, provision of expert librarians is required to implement and impose these recommendations carefully. However, the university can use these recommendations in a long term development of planning and strategy where it can improve its users' entire information behaviour environment. Indeed the Al-Husayniyyah Library has to serve many academic disciplines, but this study and its recommendations can be considered as a first step to make similar research and cover other disciplines at YU. Consequently, in the long-term, such execution of plan could improve the entire cost efficiency of resources and services. This can be achieved because only most information need of resources and services are provided, hence eradicating of the unneeded resources and services.

7.5 Limitation of the Study

This study was conducted at Yarmouk University, Jordan, as an example of the academic environment in the developing Arab country. The findings of this study cannot be assumed or guaranteed to which level it can be generalized to other humanities scholars in other universities. The researcher believes that the Arab nation of the Middle-East is not isolated from variant and different culture and socio-economic setting as other continents like Africa and Europe for example, which the diversity can influence the scholars' information-seeking behaviour and their activity outcomes.

Researchers also cannot be assured on the applicability to generalize the findings of this study to other scholars in other fields, as only the humanities scholars have been examined and no other academic fields. Others may have different ways of accessing and using information than humanities scholars. Therefore, to determine the applicability of generalization of the findings in this study to other academic fields, the future study might concentrate to other scholars of other academic fields.

Additionally, in this study, a wide range of academic disciplines within humanities scholars was covered. For example, most of Sharia scholars used one language (Arabic as a mother tongue) where they were graduated from Arab universities. Similar example to the Archaeology and Anthropology scholars which most of them were graduated from overseas, know more than one language, and have good computer skills that they acquired from the overseas universities. In the end, they might have resulted in overall bias in the research findings, since the scholars from faculty of Archaeology and Anthropology are expected to perform better in information-seeking than other academic discipline of humanities scholars. In addition, even though the rate of response was good from the qualitative and quantitative respondents, there might be a

bias in the finding due to the possibility of non-participation of potential samplings. For example, it is not identified whether the information behaviour of the non-participants could result in significant difference.

The findings indicate, however, that there are relatively few differences from different group of humanities scholars in their experience of information-seeking behaviour and the outcomes. It was clear that the senior scholars, in general, who could speak more than one language and who are slightly proficient in computer literacy could have a chance to be better in information-seeking and the outcomes than the junior scholars.

Lastly, researcher has spent more than six months in developing the conceptual model based on the previous models of information-seeking to make sure the model can reflect as accurate as possible the information need of the humanities scholars and can portray their information-seeking activities. The selection of the five theoretical models is based on the familiarity and significance of the models in information-seeking behaviour theory. The five models selected are the main references for researchers in Library and Information Science. However, there is a possibility to omit some activities that is important to the humanities scholars at YU. Hence, researcher keeps this issue in his account to ensure that this would not happen. During the in-depth interview with the humanities scholars, researcher always asked the scholars if they felt to have any other factors that were relevant to the study to reflect their experiences in details and to raise any significance issues.

7.6 Future Research

Significantly, a conceptual model and novel research method and analysis have been produced and validated among the humanities scholars at YU, Jordan. It would be beneficial for further study to make a test the validation of the proposed model and research methods in other Middle East countries and other developing countries. The validation in further research can improve and refine the theoretical aspect and in making a better generalization of the proposed model to the scholars community.

Besides, through time, up-to-date and current study is required to update the knowledge of information behaviour. The update has to be made to reveal the real and recent information because the advancement of technology especially the electronic resources will have influence on the information behaviour. Thus, quantitative and qualitative approaches of recent study are needed to produce a recent result that can reveal a statistical or elaborative finding until a recent generalization of the population can be made.

This study applied Persona method to classify a resemblance of accurate group of persons that have similar behaviour. Persona has never been used in the study of information-seeking behaviour of humanities scholars in Library and Information Science. Through the use of Persona in this study, a significant classification was revealed that can give clear understanding of the information behaviour of the user. Therefore, it is highly recommended that future research would use the Persona method especially if the study involves behaviour study. Future research studies will validate if the use of personas leads to the design of more usable library services and will study the organizational influences on the effectiveness and the use of personas. This stream of research on the personas method will provide usability professionals with results that

will either agree or disagree with the promising anecdotal evidence that currently exists. It is hoped that the method presented in this study would be easy to perceive and be translatable into practice. It is to be noted that the methodology would become clearer and clearer as each step is put into practice enhancing the understanding of the scenario and help in fine tuning the procedure to suit particular situations.

Finally, information service provider particularly the academic libraries should always make scheduled assessment on their effectiveness of services and resources in order to refine the information need and information-seeking activities of the users. Scheduled assessment in both approaches of quantitative and qualitative is vital to provide the best services and resources in library management. Via the quantitative and qualitative study, the satisfaction level of the users can be identified and the necessary action can be taken to fulfill the optimum satisfaction level. Furthermore, the suggestions from the users need to be identified so that the planning of library resources and services will provide the right supply according to the desired need. In the end, satisfaction to both information provider and information user can be satisfied.

7.7 Conclusion

The objective of this study is to understand the information-seeking needs and behavior of humanities scholars and the effect of the electronic environment on their information seeking behaviour using personas. This study is conducted within a conceptual framework based on an integration of existing models of information-seeking behaviour, along with additional new elements representing the information context environment, such as languages, decision to seek and format of information resources. The four personas that were uncovered in this study may be able to effectively communicate the actual information needs of the humanities scholars

through the personal narrative, name, and face, which continuously will remind the academic library of what their users really want and need from their services. This study also lays the foundation for future research by identifying variables of interest, and building construct validity through the themes of information needs that emerged. It is hoped that a vital and significant contribution to the existing body of knowledge in the topic of information behaviour in humanities scholars can be made by this study. The dilemma of backdated services and resources of library becomes a major concern in the field of LIS as the advancement of ICT is progressing rapidly and produced abundance electronic resources and services. In contrast, the adoption of humanities scholars to the electronic resources and services are still at a slow pace. Similarly are the theories and models of information behaviour that was developed few years ago that have to be revisited to update and modify based on the current context.

The final chapter of this study has addressed the key research finding that has showed the significance contribution made by this study in filling the research topic gap and expanding the theories of previous studies. Contribution and implication of the theoretical and practical aspect of this study have been elaborated to orient the findings of this study to the management of Al-Husayniyyah Library. The limitation of the study also has been explained so that the future researchers in this research topic can be aware of and improvise accordingly. Additionally, a list of research implications has been listed to help the Al-Husayniyyah Library as well as other information service providers to take into consideration several vital actions that need to be taken in information service provision. Lastly, further research has been proposed to advance the topic of this study, to identify factors to take into account in formulating appropriate research designs, and offers research models worthy of replication or further exploration.

REFERENCES

Abagai, T. (1993). The use of library in a non-residential college: a case study of Kaduna State College of Education. *Forum Academia: Multi-disciplinary Journal of Education, 1* (1), 104.

Abels, E. (2004). Information seekers' perspectives of libraries and librarians. *Advances in Librarianship*, *28*, 151-170.

Abouserie, H. E. M. R. (2007). *Information seeking behavior of library and information science faculty in research with a special reference to the use of networked information sources and services: A case study performed at the graduate school of library and information science at the University of Illinois at Urbana*. (Unpublished doctoral dissertation). University of Illinois.

Adams, J. A. & Bonk, S. C. (1995). Electronic information technologies and resources: use by university faculty and faculty preferences for related library services. *College & Research Libraries, 56* (2), 119-131.

Adebayo, S. S. (2012). *The impact of application of Information and Communications Technology (ICT) in the administration of Polytechnics Inogun State, Nigeria.* (Unpublished master's thesis). School of Education, National Open University of Nigeria, Nigeria.

Adeniran, P. (2011). User satisfaction with academic libraries services: academic staff and students perspectives. *International Journal of Library and Information Science, 3* (10), 209-216.

Aguilar, F. J. (1967). *Scanning the business environment*. New York: Macmillan.

Akinola, S. F. (2009). Information seeking behavior of lecturers in Faculties of Education in Obafemi Awolowo University, Ile Ife and University of Ibadan. *Samaru Journal of Information Studies, 9* (2), 23-32.

Aldojan, M. A. (2007). *An exploratory study about internet use among education faculty members in Jordanian public universities*. (Unpublished doctoral dissertation). Ohio University, Ohio.

Al-Shanbari, H., & Meadows, A. J. (1995). Problems of communication and information-handling among scientists and engineers in Saudi Universities. *Journal of information science, 21*(6), 473-478.

Al-Suqri, M. N. (2007). *Information needs and seeking behavior of social science scholars at Sultan Qabous University in Oman: Mixed-method approach.* (Unpublished doctoral dissertation). Emporia State University, Kansas, United States of America.

Alzougool, B., Shanton, C., & Gray, K. (2007). Modeling the information needs of informal carers. *18th Australasian Conference on Information Systems, 5-7 Dec 2007, Toowoomba* (pp. 345-355).

Andersen, D. L. (1998). Academic historians, electronic information access technologies, and the World Wide Web: A longitudinal study of factors affecting use and barriers to that use. *The Journal of the Association for History and Computing, 1* (1). Retrieved 5 September, 2013 from http://hdl.handle.net/2027/spo.3310410.0001.101

Ani, O. E., Ngulube, P., & Onyancha, B. (2015). Perceived effect of accessibility and utilization of electronic resources on productivity of academic staff in selected Nigerian universities. *SAGE Open*, *5*(4), 2158244015607582.

Anjum, M. A. (1978). *Information needs of humanities teachers of the University of the Punjab, Lahore*. (Unpublished master's thesis). Department of Library Science, University of the Punjab, Lahore, Pakistan.

Ansari, M. N. (2008). Information seeking behavior models: a review. *Pakistan Library & Information Science Journal, 39 (4),* 3-16.

Anwar, M. A., Al-Ansari, H. & Abdullah, A. (2004). Information seeking behaviour of Kuwaiti journalists. *Libri, 54* (4)*,* 228-236.

Anwar, M. A. (2007). Research on information seeking and use in Pakistan: an assessment. *Pakistan Journal of Library & Information Science*, 2007 (8), 15-32.

Arab IP Center. (2013). *The Internet in Jordan*. Retrieved January 08, 2013 from http://www.arabipcentre.com/the-internet-in-jordan.php

Arksey, H. & Knight, P. T. (1999). *Interviewing for Social Scientists: An Introductory Resource with Examples*. Great Britain: Sage Publications Ltd.

Aslam Mujahid, M. (1977). *Information needs of science teachers of the University of the Punjab, Lahore*. (Unpublished Master's thesis). Department of Library Science, University of the Punjab, Lahore, Pakistan.

Bader, A. (2001). *Moqademih fe alinsaneat wlolom al ejtmaieh*. Cairo: Dar Qoba.

Baker, S. (2012). The Arab world's Silicon Valley: Jordan emerges as an Internet hub. *The Washington Post*. Retrieved June 23, 2012 from: http://articles.washingtonpost.com/2012-10-20/business/35500207_1_internet-hub-web-designers-arabic

Balsley, H. L. (1970). *Quantitative Research Methods for Business and Economics*. New York: Random House.

Baro, E. E. & Zuokemefa, T. (2011). Information literacy programmes in Nigeria: a survey of 36 university libraries. *New Library World*, *112*(11/12), 549-565.

Barrett, A. (2005). The information-seeking habits of graduate student researchers in the humanities. *Journal of Academic Librarianship, 31* (4), 324-331.

Baruchson-Arbib, S. & Bronstein, J. (2007). Humanists as information users in the digital age: The case of Jewish studies scholars in Israel. *Journal of the American Society for Information Science and Technology*, *58* (14), 2269-2279.

Basri, H. (2002). *Using electronic information resources: A study of end user training needs and methods in selected public university libraries in Malaysia*. (Unpublished Doctoral dissertation). Loughborough University, United Kingdom.

Bass, A., Fairlee, J., Fox, K., & Sullivan, J. (2005). The information behavior of scholars in the humanities and social sciences. Retrieved 14 May 2008, from: http://ischoolwashingto.edu/harryb/courses/LIS510/Assign_2/Team_2_Scholar.pdf.

Bates, M. J. (1989). The design of browsing and berrypicking techniques for the online search interface. *Online Information Review, 13* (5), 407-424.

Bates, M. J. (1996). Learning about the information seeking of interdisciplinary scholars and students. *Library Trends*, *45 (2),* 155-164.

Bates, M. J. (1996). The Getty end-user online searching project in the humanities: Report No 6: Overview and conclusions. *College and Research Libraries*, *57*, (6), 514-523.

Bates, M. J. (2001). *Information needs and seeking of scholars and artists in relation to multimedia materials*. Department of Information Studies, University of California, Los Angeles, California. Retrieved from http://pages.gseis.ucla.edu/faculty/bates/scholars.html

Bates, M. J. (2002). Toward an integrated model of information seeking and searching. (Keynote Address, Fourth international Conference on Information Needs, Seeking and Use in Different Contexts, Lisbon, Portugal, September 11, 2002.) *New Review of Information Behaviour Research, 3*, 1-15.

Bates, M. J. (2005). An introduction to metatheories, theories, and models. In K.E. Fisher, S. Erdelez, & L.E.F. Mackechne (Eds.). *Theories of information behavior* (pp.3-24). Medford, NJ: Information Today, Inc.

Bates, M. J., Wilde, D. N. & Siegfried, S. (1993). An analysis of search terminology used by humanities scholars: The Getty Online searching project report number 1. *The Library Quarterly: Information, Community, Policy, 63* (1), 1-39.

Bernal, J. D. (1948). Preliminary analysis of pilot questionnaire on the use of scientific literature. *Proceedings of the Royal Society Scientific Information Conference* (pp. 589-637). London: Royal Society.

Bernal, J. D. (1960). Scientific information and its users. *Aslib Proceedings, 12* (12)*, 423-438.

Benardou, A., Constantopoulos, P., Dallas, C., & Gavrilis, D. (2010). Understanding the information requirements of arts and humanities scholarship. *The International Journal of Digital Curation*, *1* (5), 18-33.

Bhatti, R. (2010). Information needs and information-seeking behaviour of faculty members at the Islamia University of Bahawalpur. *Library Philosophy and Practice (e-journal), Paper 314.*

Blazek, R., & Aversa, E. (1994). *The humanities: a selective guide to information resources. (4th ed.). Library and Information Science Text Series*. Englewood, CO: Libraries Unlimited, Inc.

Bouazza, A. (1989). Information user studies. *Encyclopedia of Library and Information Science, 44* (9), 144–164.

Bogdan, R. C. & Biklen, S. K. (1998). *Qualitative Research for Education*. Boston: Allyn & Bacon.

Bover, O. (2008). Oversampling of the wealthy in the Spanish Survey of Household Finances (EFF) (p. 399 - 402). In *Irving Fisher Committee Bulletin (No. 28)*. Retrieved on 5th April 2009 from http://www.bis.org/ifc/publ/ifcb28.pdf

Brady, M. K., Robertson, C. J., & Cronin, J. J. (2001). Managing behavioral intentions in diverse cultural environments: an investigation of service quality, service value, and satisfaction for American and Ecuadorian fast-food customers. *Journal of International Management, 7* (2), 129–149.

Brannen, J. (2005). Mixing methods: The entry of qualitative and quantitative approaches into the research process. *International Journal of Social Research Methodology, 8*(3), 173-184.

Braun, L. M. M., Wiesman, F., Van den Herik, H. J., Hasman, A., & Korsten, E. (2007). Towards patient-related information needs. *International Journal of Medical Informatics*, 76 (2-3), 246-251.

Brickey, J., Walczak, S. & Burgess, T. (2012). Comparing semi-automated clustering methods for persona development. *Software Engineering, IEEE Transactions on*, *38* (3), 537-546.

British Broadcasting Corporation (BBC). (November 2015). *Jordan Country Profile*. Retrieved 1 March, 2016 from http://www.bbc.com/news/world-middle-east-14631981

Brittain, J. M. (1970). *Information and its users: a review with special reference to the social science*. New York: Wiley Inter-science.

Broadbent, E. (1986). A study of humanities faculty library information seeking behaviour. *Cataloging and Classification Quarterly, 6* (3), 23-37.

Broadus, R. N. (1987). Information needs of humanities scholars: A study of requests made at the National Humanities Center. *Library and Information Science Research, 9* (2), 113-129.

Broadus, R. N. (1990). The range of subject literature used by humanities scholars. *Collection Management, 12* (1-2), 61-68.

Brockman, W. S., Neumann, L., Palmer, C. L., & Tidline, T. J. (2001). *Scholarly work in the humanities and the evolving information environment*. Washington, DC: Digital Library Federation and the Council on Library and Information Resources. Retrieved August 12, 2009, from http://www.clir.org/pubs/reports/pub104/pub104.pdf

Bronstein, J. (2007). The role of the research phase in information seeking behaviour of Jewish studies scholars: a modification of Ellis's behavioural characteristics. *Information Research*, *12* (3), paper 318. Available at: http://InformationR.net/ir/12-3/paper319.html

Buchanan, G., Cunningham, S.J., Blandford, A., Rimmer, J. & Warwick, C. (2005). Information seeking by humanities scholars. *Lecture Notes in Computer Science, 3652*, 218-229.

Busha, C. H. & Harter, S. P. (1980). *Research Methods in Librarianship: Techniques and Interpretation*. New York: Academic Press.

Bussert, L. (2011). Millennial Students' Online Search Strategies are Associated with Their Mental Models of Search. *Evidence Based Library and Information Practice*, *6*(3), 77-81.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin, 56*(2), 81.

Case, D. O. (2002). *Looking for Information: A Survey of Research on Information Seeking Needs and Behavior*. Amsterdam, New York: Academic Press.

Case, D. O., Andrews, J. A., Johnson, J. D., & Allard, S. L. (2005). Avoiding versus seeking: the relationship of information seeking to avoidance, blunting, coping, dissonance, and related concepts. *Journal of Medical Library Association, 93* (3), 353-362.

Challener, J. (1999). *Information-Seeking Behavior of Professors of Art History and Studio Art*. (Master's thesis, Kent State University). Retrieved January 5th, 2006, from http://files.eric.ed.gov/fulltext/ED435405.pdf

Chapman, L. (2002). Russian roulette or Pandora's Box: Use of internet as a research tool. Paper presented at VALA 2002. 11th Biennial Conference and Exhibition, 6-8 February, 2002, Melbourne. Victoria, Australia: Victoria Association for Library Automation INC. [Online]. Available at: http://vala.org.au/vala2002/2002pdf/18Chpmn.pdf Accessed on the 15th April 2008.

Charmaz, K. (2008). Grounded theory as an emergent method. In S. N. Hesse-Biber & P. Leavy (Eds.), *Handbook of emergent methods*, pp. 155-172. New York: The Guilford Press.

Chin-Hung, L. & Li-Chen, Y. (2010). The effects of service quality, tourism impact, and tourist satisfaction on tourist choice of leisure farming types. *African Journal of Business Management, 4* (8), 1529-1545.

Choo, C.W., Detlor, B., & Turnbull, D. (1998). A behavioral model of information seeking on the web-preliminary results of a study of how managers and it specialists use the web. *Paper presented at the Annual Meeting of the American Society for Information Science (ASIS), Pittsburgh,* 25-29 October, 1998, Pittsburgh, United States of America.

Choo, C.W., Detlor, B., & Turnbull, D. (2000). Information-seeking on the web: An integrated model of browsing and searching. *First Monday, 5* (2). Retrieved at May12, 2009, from http://journals.uic.edu/ojs/index.php/fm/article/view/729/638

Chu, C. M. (1999). Literary critics at work and their information needs: A research-phases model. *Library & Information Science Research, 21* (2), 247-273.

Cohan, W. D. (2012). Jordan VC firms forging Mideast silicon valley. *Bloomberg.* Retrieved June 23, 2012 from: http://www.bloomberg.com/news/2012-02-06/cohan-jordan-vc-firms-forging-mideast-silicon-valley.html

Cohen, L., Manion, L. & Morrison, K. (2000). *Research methods in education (5th ed.).* London: Routledge Falmer.

Cole, C. (1998). Information acquisition in history PhD students: inferencing and the information of knowledge structures. *Library Quarterly, 68*, 33-54.

Cooper, A. (1999). *The Inmates are Running the Asylum.* Indianapolis, IA: SAMS/Macmillan.

Cooper, A. & Reimann, R. (2003). *About Face 2.0: The Essentials of Interaction Design.* New York: John Wiley & Sons.

Couch, N. & Allen, N. (1993). *The humanities and the library.* Chicago: ALA.

Covi, L. & Kling, R. (1996). Organizational dimensions of effective digital library use: Closed rational and open natural systems models. *Journal of the American Society for Information Science, 47* (9), 672–89.

Crane, D. (1972). *Invisible colleges.* Chicago: University of Chicago Press.

Creswell, J. W. (1994). *Research Design: Qualitative and Quantitative Approaches.* Thousand Oaks, CA.: Sage Publication.

Creswell, J, W. (1998). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions.* Thousand Oaks, California: Sage Publications.

Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2nd ed.).* Thousand Oak, California: Sage Publications, Inc.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* Thousand Oaks, CA: SAGE Publications.

Creswell, J. W., Hanson, W. E., Plano, V. L. C., & Morales, A. (2007). Qualitative research designs selection and implementation. *The Counseling Psychologist, 35*(2), 236-264.

Creswell, J, W., & Plano Clark, V.L. (2007). *Designing and Conducting Mixed Method Research*. Thousand Oaks, CA: Sage Publications.

Cullars, J. (1989). Citation characteristics of French and German literary monographs. The Library Quarterly: Information, Community, Policy, 59 (4), 305-325.

Cullars, J. (1992). Citation characteristics of monographs in the fine arts. The Library Quarterly: Information, Community, Policy, 62 (3), 325-342.

Dahl, C. (2012). PDA and the humanities assessing the fit through an examination of the literature on humanists and e-resources. *The Electronic Library*, 31(6), 745-752.

Daily, J. (1990). Language, In: ELIS. P.37-51, Humanities and its Literature, *ELIS*. p.71-81.

Dalton, M. S. & Charnigo, L. (2004). Historians and their information sources. *College and Research Libraries*, 65 (5), 400-425.

Delgadillo, R. & Lynch, B. P. (1999). Future historians: their quest for information. *College & Research Libraries, 60* (3), 245-259.

Dervin, B. (1983). An overview of sense-making research: concepts, methods and results to date. *International Communications Association Annual Meeting, Dallas, Texas*. Retrieved Jun 12, 2007, from http://communication.sbs.ohio-state.edu.sensemaking/zennez/zennezdervin83smoverview.html.

Dervin, B. (1992). From the mind's eye of the user: The sense-making qualitative-quantitative methodology. In J.D. Glazier & R.R. Powell (Eds.). *Qualitative Research in Information Management* (pp. 61–84). Englewood, CO: Libraries Unlimited.

Dervin, B. (1997). Given a context by any other name: Methodological tools for taming the untruly beast. In Vakkari, P., Savolainen, R. & Dervin, B. (eds.). *Information Seeking in Context: Proceeding of a Meeting in Finland*, 14-16 August 1996, 13-38. London: Taylor Graham.

Dervin, B. (2003). Given a context by any other name: Methodological tools for taming the unruly beast. In B. Dervin & L. Foreman-Wernet (with E. Lauterbach) (Eds.). *Sense-making methodology reader: Selected writings of Brenda Dervin* (pp. 111-132). Cresskill, NJ: Hampton Press.

Devadason, F. J., & Lingman, P. P. (1997). A methodology for the identification of information needs of users. *IFLA Journal, 23* (1), 41-51.

Dougherty, D. & Murthy, A. (2008). What service customers really want? *Harvard Business Review, September*: p. 22.

Duff, W. & Johnson, C. (2002). Accidentally found on purpose: Information-seeking behavior of historians in archives. *Library Quarterly, 72,* 472-98.

East, J. W. (2005). Information literacy for the humanities researcher: A syllabus based on information habits research. *Journal of Academic Librarianship*, *31,* (2), 134-142.

Education for Change Ltd, SIRU (University of Brighton) & The Research Partnership. (2002). Researchers' Use of Libraries and Other Information Sources: Current Patterns and Future Trends: Final Report. Higher Education Funding Council for England HEFCE), Bristol.

Ein-Dor, P., Goodman, S. and Wolcott, P. (1999). *The Global Diffusion of the Internet Project: The Hashemite Kingdom of Jordan*, The MOSAIC Group. Retrieved December 7, 2009 from http://mosaic.unomaha.edu/Jordan_1999.pdf

Ellis, D. (1989). A behavioral approach to information retrieval design. *Journal of Documentation*, *45* (3), 171–212.

Ellis, D. (1993). Modeling the information–seeking patterns of academic researchers: A grounded theory approach. *Library Quarterly*, *63* (4), 469–486.

Ellis, D. & Haugan, M. (1997). Modeling the information seeking patterns of engineers and research scientists in an industrial environment. *Journal of Documentation, 53* (4), 384-403.

Ellis, D. & Oldman, H. (2004). The English literature researcher in the age of the Internet. *Journal of Information Science*, *31* (1), 29–36

Ellis, D. & Oldman, H. (2005). The English literature researcher in the age of the Internet. *Journal of Information Science*, *31* (1), 29–36.

Encyclopaedia Britannica. (1998). Britannica Academic Edition. Available at: http://www.britannica.com/EBchecked/topic/27505/anthropology/236839/Culturean

Fairer-Wessels, F. A. (1990). Basic community information needs of urban black women in Mamelodi, Pretoria, South Africa. *South African Journal of Library and Information Science, 58* (1990), 359–369.

Fidel, R. (1993). Qualitative methods in information retrieval research. *Library & Information Science Research*, *15*, 219-247.

Folster, M. B. (1989). A study of the use of information sources by social science Researchers. *Journal of Academic Librarianship*, *15*, 7-11.

Ford, N. (2004). Modeling cognitive processes in information seeking: From Popper to Pask. *Journal of the American Society for Information Science and Technology, 55* (9), 769-782.

Forsetlund, L. & Bjørndal, A. (2001). The potential for research-based information in public health: identifying unrecognised information needs. *BMC Public Health, 1* (1*)*. doi:10.1186/1471-2458-1-1

Foster, A. (2004). Nonlinear model of information seeking behavior. *Journal of the American Society for Information Science and Technology, 55* (3), 228-237.

Foster, A. (2005). A non-linear model of information seeking behavior. *Information Research*, *10* (2), paper 222 Available at: http://InformationR.net/ir/102/paper222.html

Fraenkel, J. R. & Wallen, N. E. (2000). *How to Design and Evaluate Research in Education (4th ed.)*. New York: McGraw-Hill.

Francis, H. (2005). The information-seeking behavior of social science faculty at the University of the West Indies, St. Augustine Campus. *The Journal of Academic Librarianship*, *31* (1), 67-72.

Frankfort-Nachmias, C., & Nachmias, D. (1992). *Research Methods in the Social Sciences (4th ed.)*. New York: St. Martin's Press.

Frankfort-Nachmias, C. & Nachmias, D. (1996). *Research Methods in the Social Sciences (5th ed.)*. London: Edward Arnold.

Friedlander, A. (2002). *Dimensions and Use of the Scholarly Information Environment: Introduction to a Data Set*. Washington, DC: Digital Library Federation and Council on Library and Information Resources.

Ghazal, M. (2012). Entrepreneurs encouraged to enter int'l start-up competition. *The Jordan Times*, Sep 20. Retrieved June 19, 2012 from: http://jordantimes.com/entrepreneurs-encouraged-to-enter-intl-start-up-competition

Gillham, B. (2005). *Research Interviewing: The Range of Techniques*. England: Open University Press.

Given, L. M., & Willson, R. (2015). Collaboration, information seeking, and technology use: A critical examination of humanities scholars' research practices. In *Collaborative Information Seeking* (pp. 139-164). Springer International Publishing.

Glazier, J. D. & Powell, R. R. (1992). *Qualitative Research in Information Management*. Englewood, Colorado: Libraries Unlimited, Inc.

Gleeson, A. C. (2001). *Information seeking behavior of scientists and their adaptation to electronic journals*. (Unpublished Master's thesis). University of North Carolina at Chapel Hill.

Goodwin, K. (2002). *Getting from Research to Personas: Harnessing the Power of Data*. Cooper Interaction Design, Palo Alto, Calif. Available at http://www.cooper.com/content/insights/newsletters/2002_11/getting_from_research_to_personas_asp

Gorman, G. E. (1990). Patterns of information seeking and library use by theologians in seven Adelaide Theological Colleges. *Australian Academic & Research Libraries, 21* (3), 137-156.

Gould, C. C. & Pearce, K. (1991). *Information Needs in the Sciences: An Assessment*. Mountain View, CA: Research Libraries Group.

Grădinaru, C. (2015). Information seeking patterns in scholarly research. In *Conference "Humanities and Social Sciences Today. Classical and Contemporary Issues"– Philosophy and Other Humanities* (p. 21).

Graham, S. R. (2000). Historians and electronic resources: a citation analysis. *Journal of the Association for History and Computing*, 3 (3). Available at: http://mcel.pacificu.edu/JAHC/2000/issue3/works/graham (Accessed 18 September 2009).

Graziano, A. M. & Raulin, M. L. (2000). *Research Methods: A Process of Inquiry (4th ed.)*. Boston: Allyn and Bacon.

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis, 11* (3), 255-274.

Green, R. (2000). Locating sources in humanities scholarship: The efficacy of following bibliographic references. *The Library Quarterly: Information, Community, Policy*, *70* (2), 201-229.

Grudin, J. & Pruitt, J. (2002). Personas, participatory design and product development: an infrastructure for engagement. Proceedings of the Participatory Design Conference (PDC 2002), pp. 144-161. In T. Binder, J. Gregory, I. Wagner (Eds.). 23-25 June, 2002, Malmo, Sweden.

Guest, S. S. (1987). The use of bibliographic tools by humanities faculty at the State University of New York at Albany. *The Reference Librarian, 7* (18), 157–172.

Guion, L. A., Diehl, D. C., & McDonald, D. (2011). Triangulation: Establishing the validity of qualitative studies. Florida: Institute of Food and Agricultural Sciences, University of Florida. Publication FCS6014. Retrieved 27 August 2013, from http://www.ie.ufrj.br/hpp/intranet/pdfs/texto_7_-_aulas_6_e_7.pdf

Hagstrom, W. O. (1965). *The scientific community*. New York, NY: Basic Books.

Harley, D. (2007). Use and users of digital resources: a survey explored scholars attitudes about educational technology environments in the humanities. *EDUCAUSE Quarterly*, *30* (4), 12-21.

Hiller, S. (2001). Assessing user needs, satisfaction, and library performance at the University of Washington Libraries. *Library Trends, 49* (4), 605-625.

Hockey, S. (1994). Evaluating electronic texts in the humanities. *Library Trends, 42* (4), 676–693.

Hopkins, R. (1989). The information seeking behaviour of literary scholars. *Canadian Library Journal, 46* (2), 113-115.

Hsieh-Yee, I. (1993). Effects of search experience and subject knowledge on the search tactics of novice and experienced searchers. *Journal of the American Society for Information Science, 44* (3), 161–174.

Ibrahim, A. E. (2004). Use and user perception of electronic resources in the Arab Emirates University (UAEU). *Libri, 54,* 18-29.

Igben, M. J. (1993). Students use of selected services in the Polytechnic Ibadan library. *Nigeria Library Information Science Review, 11* (1&2), 11-17.

Ileperuma, S. (2002). Information gathering behaviour of arts scholars in Sri Lankan universities: a critical evaluation. *Collection Building*, *21* (1), 22-31.

Information and Communications Technology Association of Jordan & Ministry of Information and Communications Technology. (2014). *ICT & ITES Industry Statistics & Yearbook 2014*. Jordan: Information and Communications Technology Association of Jordan & Ministry of Information and Communications Technology.

Internet World Stats. (November, 2015). *Internet Penetration in the Middle East for November 30, 2015*. Retrieved 1 March, 2016 from http://www.internetworldstats.com/stats5.htm

Jamali, H. & Asadi, S. (2009). Google and the scholar: The role of Google in scientists' information-seeking behaviour. *Online Information Review, 34* (2) 282-294.

Jansen, B. J., Spink A., & Saracevic, T. (2000). Real life, real users, and real needs: a study and analysis of user queries on the web. *Information Processing and Management, 36* (2), 207-227.

Jayasundara, C. C. (2008). User perceptions and expectations on e-information literacy development programmes: A gap analysis. *Orbis: Revista de Ciencias Humanas*, *4*(10), 81-94.

Jick, T. D. (1976). Mixing qualitative and quantitative methods: triangulation in action. *Administrative Science Quarterly, 24* (4), 602-611.

Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research, 1,* 112-133.

Jordan National Competitiveness Observatory. (2009). *Jordan's Competitiveness Report*. Retrieved January 08, 2012 from: http://www.jnco.gov.jo/static/pdf/JCR_2008_2009_INSURANCE_SECTOR_A NALYSIS.PDF

Kealey, D. J., & Protheroe, D. R. (1996). The effectiveness of cross-cultural training for expatriates: An assessment of the literature on the issue. *International Journal of Intercultural Relations, 20*(2), 141-165.

Kennickell, A. B. (2008). The role of over-sampling of the wealthy in the survey of consumer finances (p. 403 – 408). In *Irving Fisher Committee Bulletin (No. 28)*. Retrieved on 5th of April 2009 from http://www.bis.org/ifc/publ/ifcb28.pdf

Khan, S. A. & Shafique, F (2011). Information needs and information-seeking behavior: A survey of college faculty at Bahawalpur. *Library Philosophy and Practice*, from http://digitalcommons.unl.edu/libphilprac/484

Kilker, J. & Gay, G. (1998). The social construction of a digital library: A case study examining implications for evaluation. *Information Technology and Libraries, 17* (2), 60-70.

King, D. W., Casto, J. & Jones, H. (1994). *Communication by Engineers: A Literature Review of Engineers, Information Needs, Seeking Processes, and Use*. Washington, D.C.: Council on Library Sources.

King, D. B. (2005). User surveys: Libraries ask, 'Hey, how am I doing?' *Law Library Journal, 97* (1), 103-115.

Kingrey, K. P. (2002). Concepts of information seeking and their presence in the practical library literature. *Library Philosophy and Practice, 4* (2), 1-13.

Kotler, P. (2006). *Marketing management (12ᵗʰ ed.)*. NY: Prentice Hall.

Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *The American Journal of Occupational Therapy, 45*(3), 214-222.

Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30* (3), 607-610.

Krikelas, J. (1983). Information seeking behavior: patterns and concepts. *Drexel Library Quarterly, 19*, 5-20.

Kroski, E. (February, 2013). *10 Great Technology Initiatives for Your Library*. Retrieved 5 February, 2016 from http://americanlibrariesmagazine.org/2013/02/27/10-great technology - initiatives-for-your-library/

Kuhlthau, C. C. (1988). Developing a model of the library search process: cognitive and affective aspects. *Reference Quarterly, 28* (2), 232-242.

Kuhlthau, C. C. (1991). Inside the search process: Information seeking from the users perspective. *Journal of the American Society for Information Science, 42* (5), 361-371.

Kuhlthau, C. C. (1993). A principle of uncertainty for information seeking. *Journal of Documentation, 49* (4), 339-355.

Kuhlthau, C. C. (2004). *Seeking meaning: A process approach to library and information services (2nd ed.)*. Westport, Connecticut: Libraries Unlimited.

Kuhlthau, C. C. (2005). Kuhlthau's information search process. In K.E. Fisher, S. Erdelez, & L.E.F. Mckechnie (Eds.). *Theories of information behavior* (pp. 230-234). Medford, New Jersey: Information Today, Inc.

Kumar, A. (2013). Assessing the information need and information seeking behavior of research scholars of M.B.P.G. College: A case study. *International Journal of Digital Library Services, 3* (3) 1-12.

Kumar, S., & Sukula. S. K. (2015). Information needs, seeking behaviours and retrieval of faculty members and PG students of faculty of arts and humanities, CCS University Campus, Meerut: A study. *Asian Journal of Multidisciplinary Studies*, *3*(7), 50-56.

Large, A., & Beheshti, J. (2013, October). Children's information seeking behavior: A laboratory versus an operational research environment. In *Proceedings of the Annual Conference of CAIS/Actes du congrès annuel de l'ACSI*.

Leckie, G. J., Pettigrew, K. E., & Sylvain, C. (1996). Modeling the information seeking of professionals: a general model derived from research on engineers, health care professionals, and lawyers. *The Library Quarterly*: *Information, Community, Policy*, *66* (2), 161-193.

Lee, H. (2005). The concept of collection from the user's perspective. *Library Quarterly, 75* (1), 67-85.

Leigh, K. (2011). Amman is unlikely hotspot for technology startups. *Arabian Business*. Retrieved July 18, 2011 from: http://www.arabianbusiness.com/amman-is-unlikely-hotspot-for-technologystartups385790.html?sms_ss=twitter&at_xt= 4d7d6530f809b2db%2C0

Line, M. B. (1969). Information requirements in the social sciences: some preliminary considerations. *Journal of Librarianship and Information Science, 1* (1), 1-19.

Line, M. B. (1999). Social science information: The poor relation. *Paper presented at the 6th IFLA Conference in Bangkok*, August 1999.

Line, M. B. (2000). Social science information: the poor relation. *IFLA Journal, 26* (3), 177–179.

Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic Inquiry*. Thousand Oaks, California: Sage.

Lucas, W. & Topi, H. (2002). Form and function: the impact of query term and operator usage on web search results. *Journal of the American Society for Information Science and Technology, 53* (2), 95–108.

Mahajan, P. (2006). Internet use by researchers: A study of Panjab University, Chandigarh. *Library Philosophy and Practice*, *8*(2), 9. Retrieved from http://www.webpages.uidaho.edu/~mbolin/ mahajan2.htm

Majid, S. & Kassim, G. M. (2000). Information-seeking behaviour of International Islamic University Malaysia Law Faculty Members. *Malaysian Journal of Library & Information Science, 5* (2), 1-17.

Majid, S., Anwar, M. A., & Eisenchitz, T. S. (2001). User perceptions of library effectiveness in Malaysian agricultural libraries. *Library Review, 50* (4), 176-186.

Malone, D. & Videon, C. (1997). Assessing undergraduate use of electronic resources: A quantitative analysis of works cited. *Research Strategies, 15* (3), 151-158.

Maness, J. M., Miaskiewicz, T., & Sumner, T. (2008, September/October). Using Personas to understand the needs and goals of institutional repository users. *D-Lib Magazine, 14* (9/10). Retrieved from http://dlib.org/dlib/september08/maness/09maness.html

Marchionini, G. (1995). *Information-seeking in electronic environments*. Cambridge, England: Cambridge University Press.

Martensen, A. & Gronholdt, L. (2003). Improving library users' perceived quality, satisfaction and loyalty: an integrated measurement and management system. *Journal of Academic Librarianship, 29* (3), 140-147.

Massey-Burzio, V. (1999). The rush to technology: A view from the humanists. *Library Trends*, *47*, (4), 620-639.

Mattern, S. (June, 2014). *Library as Infrastructure*. Retrieved 5 February, 2016 from https://placesjournal.org/article/library-as infrastructure/?gclid=CIfZ1eT258sCFdOKaAodJAYIHw

Matveev, A. V. (2002). The advantages of employing quantitative and qualitative methods in intercultural research: Practical implications from the study of the perceptions of intercultural communication competence by American and Russian managers. *Bulletin of Russian Communication Association Theory of Communication and Applied Communication*, *1*, 59-67.

McCann, L. (1997). Academic use of electronic publications in social sciences and humanities and changing roles for libraries. *Association of College and Research Libraries*, Nashville, TN. Available at: www.ala.org/ala/acrlbucket/nashville1997pap/mccann.cfm. Accessed 19 September 2009.

Meho, L. I. (2001). *The information-seeking behavior of social science faculty studying stateless nations*. (Unpublished doctoral dissertation). University of North Carolina at Chapel Hill.

Meho, L. I. & Haas, S. W. (2001). Information-seeking behavior and use of social science faculty studying stateless nations: a case study. *Library & Information Science Research*, *23* (1), 5-25.

Meho, L. I. & Tibbo, H. R. (2003). Modeling the information-seeking behavior of social scientists: Ellis's study revisited. *Journal of the American Society for Information Science and Technology, 54* (6), 570-587.

Miaskiewicz, T., & Kozar, K. A. (2011). Personas and user-centered design: How can personas benefit product design processes?. *Design Studies, 32* (5), 417-430.

Miaskiewicz, T., Sumner, T., & Kozar, K. A. (2008). A latent semantic analysis methodology for the identification and creation of Personas. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI'08), ACM Press,* 1501-1510. doi:10.1145/1357054.1357290

Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks, CA: Sage Publication.

Minichiello, V., Aroni, R., Timewell, E. & Alexander, L. (1995). In-depth Interviewing. Melbourne: Longman Australia.

Ministry of Information and Communication Technology. (2012). Retrieved August 13, 2012 from http://www.moict.gov.jo/MoICT_about_moict.aspx

Mohindra, R., & Kumar, A. (2015). User satisfaction regarding quality of library services of AC Joshi Library, Panjab University, Chandigarh. *DESIDOC Journal of Library & Information Technology*, *35*(1).

Moore, D. (2000). Gender identity, nationalism, and social action among Jewish and Arab women in Israel: Redefining the social order? *Gender Issues, 18* (2), 3-28.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2008). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods, 1*(2), 13-22.

Mostofa, Sk. M. (2013). A study of information needs and seeking behavior of faculty members of Darul Ihsan University in Bangladesh. *Library Philosophy and Practice (e-journal). Paper 983.* Retrieved December 5, 2013 from http://digitalcommons.unl.edu/libphilprac/983

Msagati, N. (2014). Awareness and use of scholarly electronic journals by members of academic staff: A case study of Dar es Salaam University College of Education (DUCE). *Library Philosophy and Practice (e-journal).* pp. 1-25. http://digitalcommons.unl.edu/libphilprac/112

Neuman, W. L. (2003). *Social Research Methods: Qualitative and Quantitative Approaches* (5th ed.). Boston: Allyn and Bacon.

Nicholas, D., Williams, P., Rowlands, I., & Jamali, H. R. (2010). Researchers' e-journal use and information seeking behaviour. *Journal of Information Science*, *36*(4), 494-516.

Niedźwiedzka, B. (2003). A proposed general model of information behavior. *Information Research, 9* (1)*, paper 164. http://InformationR.net/ir/91/paper164.html

Nnadozie, C. O. (2006). Evaluation of library resources and services in Federal Medical Centre, Owerri, Nigeria. *Coal City Libraries, 3* (April), 39-50.

Norbert, G. L., & Lwoga, E. T. (2013). Information seeking behaviour of physicians in Tanzania. *Information Development, 29* (2), 172-182.

Nor Liyana, M. S. & Noorhidawati, A. (2010). Ascertain the information seeking behavior of computer science students. *The 3ʳᵈ International Conference on Libraries, Information and Society, (ICoLIS) 2010*, at the University of Malaya, Petaling Jaya, Malaysia, 1-13.

Norman, D. (1988). *The Psychology of Everyday Things*. New York: Basic Books.

Ocholla, D. N. (1999). Insights into information-seeking and communicating behaviour of academics. *The International Information & Library Review*, *31* (3), 119-143.

Ocholla, D. & Mostert, J. (2010). The research trends of arts, humanities and social sciences research at the University of Zululand, 1994 – 2008. *Inkanyiso: Journal of Humanities and Social Sciences, 2* (1), 32-43.

Odih, A. S. (2006). *Albahth alÊlmy fe altarbiah walaloom alinsaniah*. 2ⁿᵈ ed. Irbed: Maktabt Alktany.

Okello-Obura, C. & Magara, E. (2008). Electronic information access and utilization by Makerere University students in Uganda. *Evidence Based Library and Information Practice*, *3* (3), 39-56.

OKIKI, O. C. (2013). Availability of Information Resources for Research Output: Perception of Academic Staff Members in Nigerian Federal Universities. *International Journal of Computer Science and Telecommunications, 4* (8), 26-33.

Oppenheim, A. N. (1992). *Questionnaire Design, Interviewing and Attitude Measurement*. London: Pinter.

Oppenheim, A. N. (2000). *Questionnaire Design, Interviewing and Attitude Measurement*. Great Britain: Biddles Ltd.

Palmer, C. L. & Neumann, L. J. (2002). The information work of interdisciplinary humanities scholars: exploration and translation. *Library Quarterly*, 72 (1), 85-117.

Pang-Ning. T, Steinbach, M., & Kumar, V. (2006). *Introduction to Data Mining*. Boston: Pearson Addison Wesley.

Parveen, S. (1976). *Information needs of [the] teachers and research staff working in the social sciences departments of [the] University of the Punjab, Lahore.* (Unpublished Master's thesis). Department of Library Science, University of the Punjab, Lahore, Pakistan.

Patitungkho, K. & Deshpande, N. J. (2005). Information seeking behaviour of faculty members of Rajabhat Universities in Bangkok. *Webology*, *2* (4), Article 20. Available at: http://www.webology.ir/2005/v2n4/a20.html

Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods*. Newbury Park, California: Sage Publications.

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research, 34*(5 Pt 2), 1189-1028.

Patton, M.Q. (2002). *Qualitative research and evaluation methods (3rd ed.)*. Thousand Oaks, California: Sage Publications.

Pew Research Center. (n.d.). *Oversamples*. Retrieved on 5th of April 2009 from http://www.people-press.org/methodology/sampling/oversamples/

Pinelli, T. E. (1991). The information-seeking habits and practices of engineers. *Science & Technology Libraries, 11* (3), 5-25.

Popham, W. J. (2000*). Modern Educational Measurement: Practical Guidelines for Educational Leaders*. Needham: Allyn & Bacon.

Popoola, S. O. (2001). Faculty awareness about library information products and services in Nigerian universities. *Gateway Library Journal*, 4(1&2), 1-10.

Pruitt, J. & Adlin, T. (2010). *The Persona Lifecycle: Keeping People in Mind Throughout Product Design*. San Francisco: Morgan Kaufmann Publishers.

Pruitt, J. & Grudin, J. (2003). Personas: practice and theory. In *Proceedings of the 2003 conference on Designing for user experiences* (pp. 1-15). ACM.

Quan-Haase, A. & Martin, K. (2012). Digital humanities: the continuing role of serendipity in historical research, *Proceedings of the 2012 i-Conference, February 7-10, 2012, Toronto, ON, ACM*, New York, NY, p. 456-58.

Quigley, J., Peck, D. R., Rutter, S., & Williams, E. (2002). Making choices: Factors in the selection of information resources among science faculty at the University of Michigan. *Issues in Science and Technology Librarianship, 34*. Retrieved 17 May 2010 from http://www.istl.org/02-spring/refereed.html.

Rafiq, M. & Ammeen, K. (2009). Information seeking behavior and user satisfaction of university instructors: A case study. *Library Philosophy and Practice (e-journal), Paper 1*.

Reed, B. & Tanner, D. R. (2001). Information needs and library services for the fine arts faculty. *Journal of Academic Librarianship*, *27* (3), 229-233.

Reitz, J. M. (2004). *ODLIS-Online Dictionary for Library and Information Science*. Portsmouth: Libraries Unlimited.

Rempel, H. G., Buck, S. & Deitering, A. M. (2013). Examining student research choices and processes in a disintermediated searching environment. *Portal: Libraries and the Academy*, *13* (4), 363-384.

Renwick, S. (2005). Knowledge and use of electronic information resources by medical sciences faculty at The University of the West Indies. *Journal of the Medical Library Association*, *93* (1), 21-31.

Rihani, M. (2008). Jordanian record achievements in the Guinness Book of the Guinness Book 1. Available at: http://alrihani.blogspot.com/search?updatedmax=200804T16%3A08%3A00%2B02%300&max-results=7. Accessed on the 20th April 2008.

Rimmer, J., Warwick, C., Blandford, A., Gow, J. & Buchanan, G. (2006). Humanities scholars' information-seeking behaviour and use of digital resources. *Paper presented at Workshop on Digital Libraries in the Context of Users' Broader Activities (DL-CUBA), The Joint Conference on Digital Libraries*, 15 June, 2006. Chapel Hill, USA.

Rohde, N. F. (1986). Information needs. *Advances in Librarianship, 14*, 49-73.

Romanos de Tiratel, S. (2000). Accessing information use by humanists and social scientist: A study at the Universidad de Buenos Aires, Argentina. *Journal of Academic Librarianship, 26* (5), 346-354.

Rose, T. (2002). Technology's impact on the information-seeking behavior of arts historians. *Art Documentation: Journal of the Art Libraries Society of North America*, *21* (2), 35-42.

Rowley, J. & Turner, C. M. D. (1978). *The Dissemination of Information*. Boulder, CO: Westview Press, Inc.

Salkind, N. J. (1997). *Exploring Research. (3rd ed.)*. New Jersey, Upper Saddle River, Prentice Hall, Inc.

Sarkhel, J. & Khan, Md. (2014). Information needs and information seeking behavior of faculty members of agricultural universities in Bangladesh: A study. *The International Journal of Social Sciences, 24* (1) 23-36.

Seaman, D. (2011). Discovering the information needs of humanists when planning an institutional repository. *D-Lib Magazine*, *17*(3), 1. Available at: http://www.dlib.org/dlib/march11/seaman/03seaman.html

searchcio.techtarget.com. (2005). *Definition of ICT (information and communications technology - or technologies)*. Retrieved 15 February, 2016 from http://searchcio.techtarget.com/definition/ICT-information-and-communications-technology-or-technologies

Shaw, D. & Davis, C. H. (1996). The Modern Language Association: Electronic and Paper Surveys of Computer-based Tool Use. *Journal of the American Society for Information Science, 47* (12), 932–940.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63-75.

Shenton, A. K. & Dixon, P. (2004). Issues arising from youngsters' information-seeking Behavior. *Library & Information Science Research*, *26* (2), 177-200.

Siegfried, S., Bates, M., & Wilde, D. (1993). A profile of End-user searching behavior by humanities scholars: The Getty Online Searching project report No. 2. *Journal of the American Society for Information Science, 44* (5), 273-291.

Sievert, D. & Sievert, M. E. (1988). Humanists and technologists: the case of philosophers. In Borgman, C. L. & Edward Y. H. (eds.) *Information Technology: planning for the next fifty years. Proceedings of the First Annual Meeting of the American Society for Information Science, 25*, 94-99, Medford, New Jersey.

Silverman, D. (1993). *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction*. London: Sage Publications.

Simmonds, P. L. & Andaleeb, S. S. (2001). Usage of academic libraries: the role of service quality, resources and user characteristics. *Library Trends, 49* (4), 626-634.

Singh, K. P. & Satija, M. P. (2006). A review of research on information seeking behaviour of agricultural scientists: international perspectives. *DESIDOC Bulletin of Information Technology, 26* (2), 25-36.

Sinha, R. (2003). Persona development for information-rich domains. *Extended Abstracts on Human Factors in Computing Systems (CHI EA '03), ACM Press*, 830-831.

Skinner, B. F. (1961). Cumulative record (enlarged ed.). *Century psychology series*. (pp. 39-69). East Norwalk, CT, US: Appleton-Century-Crofts, xi, 426 pp. doi: 10.1037/11324-005

Slater, M. (1988). Social scientists information needs in the 1980s. *Journal of Documentation, 44* (3), 226-237.

Sonnenwald, D. H., & Wildemuth, B. M. (2001). Investigating information seeking behavior using the concept of information horizons. In *Association for Library and Information Science Education Conference, Washington DC*.

Sowole, I. A. (1995). Information needs of farm management personnel: a case study of two universities and two agricultural research institutes in western Nigerian. *Lagos Librarian, 16* (1), 9-12.

Starkweather, W. M. & Wallin, C. (1999). Faculty response to library technology: Insights on attitudes. *Library Trends, 47* (4), 640-812.

Stone, S. (1982). Humanities scholars: information needs and uses. *Journal of Documentation, 38,* 292-313.

Sukovic, S. (2008). Convergent flows: humanities scholars and their interactions with electronic texts. *Library Quarterly, 78* (3), 263-284.

Sureshchandar, G. S., Rajendran, C. & Kamalanabhan, T. J. (2002). Customer perception of service quality: a critique. *Total Quality Management, 12* (1), 112-124.

Suriya, M., Sangeetha, G. & Nambi, M. A. (2004). Information-seeking behaviour of faculty members from government arts colleges in Cuddalore district. In: Kaul, H. K. & Patil, S. K. (Eds.). *Library and Information Networking* (NACLIN 2004). New Delhi: 285-292.

Sutton, S. A. (1994). The role of attorney mental models of law in case relevance determinations: an exploratory analysis. *Journal of the American Society for Information Science, 45* (3), 186-200.

Tahir, M., Mahmood, K., & Shafique, F. (2008). Information needs and information-seeking behavior of arts and humanities teachers: a survey of the University of the Punjab, Lahore, Pakistan. *Library Philosophy and Practice, Paper 227.*

Tahir, M., Mahmood, K., & Shafique, F. (2010). Use of electronic information resources and facilities by humanities scholars. *The Electronic Library, 28* (1), 122-136. Available at www.emeraldinsight.com/0264-0473.htm

Talja, S., Keso, H. & Pietilainen, T. (1999). The production of "context" in information seeking research: A metatheoretical view. *Information Processing & Management, 35*, 751-763.

Talja, S. & Maula, H. (2003). Reasons for the use and non-use of electronic journals and databases: a domain analytic study in four scholarly disciplines. *Journal of Documentation, 59* (6), 673-691.

Taylor, R. S. (1991). Information use environments. In: Dervin, B. & Voigt, M. J. (Eds.). *Progress in Communication Sciences, 10,* 217-255. Norwood, NJ: Ablex.

Taylor, S. J. & Bogdan, R. (1998). *Introduction to Qualitative Research Methods: A Guidebook and Resource (3rd ed.).* New York: John Wiley & Sons.

Teddlie, C., & Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioral sciences. *Handbook of Mixed Methods in Social & Behavioral Research*, 3-50.

Tenopir, C. (2003). *Use and users of electronic library resources: An overview and analysis of recent research studies.* Washington, D.C.: Council on Library and Information Resources. Retrieved Jun 20, 2007 from http://www.clirorg/pubs/abstract/pub120abst.html.

The World Factbook. (February, 2016). *Middle East: Jordan.* Retrieved 1 March, 2016 from https://www.cia.gov/library/publications/the-world-factbook/geos/jo.html

Thorngate, W. (1988). On paying attention. In Baker, W. J., Mos, L. P., Rappard, H. V. & Stam, H. J. (Eds.). *Recent Trends in Theoretical Psychology* (pp. 247-263). New York: Springer.

Tibbo, H. R. (1991). Information Systems, Services, and Technology for the Humanities. *Annual Review of Information Science and Technology, 26,* 287-346.

Tibbo, H. R. & Meho, L. I. (2001). Finding finding aids on the World Wide Web. *The American Archivist, 64* (1), 61-77.

Tibbo, H. R. (2002). Primarily history: historians and the search for primary source materials. In *JCDL '02: Proceedings of the 2nd ACM/IEEE-CS Joint Conference on Digital Libraries* (pp. 1-10). ACM Press.

Tibbo, H. R. (2003). Primarily history in America: how U.S. historians search for primary materials at the dawn of the digital age. *American Archivist, 66* (1), 9-50.

Todd, R. J. (1999). Back to our beginnings: information utilization, Bertram Brookes and the fundamental equation of information science. *Information Processing and Management, 35* (6), 851–870.

Toms, E. G. & O'Brien, H. L. (2008). Understanding the information and communication technology needs of the e-humanist. *Journal of Documentation*, *64*, (1), 102-130.

Ucak, N. O. & Kurbanoglu, S. S. (1998). Information need and information seeking behavior of scholars at a Turkish University. *Proceedings of the 64th IFLA General Conference, 16-21 August, 1998, Amsterdam*. Available at http://www.nlc-bnc.ca/ifla/IV/ifla 64/041-112e.htm

Urquhart, D. J. (1948). The distribution and use of scientific and technical information. *The Royal Society Scientific Information Conference*, 408-419.

Vakkari, P. (2008). Perceived influence of the use of electronic information resources on scholarly work and publication productivity. *Journal of the American Society for Information Science and Technology*, *59*, 602-612.

Verma, M. K., & Parang, B. (2015). Use and user's satisfaction on library resources and services by students of school of physical sciences, Mizoram University, Aizawl: A Study. *Information Studies*, *21*(2/3), 193.

Vogt, W. P. (1999). *Dictionary of Statistics and Methodology*. Thousand Oaks, California: Sage.

Ward, J. L. (2010). *Persona development and use, or, how to make imaginary people work for you*. Paper presented at the Library Assessment Conference, Baltimore, MD, 2010. Available at: libraryassessment.org/bm~doc/ward_jennifer.pdf.

Warwick, C., Terras, M., Galina, I., Huntington, P. & Pappa, N. (2008). Library and information resources and users of digital resources in the humanities. *Program: Electronic Library and Information Systems*, *42* (1), 5-27.

Watson-Boone, R. (1994). The information needs and habits of humanities scholars. *RQ, 34* (2), 203–216.

Webster Dictionary. (2008). Trident press international: Florida.

Weisman, H. M. (1972). *Information Systems Services Centers*. New York: Wiley.

Wenderoth, C. (2007). Research behaviors of theological educators and students: The known and the unknown. In *American Theological Library Association Summary of Proceedings 61*, 2007: 180.

White, M. D. (1975). The communications behaviour of academic economists in research phases. *Library Quarterly, 45*, 337-353.

Whitmire, E. (2002). Disciplinary differences and undergraduates' information-seeking behavior. *Journal of the American Society for Information Science and Technology, 53* (8), 631–638.

Wiberley, S. E. & Jones, W. G. (1989). Patterns of information seeking in the humanities. *College and Research Libraries, 50,* 638–645.

Wiberley, S. E. & Jones, W. G. (2000). Time and technology: A decade-long look at humanists' use of electronic information technology. *College & Research Libraries, 61,* 421–431.

Wildemuth, B. M. (2004). The effects of domain knowledge on search tactic formulation. *Journal of the American Society for Information Science and Technology, 55* (3), 246–258.

Williams, F. & Monge, P. (2001). *Reasoning with Statistics: How to Read Quantitative Research (5th ed.)*. Australia: Thomson Wadsworth.

Williams, T. D. (2004). Teachers' link to electronic resources in the library media center: A local study of awareness, knowledge and influence. *Journal of the American Association of School Librarians*. Retrieved 25 April 2007 from http://files.eric.ed.gov/fulltext/EJ965623.pdf

Wilson, T. D. (1981). On user studies and information needs. *Journal of Documentation, 37* (1), 3-15.

Wilson, T. D. (1999). Models in information behaviour research. *Journal of Documentation. 55* (3), 249-270.

Wilson, T. D. (2000). Human information behavior. *Information Science Research, 3,* (2), 49-55.

Wilson, T. D. & Allen, D. K. (Eds.) (1999). Exploring the contexts of information behaviour: *Proceedings of the Second International Conference on Research in Information Needs, Seeking and Use in Different Contexts. Sheffield, United Kingdom, 13-15 August 1998*. London: Taylor Graham.

Wilson, T. D. & Streatfield, D. R. (1981). Structured observation in the investigation of information needs. *Social Science Information Studies, 1* (3), 173-184.

Wilson, T. D. & Walsh, C. (1996). *Information behavior: an interdisciplinary perspective*. Sheffield: University of Sheffield, Department of Information Studies.

Witten, I. H. (2004). Digital libraries: Developing countries, universal access, and information for all. In *Digital Libraries: International Collaboration and Cross-Fertilization* (pp. 35-44). Springer Berlin Heidelberg.

World Bank Group. (2015). *Ease of Doing Business in Jordan*. Retrieved 1 March, 2016 from http://www.doingbusiness.org/data/exploreeconomies/jordan

World Economic forum. (2010). *The global competiveness report 2010-2011*. Available at: http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport2010-11.pdf

World Trade Organization. (2015). *World Trade Report 2015*. Geneva: World Trade Organization. Online report Retrieved 1 March, 2016 from https://www.wto.org/english/res_e/booksp_e/world_trade_report15_e.pdf

www.techopedia.com. (n.d.). *Definition of Information and Communications Technology (ICT)*. Retrieved 15 February, 2016 from https://www.techopedia.com/definition/24152/information-and-communications-technology-ict

www.topuniversities.com. (2016). *QS University Rankings: Arab Region 2015*. Retrieved 1 March, 2016 from http://www.topuniversities.com/university-rankings/arab-region-university-rankings/2015#sorting=rank+region=+country=103+faculty=+stars=false+search=

www.webometrics.info. (2016). *Ranking Web of Universities - Jordan*. Retrieved 1 March, 2016 from http://www.webometrics.info/en/Asia/jordan

Xuemei, G. (2005). *Information-seeking behavior of social science and humanities researchers in the internet age*. (Unpublished master's thesis). University of Tennessee, Knoxville.

Xuemei, G. (2010). Information-seeking behaviour in the digital age: a multidisciplinary study of academic researchers. *College & Research Libraries*, *71* (5), 435- 455.

Yarmouk University. (2007). *Yarmouk University Catalogue*, Yarmouk University Irbid.

Yiqian, K. W. (2006). *Information behaviours in the digital environment: a case study of humanities and social science scholars*. (Unpublished master's thesis). University of Alberta, Canada.

Yi, S. (2007). Information Seeking in Academic Research: A Study of the Sociology Faculty at the University of Wisconsin-Madison. *Information Technology and Libraries, 26 (1),* 4-10. Available at: http://proquest.umi.com/pqdlink?did=1269339441&sid=3&Fmt=3&clientId=18 803&. Accessed on the 8th April 2008.

Yitzhaki, M. & Hammershlag, G. (2004). Accessibility and use of information sources among computer scientists and software engineers in Israel: Academy versus industry. *Journal of the American Society for Information Science and Technology*, *55* (9), 832-842.

Yoo-Seong, S. (2009). Designing library services based on user needs: new opportunities to re-position the library. *World Library and Information Congress: 75ᵗʰ IFLA General Conference and Council, 23-27 August, 2009, Milan, Italy.*

Young, H. (1983). The ALA Glossary of Library and Information Science. Chicago, IL: American Library Association.

Zha, X., Wang, W., Yan, Y., Zhang, J., & Zha, D. (2015). Understanding information seeking in digital libraries: antecedents and consequences. *Aslib Journal of Information Management*, *67*(6), 715-734.

Zhang, W. (1998). Analyzing faculty and staff's information needs and use of electronic technologies: a liberal arts college's experience. *Journal of Education Media and Library Sciences, 35* (3)*,* 218-241.

Zhang, Y. (2001). Scholarly use of internet-based electronic resources. *Journal of the American Society for Information Science and Technology, 52* (8), 628-654.

LIST OF PUBLICATIONS AND PAPERS PRESENTED

PUBLICATIONS

Al Shboul, M. K. & Abrizah, A. (2015). Modes of Information Seeking: Developing Personas of Humanities Scholars. *Information Development, 0266666915627673.*

Al Shboul, M. K. & Abrizah, A. (2014). Information Needs: Developing Personas of Humanities Scholars. *Journal of Academic Librarianship, 40* (5), 500-509.

Ahmad Bakeri, A. B. & Al Shboul, M. K. (2011). *The Need for Online Resources in an Islamic University Education*. In: Information Seeking and Information Needs. IIUM Press, Kuala Lumpur, pp. 85-105. ISBN 978-9-67418-088-1.

Ahmad Bakeri, A. B. & Al Shboul, M. K. (2008). *Evaluation of Use of Online Resources in an Islamic University Education*. In: 2nd European Conference on Information Management and Evaluation, Royal Holloway University of London, 11th-12th September 2008, London, United Kingdom, pp. 11-20.

CONFERENCES

Al Shboul, M. K. & Abrizah, A. (2014). *Information Needs and Behaviour of Humanities Scholars in an ICT-Enriched Environment of an Arab Nation*. Postgraduate Research Excellence Symposium, University of Malaya, 22nd May 2013, Petaling Jaya, Selangor, Malaysia.

Al Shboul, M. K. & Abrizah, A. (2014). *Information Needs and Behaviour of Humanities Scholars in an ICT-Enriched Environment of an Arab Nation*. International Conference on Libraries, Information & Society (ICoLIS 2010: Toward greater information accessibility), University of Malaya, 9th-10th November 2010, Petaling Jaya, Selangor, Malaysia.

Ahmad Bakeri, A. B. & Al Shboul, M. K. (2008). *Evaluation of Use of Online Resources in an Islamic University Education*. In: 2nd European Conference on Information Management and Evaluation, Royal Holloway University of London, 11th-12th September 2008, London, United Kingdom.

APPENDIX A

Yarmouk University Library (Al-Husayniyyah Library)

Yarmouk University Library (YUL), known as Al-Husayniyyah Library, is situated in Irbid City, and was established in 1976. Recently, the Al-Husayniyyah library was shifted to a new building with an area of 17300 square meters, capable of holding one million items as well as 2,500 chairs. The total cost of the project is estimated at $6,000,000. Administered by 110 staffs, it assists more than 600 academic staffs, 22,000 students and 1,000,000 local communities. It holds more than half a million items in diverse knowledge perspectives and in many languages. The holdings include:

    a)   400,000 monographs

    b)   95,000 volumes of back issues of periodicals

    c)   13,000 audio-visual materials

Al-Husayniyyah library also has an active subscription to 880 periodicals and 2000 CD-ROM for numbers of old and modern daily newspapers as well as 14,000 of micro films. Al-Husayniyyah library subscribes to numbers of online databases which carry thousands of periodicals, books, full-text global theses, which is available on the Internet and in particular (EBSCO) patrol's database, and (Ebrary) database for books, and (Proquest) for university thesis. Other databases can also be found on the Library website: (http://library.yu.edu.jo). It should be noted that the library, in collaboration with the Center for Information Technology (IT), provides theses Databases off campus for the members of teaching and graduate students.

Al-Husayniyyah library adopted the Library of Congress classification system and the Anglo-American cataloging Rule 2. It provides circulation, reservation, reference services and guidance. It also has a microfilm-photocopy lab in addition to a number of photostat photocopying machines to provide photocopy services to the customers. Al-Husayniyyah library also provides British Library documents photocopy services for articles that are not available in Jordan. When talking about information technology, Al-Husayniyyah library uses the computer in almost all of its services; a home-designed system centered by Oracle Database is utilized to program the functions of the library. The systems comprise of *Order, Acquisition, Cataloging, Indexing and Abstracting, Circulation*, and *Online Public Access Catalog* (OPAC) (Yarmouk University, 2007).

Moreover, Al-Husayniyyah library uses the automated system in the global supply of the horizon, classification and loan of books, periodicals, and database system based on Oracle, one of the developments of the computer center at the university, for the cataloging and digitization of periodicals, books, and theses to provide full text services. Al-Husayniyyah library also provides over 100 computers to do searching in the library catalog, and 30 computers to do searching in the database body. In addition, there is an automated system for the blind where they can search in the library catalog and databases and the global read of full text in both Arabic and English language (http://library.yu.edu.jo). In 2004, Al-Husayniyyah library established Centre of Excellence to manage Jordanian Public University Library Information Network and to coordinate its various services and to unify the mechanisms and tools among all libraries of the assembly.

Instruments English Interview Protocols

SECTION 1: Demographic Information

1. Could you please introduce yourself, your gender, department, area of specification, mother tongue and the language you use to read, write, and teach, etc.

SECTION 2: Types of Information Resources Used to Satisfy the Information

Need

2. Could you please describe the types of information resources that are available to you in Al-Husayniyyah library and Centre of Excellence?

3. What is the nature of information resources you need for your academician tasks?

4. Which types of information resource you normally use for your academician tasks? And what are their advantages and disadvantages?

SECTION 3: Information Seeking Process

5. How have research methods and information access changed since you have begun researching? And how have these changes impacted your research?

6. What are the attitudes that attract your attention for seeking of information?

7. What are the main methods, tools, and strategies that you use to locate information and what criteria do you use for evaluating Internet resources?

8. When you begin with an exact idea, do you expect to find something on that specific topic or just something similar?

9. When you collect information, how do you organise and store it in the course of your research?

10. When you find useful sources of information, such as journal articles or books, how do you generally locate relevant information in them? (for example, do you usually just skim them reading relevant parts only, or read the whole resource) Please describe the process you normally undertake?

11. Could you please describe the steps that you use to obtain information when you begin searching for information for research and teaching purposes, if they are different between them? Do you have any idea of what information you require, or are you scanning in your field (for new information)?

12. What is the action that you usually take to obtain/gain relevant sources when you find them (e.g. ordering books or articles or printing them)?

13. Do you regularly monitor newspapers, journals and other sources for information relating to your specific areas of research? How?

14. Do you generally print Electronic resources for use in your research, or save or read them in electronic format?

SECTION 4: Barriers and Factors influence Information Behaviour

15. What are the barriers or problems you face when you try to locate and find information relevant to your needs? (for example, not knowing how to use the library resources; not sure where can locate sources, availability, accuracy and keeping up –to-date....etc)

16. What do you do regarding the barriers or problems that you face when trying to obtain materials relevant to your information needs?

17. How comfortable do you feel when you using library resources? What skills, training and knowledge do you need in order to help you to improve your access to and use of library resources, particularly electronic resources?

18. What level of training (basic or advance training) and which training methods do you prefer also? (for example, one to one, print instructions/ manuals, group sessions, etc.)

SECTION 5: Perception and Satisfaction

19. What percentages of your information needs are satisfied from Al-Husayniyyah library and Centre of Excellence resources?

20. What could Al-Husayniyyah library and Centre of Excellence do to make looking for information a more satisfying and enjoyable experience to you than others?

Note: *please feel free to add any additional comments or opinions regarding to your information needs, use, and information-seeking behaviour, and with respect to resources and services of Al-Husayniyyah library and the Centre of Excellence.*

مقابلة وجهاً لوجه باللغة العربية

سلوك الباحثين واحتياجاتهم من المعلومات في مجال العلوم الانسانية في ضل بيئة متقدمه لتكنولوجيا المعلومات و

الاتصالات في الدول العربية.

المجال الاول : البيانات الشخصية.

1. هلا رجاء قدمت نفسك , القسم , مجال التخصص , الجامعة التي تخرجت منها وسنة التخرج, رتبتك في الجامعة, الغة التي تستخدمها للكتابة ,للقراءة ,للتعليم الخ..

المجال الثاني : انواع مصادر المعلومات المستخدمه.

2. هلا وصفت لنا انواع مصادر المعلومات المتوفرة لكم في مكتبة جامعة اليرموك (مكتبة الحسين بن طلال) ومركز التميز رجاء؟

3. ما هي طبيعة حاجتك للمعلومات ونوع مصادرا تلك المعلومات التي تستخدمها ؟ وما هي مزاياها وعيوبها؟

4. أي نوع من أنواع مصادر المعلومات التي تستخدمها عادة للمهام الأكاديمي الخاص بك؟ وما هي مزاياها وعيوبها؟

القسم الثالث : عملية السعي عن المعلومات.

5. إلى أي مدى تغيرت أساليب البحث في الحصول على المعلومات منذ كنت قد بدئت البحث؟ وكيف اثرت هذه التغيرات على بحثك؟

6. ماهي المواقف والعوامل التي تجذب انتباهك للبحث عن المعلومات؟

7. ما هي المناهج الاساسية والادوات والاستراتيجيات التي تستخدمها لتحديد المعلومات وماهي المعاير التي تستخدمها لتقييم مصادر معلومات الانترنت؟

8. هل يمكن رجاء ان تصف الخطوات التي تسخدمها عند بدئك البحث عن المعلومات لاغراض البحث او التعليم وفيما اذا كان هنالك اختلاف بينهما؟ هل يكون عندك اي فكرة عن المعلومات التي تحتاجها, او انك تعمل مسح في مجال تخصصك (للمعلومات الجديدة)؟

9. عندما تبداء بفكرة معينه, هل تتوقع ان تجد شيئا معينا حول هذا الموضوع بعينه ام انك فقط تجد مجرد شيء مماثل؟

10. عند حصولك للمعلومات, كيف تقوم بتنظيمها و حفظها في سياق البحث الخاص بك؟

11. هل تقوم بانتظام بمراقبة ومتابعة الصحف, الدوريات ومصادر المعلومات المتخصصة في مجال بحثك ؟ كيف تقوم بمواكبة المستجدات من احد ث المنشورات ف مجال تخصصك؟

12. عند ايجادك لمصادر معلومات مفيدة , مثل مقالات الدوريات او الكتب, كيف تقوم بشكل عام بتحديد المعلومات ذات الصلة منها؟ (على سبيل المثال, من خلال قراءة الاجزاء ذات الصلة فقط او من خلال قراءة كامل المصدر) يرجى وصف العملية التي تقوم بها عادةً؟

13. هل تقوم عادةً بطباعة المصادر الالكترونية لتقوم با ستخدامها ببحثك؟ او انك تحفظها ام انك تقراءها بشكلها الالكتروني؟

14. في نهاية عملية السعي للمعلومة وحصولك عليها , ماهو الأجراء الذي تتبعه عادةً بهذه المعلومات عند عثورك عليها (على سبيل المثال , تستعيرها, طلب الكتب او المقالات او طباعتها الخ)؟

القسم الرابع : المعوقات والعوامل المؤثرة في عملية السعي للمعلومات.

15. ماهي المعوقات والمشكلات التي تواجهها عند محاولتك لتحديد وايجاد المعلومات ذات الصلة لحاجتك؟ (على سبيل المثال , عدم المعرفة بكيفية استخدام مصادر المكتبة , غير متأكد أين يمكن العثور على المصادر, توفرها, دقتها ,حداثتها, عدم توفر الوقت الكافي ...الخ).

16. ماذا تفعل فيما يتعلق بالمعوقات والأشكاليات التي تواجهك عند محاولتك للحصول على المواد ذات العلاقة بالمعلومت التي تحتاجها؟ (تطلب مساعدة مثلا....الخ).

17. الى أي مدى تشعر بالراحة عند استخدامك لمصادر المكتبة؟ وماهي المهارات ونوع التدريب والمعرفة التي تحتاجها لتساعدك على تحسين قدراتك للوصول وللاستخدام الافضل لمصادر المكتبه؟ ولا سيما الالكترونية منها؟

18. ماهو مستوى التدريب الذي تحتاجه على سبيل المثال (اساسي او متقدم)؟ و ماهي اساليب التدريب التي تفضلها على سبيل المثال (شخص لشخص, تعليمات مطبوعة , كتيبات , جلسات جماعية الخ)؟

القسم الخامس : التصور والرضا.

19. مامقدارتلبية حاجتك من مصادر المعلومات ومستوى الخدمة المقدمة من مكتبة جامعة اليرموك ومركز التميز؟

20. من وجهة نظرك ماذا عليها ان تفعل المكتبة الحسينة ومركز التمز لجعل عملية البحث عن المعلومات اكثر متعة وارضاء لك ؟

ملاحظة: *ارجو عدم التردد في حالة رغبتكم في اضافة اي تعليق او اي رائي فيما يتعلق بمدى حاجتك للمعلومات واستخدمها ومنهجية السعي للحصول عليها , او فيما يتعلق بمصادر وخدمات المكتبة الحسينية ومركز التميز.*

A Questionnaire Survey of Information Behaviour of Human-Science Scholars in ICT-enriched Environments of Arab Countries

Instruction: Please TICK [⟋] where appropriate.
Profile and Background Information

Section 1. Respondents' Profile and Background Information

Part (1) Demographic Information: (*Please TICK the appropriate box*)

1. Gender: ☐ Male   ☐ Female

2. Age: ☐ 30-35 years old   ☐ 36-40 years old   ☐ 41-45 years old

          ☐ 46 -50 years old   ☐ 51 -55 years old   ☐ 56 and above

3. Highest Degree Awarded:

     ☐ PhD   ☐ Master   ☐ Bachelor or equivalent

4. Academic Position:

          ☐ Lecturer   ☐ Assistant Professor

          ☐ Associate Professor   ☐ Professor

5. Country of Graduation (of Highest Degree Awarded)

          ☐ Arab World   ☐ United States   ☐ United Kingdom

          ☐ Others (please specify)…………………………….

6. Affiliated Department...

7. Years of academic experience …………………………

Part (2) Computer and Internet Use: (*Please TICK the appropriate box*)

8. Do you own a computer/laptop at the following places?

          Home: ☐ Yes   ☐ No
          Office: ☐ Yes   ☐ No

9. Do you have an International Computer Driving License (ICDL)?

     ☐ Yes   ☐ No

10. How long have you been using a computer/laptop?

☐ Less than one year   ☐ Less than two years   ☐ Less than three years

☐ Less than four years   ☐ Less than five years   ☐ More than five years

11. If you use the Internet for academic purposes since when you are using? **If you are not using, go to the third part, please.**

☐ Less than one year   ☐ Less than two years   ☐ Less than three years

☐ Less than four years   ☐ Less than five years   ☐ More than five years

12. How often do you use the Internet for academic purposes?

☐ Every day   ☐ Twice to three times a week   ☐ Once a week

☐ Once a month   ☐ Once in semester

13. Where do you prefer to access the Internet and use electronic sources?

☐ Library   ☐ Office   ☐ Internet cafe

☐ Home   ☐ Others (please specify)…………..........................

Part (3): Library Use *(Please **TICK** the appropriate box)*

14. How often do you use the followings?

Resources using	More than Once a week	Once a week	Once a month	Once in Semester	Not using
Use Al-Husayniyyah Online Public Access Catalogue (OPAC					
Use the Centre of Excellence Online Public Access Catalogue (OPAC)					
Physically visit Al-Husayniyyah library					

15. Please indicate three university libraries where you most often use the Online Catalogue?

☐ Al-Husayniyyah library Yarmouk University   ☐ Jordan University Library

☐ Jordan University of Science and Technology   ☐ Mutah University Library

☐ The Hashemite University Library   ☐ Al al-Bayt University Library

☐ Al-Balqa' Applied University Library   ☐ German-Jordan University Library

☐ Alhussein Bin Talal University Library   ☐ Tafila Technical University Library

Section 2. Need and Use of Electronic and Print Resources

16. What are the main kinds of information most **often need** to access?
   (*Please **TICK** all that apply)*

☐ Books   ☐ Journals

☐ Databases   ☐ Dissertations

☐ Government Documents   ☐ Conference Proceedings

☐ Audio-Visual materials   ☐ News papers

17. Over the last month **how often did you use** the following resources for **RESEARCH** purposes?

Sources / usage	Never	Rarely	Sometimes	Frequently	Always
Printed Books					
Printed Journals					
Online Databases					
Electronic Journals					
Electronic Books					
Directories & Search Engines: (Yahoo, Google, Lycos, etc.)					
Al-Husayniyyah OPAC					
Centre of Excellence Site					

18. Over the last month **how often did you use** the following resources for **TEACHING** purposes?

Sources / usage	Never	Rarely	Sometimes	Frequently	Always
Printed Books					
Printed Journals					
Online Databases					
Electronic Journals					
Electronic Books					
Directories & Search Engines: (Yahoo, Google, Lycos, etc.)					
Al-Husayniyyah OPAC					
Centre of Excellence Site					

19. Please indicate the importance of the following information resources in your research and teaching activities?

Resources	Not very important	Not important	Somewhat important	Important	Very important
Library OPAC					
Online Databases					
E-Books					
Internet Websites					
Online References					
E-mails					
Print materials					
Colleagues					
Personal collection					
Government archives					

20. Which of the following do you consider to be your **primary** sources of information for Undergraduate teaching? (*(Please **TICK** all that apply)*

☐ Electronic monographs   ☐ Print monographs

☐ Electronic preprints   ☐ Print preprints

☐ Electronic textbooks   ☐ Print textbooks

☐ Electronic journals   ☐ Print journals

☐ Electronic conferences proceedings   ☐ Print conferences proceedings

21. If you teaching graduate students, which of the following do you consider to be your **primary** sources of information for Graduate teaching? *(Please **TICK** all that apply)*

☐ Electronic monographs   ☐ Print monographs
☐ Electronic preprints   ☐ Print preprints

☐ Electronic textbooks   ☐ Print textbooks

☐ Electronic journals   ☐ Print journals

☐ Electronic conferences proceedings   ☐ Print conferences proceedings

22. Please rank the following information resources considered as **primary** resources of Information for research in your field. *(Please **TICK** all that apply)*

☐ Electronic monographs   ☐ Print monographs

☐ Electronic preprints   ☐ Print preprints

☐ Electronic textbooks   ☐ Print textbooks

☐ Electronic journals   ☐ Print journals

☐ Electronic conferences proceedings   ☐ Print conferences proceedings

23. If you are given the choice between examining the same document in print form or electronic form, which would you brefer? (*Please **TICK** one that apply*)

☐ Print   ☐ Electronic

Section 3. Identifying and Locating Relevant Information

---

24. Please rank the purpose for seeking information necessary to meet your professional need (**1** for most purpose, **7** for least purpose)?

	Complete research		Participate at conferences
	Prepare for class discussion and teaching		Earn new knowledge
	Exchange correspondence on publications		Check information
	Seminars / Workshops		

25. Which languages do you use when you search for information?
(*Please **TICK** all that apply*)

☐ Arabic   ☐ English   ☐ Both Arabic and English

☐ Other (*please specify*)...

26. When you search for **answers to a specific question** on the Internet, do you primarily? (*Please **TICK** one*)

☐ Enter a general query at a search engine

☐ Enter a specific query at a search engine

☐ Go to a topic specific webpage and perform a search there

☐ Searching academic databases

27. Please arrange the following **method** that you often use when you access to relevant information? (*Please read the methods listed below and place a '1' next to the method you most prefer; a '2' next to your second-most-prefer method; etc*.)

☐   [ ] Read abstract

☐   [ ] Read the important points

☐   [ ] Read chapter of book / source

☐   [ ] Read each source in full

☐   [ ] Browse the index for relevance sources

☐   [ ] Skim each source in full

☐   [ ] Skim each source for relevance and read in full later

☐   [ ] Other (please specify)..

28. When you **locate** relevant electronic information resources, do you most often?
(Please *TICK all that apply)*

☐ E-mail a copy to myself   ☐ Print a copy

☐ E-mail the webpage lik to myself   ☐ Bookmark the site

☐ Read it on screen   ☐ Read a copy in a portable medium

☐ Save a copy to the hard drive   ☐ Save a copy in a portable medium

☐ Write the information needed down on paper or in a different computer document

☐ Others (please specify)………………………………………………………

Section 4. Sources Used to Obtain Information

29. Please specify appropriate frequency **methods** for seeking information?

Methods of seeking information	Never	Rarely	Sometimes	Frequently	Always
Asking librarians or information specialists					
Attending conferences and meeting					
Reading conference and meeting papers					
Reading professional journals in my field					
Reading textbooks in my field					
Searching bibliographic databases					
Talking to colleagues or experts in my own department					
Using an Internet search engine					
Writing to a colleague or expert at another university					

30. **What methods** do you use to obtain relevant research materials?
(*Please TICK all that apply***)**

☐ Browse print journals   ☐ Browse relevant Internet resources

☐ Browse electronic journals   ☐ Browse the library catalogue

☐ Browse the shelves at the library   ☐ Search bibliographies of relevant articles

☐ References from your Colleagues   ☐ Refer to sources in your own collection

31. How do you **obtain** journal articles? (*Please TICK all that apply)*

☐ Personal print subscription   ☐ Personal subscription to e-journals

☐ Read library's copy   ☐ Photocopy library's copy

☐ Inter-library loan   ☐ Browse free e-journals

☐ Documents delivery service   ☐ Colleagues

☐ Read library's electronic version

32. Please indicate the five library resources you **currently use**?

☐ References books   ☐ Non-references books

☐ Print journals   ☐ Electronic databases

☐ Electronic journals   ☐ References services

☐ Archives   ☐ Dissertation

☐ Audiovisual   ☐ Newspapers (online or print)

☐ Inter-library loan or document retrieval

33. Which electronic databases are you aware of and you **favour to use**?
*(Please **TICK** all that apply)*

☐ ProQuest   ☐ EbscoHost   ☐ ERIC

☐ Emerald   ☐ SCOPUS   ☐ Translation journals

☐ LISA   ☐ Science Direct   ☐ Arabic library Resources

☐ Others *(please specify)*..

☐ Do not use. Why? (*Please specify the reasons*)…………………………………

Section 5. Issues faced regarding information behaviour

---

34. Do you have enough time to seek information by yourself? (*Please **TICK** one that apply*)

☐ Yes   ☐ No

35. Have you ever asked for assistance during seeking information?
(*Please **TICK** one that apply*)

☐ Yes   ☐ No

36. If yes, who did you ask for assistance? *(Please **TICK** all that apply)*

☐ Research assistant   ☐ Library assistant   ☐ My colleague

☐ Other (please specify)…………………

37. How would you evaluate your Internet searching skills? (*Please **TICK** one that apply*)

☐ Less than adequate   ☐ Adequate   ☐ Somewhat proficient

☐ Proficient   ☐ Very proficient

38. How relevant is the search result to what you are looking for? (*Please **TICK** one that apply*)

☐ Very irrelevant   ☐ Irrelevant   ☐ Sometime relevant

☐ Relevant   ☐ Very relevant

39. Have you received training on the following? (*Please **TICK** as appropriate*)

	Yes	No
Using OPAC	☐	☐
Searching CD-ROMs	☐	☐
Searching online databases	☐	☐
Searching the Internet	☐	☐

40. Would you like more training on the following? (*Please **TICK** as appropriate*)

	Yes	No
Using OPAC	☐	☐
Searching CD-ROMs	☐	☐
Searching online databases	☐	☐
Searching the Internet	☐	☐

41. How do you rate the speed of your search for electronic resources?
(*Please **TICK** one that apply*)

☐ Very slow ☐ Slow ☐ To some extent fast ☐ Fast ☐ Very fast

42. Do electronic sources meet your information need? (*Please **TICK** one that apply*)

☐ Never ☐ Rarely ☐ Sometimes ☐ Frequently ☐ Always

43. How often you can access to electronic resources? (*Please **TICK** one that apply*)

☐ Never ☐ Rarely ☐ Sometimes ☐ Frequently ☐ Always

Section 6. Perception and Satisfaction

44. To what extent from the electronic resources you are more satisfied with?
(*Please **TICK** where appropriate*)

Electronic sources	Very Dissatisfied	Dissatisfied	Somewhat Satisfied	Satisfied	Very Satisfied
E-Journal					
E-Books					
Internet Web site					
Full Text Database					

45. To what extent are you satisfied with the services provided by Al-Husayniyyah Library in meeting our information needs? (*Please **TICK** as appropriate*)

☐ Very dissatisfied ☐ Dissatisfied ☐ Somewhat satisfied

☐ Satisfied ☐ Very satisfied ☐ Do not use

46. To what extent are you satisfied with the services provided by the Centre of Excellence in meeting your information needs? (*Please **TICK** as appropriate*)

☐ Very dissatisfied ☐ Dissatisfied ☐ Somewhat satisfied

☐ Satisfied ☐ Very satisfied ☐ Do not use

47. Overall, do you agree that Al-Husayniyyah Library provides adequate access to electronic sources? (*Please **TICK** as appropriate*)

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly agree

48. Overall, do you agree that the Centre of Excellence provides adequate access to electronic sources? (*Please **TICK** as appropriate*)

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly agree

49. Overall, do you agree that Al-Husayniyyah Library provides adequate training on how to use the electronic sources? (*Please **TICK** as appropriate*)

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly agree

Thank you very much for completing this questionnaire.

استبانه لدراسة سلوك الباحثين الأكاديميين واحتياجاتهم من المعلومات في مجال العلوم الإنسانية في ظل بيئة متقدمه لتكنولوجيا المعلومات و الاتصالات في الدول العربية

التعليمات : ارجو الاشارة ب علامة صح [✓] حيث الاجابة المناسبة

القسم الأول: البيانات والخبرة الشخصية

الجزء الأول: البيانات الشخصية:(يرجى اختيار الاجابة المناسبه)

1.الجنس: ☐ ذكر   ☐ انثى

2. العمر: ☐ 30-35 عاما   ☐ 36-40 عاما   ☐ 41- 45 عاما
☐ 46-50 عاما   ☐ 51-55 عاما   ☐ 56 عاما فما فوق

3. الدرجة العلمية : ☐ دكتوراه   ☐ ماجستير   ☐ بكالوريوس أو ما يعادلها

4. بلد التخرج (لأعلى شهادة عليا): ☐ بلد عربي   ☐ الولايات المتحدة الامريكية
☐ المملكة المتحدة   ☐ بلد أخر (أرجو تحديد اسم البلد)............

5. الوظيفة الأكاديمية: ☐ محاضر   ☐ أستاذ مساعد   ☐ أستاذ مشارك   ☐ أستاذ

6. القسم الذي تتبع إليه.................................

7. سنوات الخبرة في التدريس في جامعة اليرموك.................................

الجزء الثاني: استخدام الكمبيوتر والانترنت: :(يرجى اختيار الاجابة المناسبه)

8.هل يتوفر لك حاسب الي اوحاسب محمول في الاماكن التالية؟

في المكتب : ☐ نعم   ☐ لا
في المنزل: ☐ نعم   ☐ لا

9. منذ متى وانت تستخدم الحاسب الالي / حاسب محمول؟

☐ منذ اقل من سنة   ☐ اقل من سنتين   ☐ اقل من ثلاثة سنوات
☐ اقل من اربع سنوات   ☐ اقل من خمس سنوات   ☐ اكثر من خمس سنوات

10. هل لديك رخصة قيادة الحاسوب الدولية (اي سي دي ال)؟

☐ نعم   ☐ لا

11. اذا كنت تستخدم الانترنت للأغراض الأكاديمية فمنذ متى وانت تستخدمه؟ اذا كنت لا تستخدم انتقل الى الجزء الثالث رجاء

☐ اقل من ثلاثة سنوات   ☐ اقل من سنتين   ☐ منذ اقل من سنة

☐ اكثر من خمس سنوات   ☐ اقل من خمس سنوات   ☐ اقل من اربع سنوات

12. كم عدد المرات التي تستخدم فيها الانترنت للاغراض الأكاديمية؟

☐ مرة في الاسبوع   ☐ مرتين الى ثلاثة مرات في الاسبوع   ☐ يوميا

☐ مرة واحدة في الفصل   ☐ مرة واحدة في الشهر

13. في اي مكان تفضل الدخول للانترنت واستخدام المصادر الالكترونية؟

☐ في مقهى الانترنت   ☐ في المكتب   ☐ في المكتبة

....☐ في مكان اخر (حدد رجاء)   ☐ في المنزل

الجزء الثالث: استخدام المكتبة :(يرجى اختيار الاجابة المناسبه)

14. كم مرة تقوم با ستخدام ما يلي؟

لا استخدم	مرة في الفصل	مرة في الشهر	مرة في الاسبوع	اكثر من مرة في الاسبوع	استخدام المصدر
					استخدام فهرس المكتبة الحسينية الالي
					استخدام فهرس مركز التميز الالي
					زيارة المكتبة الحسينية بشكل شخصي

15. يرجى الاشارة الى ثلاثة مكتبات جامعية تقوم عادة بالدخول لموقعها واستخدام فهارسها الالية ؟

مكتبة الجامعة الأردنية ☐   المكتبة الحسينية / جامعة اليرموك ☐

مكتبة جامعة مؤتة ☐   مكتبة جامعة العلوم والتكنولوجيا ☐

المكتبة الهاشمية/ جامعة أل البيت ☐   مكتبة الجامعة الهاشمية ☐

مكتبة الجامعة الالمانية ☐   مكتبة جامعة البلقاء ☐

مكتبة جامعة الطفيلة التقنية ☐   مكتبة جامعة الحسين بن طلال ☐

القسم الثاني:حاجة و استخدام مصادر المعلومات المطبوعة والالكترونية

16. ما هي اهم مصادر المعلومات التي تحتاج الى تصفحها والاطلاع عليها (اختر كل الاجابات المناسبه)

الدوريات	☐	الكتب	☐
الرسائل الجامعية	☐	قواعد البيانات	☐
اعمال المؤتمرات	☐	الوثائق الحكومية	☐
الصحف	☐	المواد السمعية والبصرية	☐

17. خلال الشهر الماضي, كم مرة قمت باستخدام المصادر التالية **لأغراض الكتابة البحثية؟**

دائما	متكرر	احيانا	نادرا	لا تستخدم	استخدام المصدر
					الكتب المطبوعة
					المجلات المطبوعة
					قواعد البيانات
					المجلات الالكترونية
					الكتب الالكترونية
					الادلة ومحركات البحث الالكرونية مثل (ياهو , جوجل, لايكوس...الخ)
					فهرس المكتبة الحسينية الالي
					موقع مركز التميز

18. خلال الشهر الماضي, كم مرة قمت باستخدام المصادر التالية **لأغراض التعليم؟**

دائما	متكرر	احيانا	نادرا	لا تستخدم	استخدام المصددر
					الكتب المطبوعة
					المجلات المطبوعة
					قواعد البيانات
					المجلات الالكترونية
					الكتب الالكترونية
					الادلة ومحركات البحث الالكرونية مثل (ياهو , جوجل, لايكوس...الخ)
					فهرس المكتبة الحسينية الالي
					موقع مركز التميز

19. يرجى الإشارة إلى أهمية مصادر المعلومات التالية في مجال بحثك الخاص و للاغراض التعليمية؟

مهمة جدا	مهمة	مهمة لحد ما	ليست مهمة	ليست مهمة كثيرا	المصادر
					فهرس المكتبة الالي
					قواعد البيانات
					الكتب الالكترونية
					مواقع الانترنت
					المراجع الالكترونية
					البريد الالكتروني
					المصادر المطبوعة
					الزملاء
					المجموعات الخاصة
					الارشيف الحكومي

20. ايا من مصادر المعلومات التالية يعتبر أساسي بالنسبة اليك لتدريس طلبة البكالوريوس؟
(اختر اجابة واحدة فقط)

☐ الكتب المطبوعة   ☐ الكتب الالكترونية

☐ الكتب الدراسية المطبوعة   ☐ الكتب الدراسية الالكترونية

☐ الدوريات المطبوعة   ☐ الدوريات الالكترونية

☐ المطبوعات الغير منشورة   ☐ المطبوعات الالكترونية

☐ وثائق المؤتمرات المطبوعة   ☐ وثائق المؤتمرات الالكترونية

21. اذا كنت تدرس طلبة دراسات عليا, فاي مصادر المعلومات التالية يعتبر اساسيا بالنسبة اليك لتدريسهم؟
(اختر اجابة واحدة فقط)

☐ الكتب المطبوعة   ☐ الكتب الالكترونية

☐ الكتب الدراسية المطبوعة   ☐ الكتب الدراسية الالكترونية

☐ الدوريات المطبوعة   ☐ الدوريات الالكترونية

☐ المطبوعات غير المنشورة   ☐ المطبوعات الالكترونية

☐ وثائق المؤتمرات المطبوعة   ☐ وثائق المؤتمرات الالكترونية

22. اي من مصادر المعلومات التالية يعتبر اساسي بالنسبة اليك للتعرف على البحوث في حقل تخصصك؟
(اختر اجابة واحدة فقط)

☐ الكتب المطبوعة   ☐ الكتب الالكترونية

☐ الكتب الدراسية المطبوعة   ☐ الكتب الدراسية الالكترونية

☐ الدوريات المطبوعة   ☐ الدوريات الالكترونية

☐ المطبوعات غير المنشورة   ☐ المطبوعات الالكترونية

☐ وثائق المؤتمرات المطبوعة   ☐ وثائق المؤتمرات الالكترونية

23. لو اعطيت الخيار للحصول على وثيقة مطبوعة او الكترونية , فايهما تفضل؟

(اختر اجابة واحدة فقط)

☐ المطبوعة   ☐ الإلكترونية

القسم الثالث: طريقة الوصول للمعلومات المناسبة للبحث والتدريس

24. يرجى ترتيب سبب سعيك للحصول على المعلومات اللازمة لتلبية حاجتك المهنية؟ (1 الاهم - 7 الاقل اهمية).

لاستكمال كتابة بحث	
للمشاركة في المؤتمرات	
للحلقات الدراسية/ ورش العمل	
الاعداد للمناقشة والتعليم الصفي (للمحاضرات الصفية)	
تبادل المراسلات للمطبوعات	
لأكتساب معارف جديدة	
للتحقق من المعلومات	

25. ماهي اللغة التي تستخدمها عند البحث عن المعلومات؟ *(يمكنك اختيار اكثر من اجابة)*

☐ الغة العربية   ☐ الغة الانجليزية   ☐ الغة العربية والانجليزية   ☐ الغة اخرى (حددها)..........

26. عند بحثك عن اجابة لسؤال محدد على الانترنت , فاي الطرق التالية تتبعها للحصول على هذه الاجابة؟
(اختر اجابة واحدة فقط)

☐ طباعة تساؤل عام في محرك البحث

☐ طباعة تساؤل دقيق في محرك البحث

☐ الذهاب الى مواقع متخصصة بموضوع محدد والبحث فيها

☐ البحث في قواعد بيانات أكاديمية متخصصه

27. اختر الاسلوب الذي تتبعه غالبا في استخدامك لمصادر المعلومات ذات العلاقة بمجال تخصصك؟ قم بترتيب ثلاثة اساليب فقط ورقمهم 3,2,1 حسب اهميتهم لك.

☐ [ ] قراءة الملخص

☐ [ ] قراءة النقاط ذات الأهمية في المصدر

☐ [ ] قراءة فصل من الكتاب/ المصدر

☐ [ ] قراءة المصدر كاملأ

☐ [ ] تصفح الكشاف لقراءة مصادر اخرى ذات علاقة بالموضوع

☐ [ ] تصفح المصدر كاملا

☐ [ ] تصفح المصدر كاملا لقرائته كاملا فيما بعد

☐ [ ] اسلوب اخر, (حدده رجاء)....................................

351

28 عند تحديدك لمصادر المعلومات الالكترونية ذات الصلة ببحثك , ما هوالاسلوب الذي تتبعه ؟
(يمكنك اختيار اكثر من اجابة)

☐ طباعة نسخة ورقية منها   ☐ ارسال نسخة منها لبريدك الالكتروني

☐ حفظها في وسائط التخزين   ☐ ارسال رابط الصفحة الى بريدك الالكتروني

☐ قراءتها من على وسيلة الكترونية اخرى   ☐ قراءتها من على شاشة الحاسب

☐ حفظ الرابط في قائمة المفضلات   ☐ حفظ نسخة في جهاز الحاسب

☐ كتابة المعلومات المطلوبة على الورق او في وثيقة الكترونية اخرى (مثلا: الورد)

☐ اخرى (الرجاء تحديدها)...

القسم الرابع: استخدام المصادر للحصول على المعلومات

---

29. الرجاء تحديد التكرار المناسب لاسلوب طلب المعلومات التي تستخدمها في مجال تخصصك؟

دائما	متكرر	احيانا	نادرا	لا استخدم	اسلوب طلب المعلومات
					سؤال احد المكتبيين أوالمتخصصين في مجال المعلومات
					حضور مؤتمر او لقاء علمي
					قراءة أوراق المؤتمرات واللقاءات العلمية
					قراءة الدوريات المتخصصة المحكمة
					قراءة الكتب الدراسية في مجال تخصصي
					البحث في قواعد البيانات الببليوغرافية
					الحديث مع احد الزملاء أو الخبير في القسم الذي اعمل به
					البحث في محركات البحث المتاحة عبر الانترنت
					الكتابة الى احد الزملاء او الخبراء من جامعة اخرى

30. أيا منالاساليب التالية تتبعها للحصول على المعلومات ذات العلاقة ببحثك؟ (اختر جميع الاجابات المناسبة)

☐ تصفح مصادر الانترنت ذات العلاقة   ☐ تصفح الدوريات المطبوعة

☐ تصفح فهرس المكتبة   ☐ تصفح الدوريات الالكترونية

☐ البحث في الببلوغرافيات المتخصصة   ☐ تصفح رفوف المكتبة

☐ مراجع من الزملاء   ☐ البحث في مجموعتك الخاصة

☐ اخرى (الرجاء تحديدها)...

31. ماهي الطريقة التي تتبعها للحصول على مقالات الدوريات؟ *(اختر جميع الاجابات المناسبة)*

☐ بالاشتراك الشخصي بالدوريات الالكترونية   ☐ بالاشتراك الشخصي بالدوريات المطبوعة

☐ نسخ المقال من الدوريات الموجودة بالمكتبة   ☐ قراءة النسخة الموجودة بالمكتبة

☐ تصفح الدوريات الالكترونية المجانية   ☐ عن طريق الإعارة المتبادلة بين المكتبات

☐ قراءة النسخة الالكترونية الموجودة بالمكتبة   ☐ عن طريق خدمة ارسال المقالات

☐ اخرى (الرجاء تحديدها).........................   ☐ عن طريق طلبه من الزملاء

32. حدد من بين القائمة التالية اكثر خمس مصادر معلومات من المكتبة تستخدمها حاليا؟ *(اختر الاجابات المناسبة)*

☐ الكتب الغير مرجعية   ☐ الكتب المرجعية

☐ قواعد البيانات الالكترونية   ☐ الدوريات المطبوعة

☐ الخدمات المرجعية المسترجعة   ☐ الدوريات الالكترونية

☐ الرسائل الجامعية   ☐ الأرشيف

☐ الصحف (المطبوعة والالكترونية)   ☐ المواد السمعية والبصرية

☐ اخرى (الرجاء تحديدها).............   ☐ الاعارة المتبادلة

33. أي من قواعد البيانات التالية التي انت على علم بها وتفضل استخدامها؟ *(اختر جميع الاجابات المناسبة)*

ProQuest ☐   EbscoHos ☐   ERIC ☐

Emerald ☐   SCOPUS ☐   Translation Journals ☐

LISA ☐   Science Direct ☐   ☐ مكتبة المصادر العربية

☐ أخرى (الرجاء تحديدها)..

☐ لا استخدم قواعد البيانات (الرجاء ذكر الأسباب)..

القسم الخامس: العقبات والصعوبات التي تواجهها في البحث عن المعلومات

34. هل لديك الوقت الكافي للحصول على المعلومات بنفسك؟ *(اختر اجابة واحدة فقط)*

☐ نعم   ☐ لا

35. هل قمت بطلب المساعدة في اي وقت مضى خلال بحثك عن المعلومات؟ *(اختر اجابة واحدة فقط)*

☐ نعم   ☐ لا

36. اذا كان جوابك نعم, فمن من طلبت المساعدة؟ *(اختر كل الاجابات المناسبه)*

☐ مساعد باحث   ☐ مساعد المكتبة   ☐ زميلك   ☐ اخر (رجاء حدد)...............

37. كيف تقيم مهارتك في البحث عن المعلومات من خلال استخدام الانترنت ؟ *(اختر اجابة واحدة فقط)*

☐ ضعيف   ☐ مقبول   ☐ متوسط   ☐ متقن   ☐ متقن جد

38. الى اي حد كانت نتائج البحث ذات صلة لما كنت تبحث عنه من معلومات؟ *(اختر اجابة واحدة فقط)*

☐ لاصلة لها بالموضوع اطلاقا   ☐ لاصلة لها بالموضوع   ☐ الى حد ما لها صلة بالموضوع

☐ ذات صلة بالموضوع   ☐ لها صلة كبيرة بالموضوع

39. هل تلقيت تدريبا على ما يلي؟ *(اختر جميع الاجابات المناسبة)*

لا	نعم	
☐	☐	استخدام الفهرس الآلي
☐	☐	البحث في الاقراص المكتنزه
☐	☐	البحث في قواعد البيانات
☐	☐	البحث في الانترنت

40. هل ترغب بالمزيد من التدريب فيما يلي؟ *(اختر جميع الاجابات المناسبة)*

لا	نعم	
☐	☐	استخدام الفهرس الآلي
☐	☐	البحث في الاقراص المكتنزه
☐	☐	البحث في قواعد البيانات
☐	☐	البحث في الانترنت

41. كيف تقيم سرعتك في البحث عن المعلومات الالكترونية؟ *(اختر اجابة واحدة فقط)*

☐ بطيئة جدا   ☐ بطيئة   ☐ الى حد ما سريعة   ☐ سريعة   ☐ سريعة جدا

42. هل تلبي المصادر الالكترونية حاجتك من المعلومات ؟ *(اختر اجابة واحدة فقط)*

☐ ابدا   ☐ نادرا   ☐ احيانا   ☐ غالبا   ☐ دائما

43. هل يمكنك تصفح المصادر الالكترونية بشكل كامل ؟ *(اختر اجابة واحدة فقط)*

☐ ابدا   ☐ نادرا   ☐ احيانا   ☐ غالبا   ☐ دائما

44. ما درجة رضاك عن المصادر الالكترونية التالية؟ (اختر جميع الاجابات المناسبة)

نوع المصادر الالكترونية	مستاء جدا	مستاء	راض الى حد ما	راض	راض جدا
المجلات الالكترونية					
الكتب الالكترونية					
مواقع الانترنت					
قواعد بيانات النص الكامل					

45. ما درجة رضاك عن الخدمات التي تقدمها المكتبة الحسينية فيما يتعلق بتلبيتها لحاجتك من المعلومات ؟ (اختر اجابة واحدة فقط)

☐ مستاء جدا   ☐ مستاء   ☐ راض الى حد ما   ☐ راض   ☐ راض جدا

46. ما درجة رضاك عن مركز التميز فيما يتعلق بتلبيته لحاجتك من المعلومات ؟ (اختر اجابة واحدة فقط)

☐ مستاء جدا   ☐ مستاء   ☐ راض الى حد ما   ☐ راض   ☐ راض جدا

47. الى اي مدى تؤيد بان المكتبة الحسينة توفر الفرصة المناسبة للوصول للمصادر الالكترونية؟ (اختر اجابة واحدة)

☐ اعارض بشدة   ☐ اعارض   ☐ معتدل   ☐ اوافق   ☐ اوافق بشدة

48. الى اي مدى تؤيد بان مركز التميز يوفر الفرصة المناسبة للوصول للمصادر الالكترونية؟ (اختر اجابة واحدة فقط)

☐ اعارض بشدة   ☐ اعارض   ☐ معتدل   ☐ اوافق   ☐ اوافق بشدة

49. الى اي مدى تؤيد بان المكتبة الحسينية توفر التدريب الكافي لكيفية استخدام المصادر الالكترونية؟ (اختر اجابة واحدة فقط)

☐ اعارض بشدة   ☐ اعارض   ☐ معتدل   ☐ اوافق   ☐ اوافق بشدة

شكرا لك كثيرا على حسن تعاونك في الاجابة على اسئلة الاستبانة

APPENDIX F
Informed Consent to participate in a Dissertation
(English Face-to-face Interview)

Faculty of Computer Science and Information Technology, University of Malaya

Informed Consent for Interview of Human-Science Scholars

Title of Research: Information Behaviour of Human-Science Scholars in ICT-Enriched Environments of Arab Countries

Researcher: Mohammad Khaled Issa Al Shboul

Supervisor: Dr Abrizah Abdullah

You are invited to participate in a research study investigating the information behaviour of Humanities Scholars in ICT-enriched environments at Yarmouk University. This research project sets out (1) To understand the information needs and behaviour of humanities scholars in an ICT-enriched environment of a developing Arab nation.; (2) To ascertain the information needs and information tasks performed by the humanities scholars for teaching and research; (3) To identify the barriers encountered by the humanities scholar while they seek for and use information for teaching and research; and (4) To investigate the relationship between demographics information and the humanities scholars information-seeking processes.

The study also provides an opportunity for the Chief of Al-Husayniyyah Library and the Centre of Excellence at YU particularly and other library managers to increase their awareness of ways in which they can support human-science scholars, particularly with regard to the types of information resources, training and assistance needed by human-science scholars.

Kindly be informed that if you decide to participate, the researcher will invite you to a face-to-face interview at any location convenient to you. The interview will be audio taped and transcribed by researcher. The interview will include a number of questions regarding to your expertise in using the electronic and non-electronic sources for your research and teaching purposes. The interview is expected to take about 45 minutes to an hour. Furthermore, please note that your identity will be completely confidential; only the researcher will have access to the data and the interview will be assigned a code number to conceal your identity and will be saved in a safety cupboard and erased when the study is over.

Dear participant, you are always welcome to ask any questions at any time. Should you feel the need for further information or any enquiry, I will be more than happy to respond to you. You can kindly contact me via my E-mail below.

Could you please sign this form to demonstrate that you have agreed to volunteer as a research participant in this research and that you have understood its content.

_____

Your signature: Date:

Name:

E-mail:

Thank you for your cooperation.

Mohammad Khaled Issa Al Shboul
Researcher (PhD Candidate)
Department of Library and Information Science
Faculty of Computer Science and Information Technology
University of Malaya
E-mail: al_hareth8@siswa.um.edu.my
Phone: 0799546165

Informed Consent to participate in a Dissertation

(Arabic Face-to-face Interview)

<div dir="rtl">

اشعار بالموافقة على المشاركة في المقابلة

الباحث: محمدخالد عيسى الشبول- طالب دكتوراه بقسم المكتبات وعلم المعلومت –كلية علوم الحاسوب وتكنولوجيا المعلومات – جامعة الملايا في كوالا لامبور- ماليزيا

عنوان الرسالة: سلوك الباحثين الاكاديميين واحتياجاتهم من المعلومات في مجال العلوم الانسانية في ضل بيئة متقدمه لتكنولوجيا المعلومات و الاتصالات في الدول العربية.

ارجو التكرم بالمشاركة في الاجابة على سئلة الاستبانة والتي تدور حول سلوك الباحثين الاكاديميين واحتياجاتهم من المعلومات في مجال العلوم الانسانية في ضل بيئة متقدمه لتكنولوجيا المعلومات والاتصالات في جامعة اليرموك . حيث تهدف هذه الرسالة الى التحقيق في الاساليب والطرق التي يتبعها الباحثون في العلوم الانسانية للحصول على المعلومات واستخداماتها لتلبية احتياجاتهم. تحديد نوع وقناة مصادر المعلومات المستخدمة , مع اشارة خاصة للمصادر الالكترونية وفعالية البيئة الاكترويى في سلوكيات باحثي العلوم الانسانية عن المعلومات. تحديد الصعوبات والاشكاليات التي يواجهها باحثي العلوم الانسانية في عملية سعيهم للمعلومات. لاستكشاف تصوروادراك باحثي العلوم النسانية لخدمات المعلومات المقدمه من قبل المكتبة الحسينية ومركز التميز ومدى رضاهم عن هذه الخدمات جراء اسخدامهم لها. كذالك فان نتائج هذه الدراسة ستقدم الفرصه لرئيس المكتبة الحسينيه ولمدير مركز التميز على وجه الخصوص ومدراء المكتبات ومراكز المعلومات عموما لزيادة وعيهم بالطرق التي يمكن من خلالها دعم باحثي العلوم الانسانية, ولاسيما فيما يتعلق بانواع مصادر المعلومات ومن التدريب والتاهيل والمساعدة التي يحتاجها باحثي العلوم الانسانية لضمان الاستفادة القصوى من مصادر المعلومات .

</div>

يرجى العلم بأنه إذا قررت المشاركة, فان الباحث يدعوكم لاجراء هذه المقابلة في أي مكان مناسب لكم وسوف تكون مقابلة صوتية مسجلة ومنسوخة من قبل الباحث. وسوف تشمل هذه المقابلة عدد من الأسئلة المتعلقة بخبرتكم في أستخدام المصادر الالكترونية وغير الالكترونية في بحوتكم وللاغراض التعليمية. من المتوقع أن تاخذ المقابلة حوالي 45 دقيقة.علاوة على ذالك , يرجى ملاحظة ان هويتك ستكون سرية تماما, والباحث فقط هو من يطلع على هذه البيانات وهذه المقابلة سوف يتم تعين رمز لها لاخفاءهويتك وسيتم حظ هذه البيانات في خزانة أمنه لحين ألأنتهاء من هذه الدراسة ثم يتم اتلافها.

عزيزي المشارك , ستكون دائما مرحبا بك لطرح اي سؤال ا او اي استفسار وفي اي وقت تشعر أنك بحاجة للمزيد من المعلومات عن هذه الدراسة وسوف أكون أكثر من سعيد للرد عليكم , يمكنكم رجاء الاتصال بي عبرعنوان البريد الالكتروني ادناه.

الرجاء التوقيع ادناه على هذا الاشعار اقرارا منك بالموافقة على ما جاء فيه من نقاط وعلى تطوعك بالاجابة على اسئلة المقابلة .

توقيع المشارك:

اسم المشارك:

عنوان البريد الالكتروني للمشارك:

التاريخ:

شكرا لتعاونكم

محمد خالد عيسى الشبول

البريد الالكتروني: al_hareth8@siswa.um.edu.my

هاتف: 0799546165

Informed Consent to Participate in a Dissertation
(English Questionnaire Survey)

Faculty of Computer Science and Information Technology, University of Malaya

Informed Consent for Interview Human-Science Scholars

Title of Research: Information Behaviour of Human-Science Scholars in ICT-Enriched Environments of Arab Countries

Researcher: Mohammad Khaled Issa Al Shboul

Supervisor: Dr. Abrizah Abdullah

You are invited to participate in a research study investigating the information behaviour of Humanities Scholars in ICT-enriched environments at Yarmouk University. This research project sets out (1) To understand the information needs and behaviour of humanities scholars in an ICT-enriched environment of a developing Arab nation.; (2) To ascertain the information needs and information tasks performed by the humanities scholars for teaching and research; (3) To identify the barriers encountered by the humanities scholar while they seek for and use information for teaching and research; and (4) To investigate the relationship between demographics information and the humanities scholars information-seeking processes.

This study is also provide a great opportunity for Chief of Al-Husayniyyah Library and the Chief of Centre of Excellence at YU to increase their awareness of ways in which they can support human-science scholars at YU, particularly with regard to the types of information resources, training and assistance needed by human-science scholars.

Kindly be informed that the questions in this survey require you to answer by ticking the applicable boxes or writing a short answer. You may complete the questionnaire questions within two weeks from the date of receipt. Please contact me upon completion, and I will personally come to collect the questionnaire from you. In addition, you might send some follow-up questions to clarify your answers. However, please note that response to these clarifying questions is not mandatory, but are most encouraged.

Please also note that this survey will not be individually identifying. All completed questionnaires will be assigned to code numbers to your identity. The questionnaires will also be kept in a safety cupboard where only the researcher has access to it.

For further information and requires, you may e-mail me at al_hareth8@siswa.um.edu.my. Please sign this form to demonstrate that you have agreed to volunteer as a questionnaire participant in this research and that you have understood its content?

Thank you for your kind co-operation.

Your signature: Date:

Name:

E-mail:

Thank you for your cooperation.

Mohammad Khaled Issa Al Shboul
Researcher (PhD Candidate)
Department of Library and Information Science
Faculty of Computer Science and Information Technology
University of Malaya
E-mail: al_hareth8@siswa.um.edu.my
Phone: 0799546165

إشعار بالموافقة على المشاركة في الاستبانة

الباحث: محمدخالد عيسى الشبول- طالب دكتوراه بقسم المكتبات وعلم المعلومت –كلية علوم الحاسوب وتكنولوجيا المعلومات – جامعة الملايا في كوالا لامبور- ماليزيا

عنوان الرسالة: سلوك الباحثين الاكاديميين واحتياجاتهم من المعلومات في مجال العلوم الانسانية في ظل بيئة متقدمه لتكنولوجيا المعلومات و الاتصالات في الدول العربية

أرجو التكرم بالمشاركة في الاجابة على أسئلة الاستبانة والتي تدور حول سلوك الباحثين الاكاديميين واحتياجاتهم من المعلومات في مجال العلوم الانسانية في ظل بيئة متقدمه لتكنولوجيا المعلومات والاتصالات في جامعة اليرموك . حيث تهدف هذه الرسالة الى التحقيق في الاساليب والطرق التي يتبعها الباحثون في العلوم الانسانية للحصول على المعلومات واستخداماتها لتلبية احتياجاتهم. تحديد نوع وقناة مصادر المعلومات المستخدمة , مع اشارة خاصة للمصادر الالكترونية وفعالية البيئة الاكترونية في سلوكيات باحثي العلوم الانسانية عن المعلومات. تحديد الصعوبات والاشكاليات التي يواجهها باحثو العلوم الانسانية في عملية سعيهم للمعلومات. لاستكشاف تصور و ادراك باحثي العلوم الانسانية لخدمات المعلومات المقدمه من قبل المكتبة الحسينية ومركز التميز ومدى رضاهم عن هذه الخدمات جراء اسخدامهم لها. كذالك فان نتائج هذه الدراسة ستقدم الفرصه لرئيس المكتبة الحسينيه ولمدير مركز التميز على وجه الخصوص ومدراء المكتبات ومراكز المعلومات عموما لزيادة وعيهم بالطرق التي يمكن من خلالها دعم باحثي العلوم الانسانية, ولاسيما فيما يتعلق بانواع مصادر المعلومات ومن التدريب والتاهيل والمساعدة التي يحتاجها باحثي العلوم الانسانية لضمان الاستفادة القصوى من مصادر المعلومات .

يرجى العلم بأن الاسئلة الواردة في هذه الاستبانة تتطلب منك الاجابة عن طريق التاشير على المربع ذو الاجابة المناسبة او عن طرق كتابة جواب قصير . يمكنك اكمال اجابة الاستبانه في غضون اسبوعين من تاريخ استلامها.الرجاء الاتصال بالباحث عند الانتهاء من الاجابة. والباحث شخصيا سوف يأتي لجمع الاستبيان منك مشكورا. وبالاضافة لذلك وبالاعتماد على اجابتك فانه سوف يطلب منك الاجابة على بعض الاسئلة التوضيحية والتي سوف ترسل اليك في وقت لاحق علما بانك لست مجبرا على الاجابة على هذه التوضيحات ولكنه كتشجيع منكم.

يرجى ملاحظة ان هويتك ستكون سرية تماما, والباحث فقط هو من يطلع على هذه البيانات وهذه الاستبانه سوف يتم تعين رمز لها لاخفاءهويتك وسيتم حفظ هذه البيانات في خزانة أمنة بحيث لايستطيع احد الوصول اليها الا الباحث بنفسه و حين الانتهاء من هذه الدراسة سوف يتم اتلاف جميع هذه البيانات.

عزيزي المشارك , ستكون دائما مرحبا بك لطرح اي سؤال او أي أستفسار وفي أي وقت تشعر بانك بحاجة للمزيد من المعلومات عن هذه الدراسة وسوف اكون اكثر من سعيد للرد عليكم , يمكنك رجاء الاتصال بي عبر عنوان البريد الاكتروني ادناه.

الرجاء التوقيع ادناه على هذا الاشعار اقرارا منك بالموافقة على ما جاء فيه من نقاط وعلى تطوعك بالاجابة على اسئلة هذه الاستبانه.

توقيع المشارك:

اسم المشارك:

عنوان البريد الالكتروني للمشارك:

التاريخ:

شكرا لتعاونكم

محمد خالد عيسى الشبول
البريد الالكتروني: al_hareth8@siswa.um.edu.my
هاتف: 0799546165

.

Table for Determining Sample Size from a Given Population

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	2400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	348
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	228	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

N is population size. S is sample size. Degree of accuracy = 0.05

Table formulated by:

Krejcie, R. V. and Morgan, D. W. (1970). Determining Sample Size for Research Activities, *Educational and Psychological Measurement*, 30 (Autumn), p. 608.

291

APPENDIX K
Informed Consent to Use Face Photo in a Dissertation - Ibrahim

Faculty of Computer Science and Information Technology, University of Malaya
Informed Consent for Interview Human Science Scholars

Title of Research: Information Behaviour of Human Science Scholars in Advanced I.C.T Environments of Arab Countries

Researcher: Mohammad Khaled Issa Al Shboul
Dissertation Advisor: Dr. Abrizah Abdullah

I have conducted interviews for my Doctorate study to investigate the information behaviour of Humanities Scholars in advance I.C.T environment at Yarmouk University. One of the requirements of the analysis and finding in the study is that the need to use face photo in the Persona identity method.

Therefore, with a high pleasure, I am pleased to inform that you have been selected as a lucky person whose face photo is going to be used as a Persona identity based on our tele-conversation before. I will assign a hypothetical name to your face photo as a Persona identity.
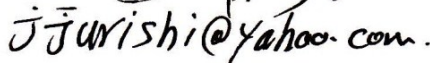
Please sign this form to demonstrate that you have agreed to permit the usage of your face photo as a Persona identity in the analysis and finding of my Doctorate study. Please be informed that the usage of the face photo is strictly for academic purpose only.

For further information and enquiry, you may e-mail me at al_hareth8@siswa.um.edu.my

Thank you for your permission and kind co-operation.

Name: _____

E-mail: Jjurishi@yahoo.com.

Date:

18/5/2014

Mohammad Khaled Issa Al Shboul
Researcher (PhD Candidate)
Department of Library and Information Science
Faculty of Computer Science and Information Technology
University of Malaya

Faculty of Computer Science and Information Technology, University of Malaya
Informed Consent for Interview Human Science Scholars

Title of Research: Information Behaviour of Human Science Scholars in Advanced I.C.T Environments of Arab Countries

Researcher: Mohammad Khaled Issa Al Shboul
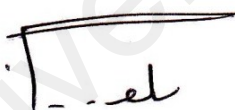**Dissertation Advisor:**   Dr. Abrizah Abdullah

I have conducted interviews for my Doctorate study to investigate the information behaviour of Humanities Scholars in advance I.C.T environment at Yarmouk University. One of the requirements of the analysis and finding in the study is that the need to use face photo in the Persona identity method.

Therefore, with a high pleasure, I am pleased to inform that you have been selected as a lucky person whose face photo is going to be used as a Persona identity based on our tele-conversation before. I will assign a hypothetical name to your face photo as a Persona identity.

Please sign this form to demonstrate that you have agreed to permit the usage of your face photo as a Persona identity in the analysis and finding of my Doctorate study. Please be informed that the usage of the face photo is strictly for academic purpose only.

For further information and enquiry, you may e-mail me at al_hareth8@siswa.um.edu.my

Thank you for your permission and kind co-operation.

Date: 26/5/2014

Name: د. يا سين أحمد بني
E-mail: yasin 148 @ hotmail.com

Mohammad Khaled Issa Al Shboul
Researcher (PhD Candidate)
Department of Library and Information Science
Faculty of Computer Science and Information Technology
University of Malaya

Faculty of Computer Science and Information Technology, University of Malaya
Informed Consent for Interview Human Science Scholars

Title of Research: Information Behaviour of Human Science Scholars in Advanced I.C.T Environments of Arab Countries

Researcher: Mohammad Khaled Issa Al Shboul
Dissertation Advisor: Dr. Abrizah Abdullah

I have conducted interviews for my Doctorate study to investigate the information behaviour of Humanities Scholars in advance I.C.T environment at Yarmouk University. One of the requirements of the analysis and finding in the study is that the need to use face photo in the Persona identity method.

Therefore, with a high pleasure, I am pleased to inform that you have been selected as a lucky person whose face photo is going to be used as a Persona identity based on our tele-conversation before. I will assign a hypothetical name to your face photo as a Persona identity.

Please sign this form to demonstrate that you have agreed to permit the usage of your face photo as a Persona identity in the analysis and finding of my Doctorate study. Please be informed that the usage of the face photo is strictly for academic purpose only.

For further information and enquiry, you may e-mail me at al_hareth8@siswa.um.edu.my

Thank you for your permission and kind co-operation.

Date: 3/6/2014

Name: سوزان خالد لشبول
E-mail: souzanalshboul175@yahoo.com

Mohammad Khaled Issa Al Shboul
Researcher (PhD Candidate)
Department of Library and Information Science
Faculty of Computer Science and Information Technology
University of Malaya

Informed Consent to Use Face Photo in a Dissertation - Ahmad

Faculty of Computer Science and Information Technology, University of Malaya
Informed Consent for Interview Human Science Scholars

Title of Research: Information Behaviour of Human Science Scholars in Advanced I.C.T Environments of Arab Countries

Researcher: Mohammad Khaled Issa Al Shboul
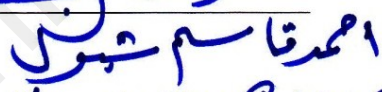**Dissertation Advisor:** Dr. Abrizah Abdullah

I have conducted interviews for my Doctorate study to investigate the information behaviour of Humanities Scholars in advance I.C.T environment at Yarmouk University. One of the requirements of the analysis and finding in the study is that the need to use face photo in the Persona identity method.

Therefore, with a high pleasure, I am pleased to inform that you have been selected as a lucky person whose face photo is going to be used as a Persona identity based on our tele-conversation before. I will assign a hypothetical name to your face photo as a Persona identity.

Please sign this form to demonstrate that you have agreed to permit the usage of your face photo as a Persona identity in the analysis and finding of my Doctorate study. Please be informed that the usage of the face photo is strictly for academic purpose only.

For further information and enquiry, you may e-mail me at al_hareth8@siswa.um.edu.my

Thank you for your permission and kind co-operation.

Date: 25/5/2014

Name: احمد قاسم شبول
E-mail: ah_qasim@yu.edu.jo

Mohammad Khaled Issa Al Shboul
Researcher (PhD Candidate)
Department of Library and Information Science
Faculty of Computer Science and Information Technology
University of Malaya

APPENDIX O
Description of Academic Ranks in Yarmouk University, Jordan

Rank	Description
Lecturer	a) Must possess a Master degree. b) Will be promoted to Assistant Professor after awarded with Doctorate degree.
Assistant Professor	a) Must possess a Doctorate degree. b) In the professional fields such as medicine, the followings are required: i) Must have a first degree or equivalent. ii) Must have professional qualification of not less than the duration of the study for two years after the university degree, or experience in the field of scientific research, or iii) Must have a working experience or practice of at least four years.
Associate Professor	a) Must fulfill the requirement of the Assistant Professor. b) Must serve as an assistant professor for at least four years. c) Must publish valuable contribution to the advancement of knowledge or field's specialization after his appointment to the rank of Assistant Professor. d) Special consideration will be considered to be appointed as an Associate Professor to: i) Who does not hold an assistant professor rank, but have a Doctorate degree, and has contributed exemplary work and research that has contributed to the advancement of knowledge in his field, and has spent at least eight years of professional practice.
Professor	a) Must fulfill the requirement of the Assistant Professor. b) Must serve as an associate professor for at least four years. c) Must publish valuable contribution to the advancement of knowledge or field's specialization after his appointment to the rank of Associate Professor. d) Special consideration will be considered to be appointed as a Professor to: i) Who does not hold an associate professor rank, but have a Doctorate degree, and has contributed exemplary work and research that has contributed to the advancement of knowledge in his field, and has spent at least twelve years of professional practice.

**Summary of Four Personas According To the Proposed Model
and Presented Theme**

		ATTENTION
		Theme 1: Humanities scholars' information needs are triggered by information events
	Abdullah	Conferences & seminars, Invisible college / informal communication, Classroom discussion, Mass media.
	Bakeri	Conferences & seminars, Invisible college / informal communication, Classroom discussion, Reading.
	Fatimah	Conferences & seminars, Invisible college / informal communication, Classroom discussion, Browsing the Internet.
	Ismail	Conferences & seminars, Invisible college / informal communication, Classroom discussion, Communication with ex-research supervisors, Browsing the Internet.
		KNOWING THE AVAILABILITY OF INFORMATION RESOURCES
		Theme 2: Humanities scholars have different level of awareness regarding the availability of information resources and services
	Abdullah	Partially awareness of library sources, Ignorance of the Internet sources & services.
	Bakeri	Fully awareness of library sources, Ignorance of the Internet sources & services.
	Fatimah	Fully awareness of library sources, Familiarity with Internet sources & services.
	Ismail	Fully awareness of library sources, Familiarity with Internet sources & services.
		Theme 3: Humanities scholars have the need for receiving information in the right form, location and understandable language
	Abdullah	Printed resources, Home-office, Arabic language.
	Bakeri	Printed resources, University office, Arabic language.
	Fatimah	Electronic resources, University office, Arabic & English language.
	Ismail	Electronic resources, University office, Arabic & English language.
		IDENTIFICATION OF INFORMATION NEED
Passive Seeking		***Theme 4: Humanities scholars oriented themselves on known materials based on context of use***
		i. Personal Information Environment
	Abdullah	Oriented themselves to use their personal experience & background for searching purposes.
	Bakeri	Oriented themselves to use their personal experience & background for searching purposes, Oriented themselves to use their own printed collection for searching purposes.
	Fatimah	Oriented themselves to use their own electronic resources for research purposes.
	Ismail	Oriented themselves to use their own electronic resources & gateway for research purposes.
		ii. Al-Husayniyyah library Information Sources & Services
	Abdullah	Oriented themselves to use Al-Husayniyyah printed resources for teaching purposes.
	Bakeri	Oriented themselves to use Al-Husayniyyah printed resources for teaching purposes, Oriented themselves to use Al-Husayniyyah printed & electronic resources for searching purposes.
	Fatimah	Oriented themselves to use Al-Husayniyyah printed & electronic resources for teaching purposes, Oriented themselves to use Al-Husayniyyah printed & electronic resources for searching purposes, Oriented themselves to use Al-Husayniyyah (OPAC) for information on specific research topic.
	Ismail	Oriented themselves to use Al-Husayniyyah printed & electronic resources for teaching purposes, Oriented themselves to use Al-Husayniyyah electronic resources for searching purposes, Oriented themselves to use Al-Husayniyyah (OPAC) for information on specific research topic.
		iii. People as Information Sources
	Abdullah	N/A
	Bakeri	Oriented themselves to contact similar research interests & concerns for awareness of current research,
	Fatimah	Oriented themselves to contact similar research interests & concerns for awareness of current research,
	Ismail	Oriented themselves to contact similar research interests & concerns for awareness of current research, Oriented themselves to contact their previous supervisors for research purpose.

		iv. External Electronic Information Sources
	Abdullah	N/A
	Bakeri	N/A
	Fatimah	N/A
	Ismail	Oriented themselves to use external universities electronic resources for research purpose.
		Theme 5: Humanities scholars have different motivation for information needs
		i. Research Information Needs
	Abdullah	Need for current research information topics & activities for specific authors, Need for particular publications in the research field, Need general current academic research information & its trend.
	Bakeri	Need general current academic research information & its trend.
	Fatimah	Need general current academic research information & its trend, Need for information on how to conduct a new research, Need information to enrich & refine research by consulting colleagues.
	Ismail	Need general current academic research information & its trend, Need information to enrich & refine research by consulting colleagues.
Passive Seeking		***ii. Teaching Information Needs***
	Abdullah	N/A
	Bakeri	N/A
	Fatimah	Need for current information in the field that they teach.
	Ismail	Need for updating information on the curriculum from other universities, Need for current information in the field that they teach.
		iii. Information Literacy Needs
	Abdullah	N/A
	Bakeri	Need information for confirming or verifying information that are already known.
	Fatimah	Need information for checking students' plagiarism.
	Ismail	Need information for checking students' plagiarism, Need to clarify the information that are already known.
		iv. Inter-Personal Information Needs
	Abdullah	N/A
	Bakeri	Need feedback on information from colleagues on personal presented research.
	Fatimah	Need feedback on information from colleagues on personal presented research, Need a moral support from colleagues who have similar topic of interest.
	Ismail	Need feedback on information from colleagues on personal presented research.
		Theme 6: Humanities scholars have a different affirmative outlook of changing information search methods
	Abdullah	Lack of awareness of changing information search methods.
	Bakeri	Partial awareness of changing information search methods.
	Fatimah	Fully awareness of changing information search methods.
	Ismail	Fully awareness of changing information search methods.

		DECISION TO SEEK INFORMATION (INITIATION)	
		Theme 7: Humanities scholars have a variant decision for information-seeking	
	Abdullah	Fully independent seekers (printed resources), Entirely dependent seekers (electronic resources).	
	Bakeri	Fully independent seekers (printed resources), Entirely dependent seekers (electronic resources).	
	Fatimah	Fully independent seekers (printed resources), Semi-independent seekers (electronic resources).	
	Ismail	Fully independent seekers (printed resources), Semi-independent seekers (electronic resources).	
		EXPLORATION	
		Theme 8: Personas exploration stages are in different order	
	Abdullah	Searching in his own collection > track references (Chaining citation) author & publisher reputation, date of publication, importance > browsing the collection of library shelves > contact a publisher > subscribe some materials.	
	Bakeri	OPAC > library shelves > reference citations > Google > colleagues & friends.	
	Fatimah	Colleagues & friends > OPAC > search engine (Google) > track references (Chaining citation) > subscribe to some academic electronic databases.	
	Ismail	Google search engine > own electronic collection, Gateway > bibliographic references > OPAC > Al-Husayniyyah Library collection > Centre of Excellence > consults a number of senior academicians & his overseas supervisor.	
		MONITORING	
		Theme 9: Personas acknowledge the importance of monitoring stage	
Active Seeking	**Abdullah**	Searching index & abstracts citations & references in reading materials > communicating with colleagues & friends; Book reviews > monitoring particular author; Attending conferences > visiting bookstores & book exhibitions > contact publisher > browsing library shelves > subscribing printed books & journals.	
	Bakeri	Searching index & abstracts citations & references in reading materials > communicating with colleagues & friends; Attending conferences > visiting bookstores & book exhibitions > contact publisher > browsing library shelves > subscribing printed books & journals; Searching & browsing online catalogues.	
	Fatimah	Searching index & abstracts citations & references in reading materials > communicating with colleagues & friends; Searching & browsing online catalogues; Browsing Internet & search engine (Google Scholar) > revisiting preferred websites & Centre of Excellence website > subscribing electronic databases.	
	Ismail	Searching index & abstracts citations & references in reading materials > communicating with colleagues & friends; Searching & browsing online catalogues; Browsing Internet & search engine (Google Scholar) > revisiting preferred websites & Centre of Excellence website > subscribing electronic databases; Communicating with previous overseas supervisor > scanning the public media.	
		ACCESSING	
		Theme 10: Personas use different methods for accessing desired materials	
		i. Tool (Method)	
	Abdullah	Colleagues & friends (Borrow, make a copy); Own collection shelves (Reading own copy of collection & writing down the importance notes in special cards); Travelling (Buy the resource / make a copy); Library shelves (Read a free library copy & use inter-library loan request); Publisher (Buy the resource, subscribe).	
	Bakeri	Colleagues & friends (Borrow, make a copy); Library shelves (Read a free library copy & use inter-library loan request); Publisher (Buy the resource, subscribe); Online catalogues (Reading abstract of the resource, print the online articles); Online resources (Read from the screen, bookmark, download, subscribe to electronic databases & print a copy).	
	Fatimah	Colleagues & friends (Borrow, make a copy); Online catalogues (Reading abstract of the resource, print the online articles); Online resources (Read from the screen, bookmark, download, subscribe to electronic databases & print a copy); Internet (Read from the screen, bookmark, download & print a copy); Google Scholar (Read from the screen, bookmark, download and print a copy); Academic website (Read from the screen, bookmark, download & print a copy); Centre of Excellence website (Read from the screen, bookmark, download & print a copy).	

	Ismail	Colleagues & friends (Borrow, make a copy); Online catalogues (Reading abstract of the resource, print the online articles); Online resources (Read from the screen, bookmark, download, subscribe to electronic databases & print a copy); Internet (Read from the screen, bookmark, download & print a copy); Google Scholar (Read from the screen, bookmark, download and print a copy); Academic website (Read from the screen, bookmark, download & print a copy); Centre of Excellence website (Read from the screen, bookmark, download & print a copy); Own gateway (Read from the screen, bookmark, download & print a copy); Previous overseas supervisors (Download & print a copy); Public media (Download).
Active Seeking	**CATEGORIZATION**	
	Theme 11: Personas have similar methods for categorization of the desired printed materials	
	Abdullah	Evaluated & classified the sources regarding to its relevance & usefulness to their subject > Organized the resources in physical folders / binders by subject (general to specific & relevance to research topic) > Labelled by subject headings, author name & temporal chronological order > Stored at home library / office
	Bakeri	
	Fatimah	
	Ismail	
	Theme 12: Personas have different methods for categorization of the desired electronic materials	
	Abdullah	Related (closely related & nearly related) > Usefulness & quality > Belong to sub-title > Labelled by subject headings, author name & temporal chronological order
	Bakeri	Related (closely related & nearly related) > Usefulness & quality > Belong to sub-title > Labelled by subject headings, author name & temporal chronological order
	Fatimah	Related (closely related & nearly related) > Usefulness & quality > Belong to sub-title > Labelled by subject headings, author name, temporal chronological order & location of resources.
	Ismail	Related (closely related & nearly related) > Usefulness & quality > Belong to sub-title > Labelled by subject headings, author name, temporal chronological order & location of resources.
	PURIFICATION	
	Theme 13: Senior & junior Persona have different purification stages	
	Abdullah	Read abstract > Read introduction > Read conclusion > Skim index & table of content > Read main points > Read particular chapter / part > Read entire material.
	Bakeri	Read abstract > Read introduction > Read conclusion > Skim index & table of content > Read main points > Read particular chapter / part > Read entire material.
	Fatimah	Read abstract > Skim table of content > Read main notes > Skim resource for relevance & read it later > Read particular chapter / part > Browse index of relevant resource > Read entire material.
	Ismail	Read abstract > Skim table of content > Read main notes > Skim resource for relevance & read it later > Read particular chapter / part > Browse index of relevant resource > Read entire material.
	SATISFACTION	
	Theme 14: Personas have a similar reaction of satisfaction	
	Abdullah	Directly obtain the resources & write down on a card or at a margin of the resources.
	Bakeri	Directly obtain the resources & write down on a card or at a margin of the resources.
	Fatimah	Directly obtain the resources & highlight the important information to be used later.
	Ismail	Directly obtain the resources & highlight the important information to be used later.

BARRIERS AFFECTING INFORMATION BEHAVIOUR	
Theme 15: Personas have variation of barriers that affect their information-seeking	
i. Problem with the library resources	
Abdullah	Poor organization of resources.
Bakeri	Poor organization of resources; Limited accessibility; Lack of resources in specialized field; Difficulty in tracking the resources.
Fatimah	Poor organization of resources; Limited accessibility; Library restrictions; Impractical classification of resources; Lack of resources in specialized field.
Ismail	Poor organization of resources; Limited accessibility; Library restrictions; Impractical classification of resources.
ii. Barriers in the university environment	
Abdullah	Inadequate funding; Insufficient of time.
Bakeri	Inadequate funding.
Fatimah	Inadequate funding; Prolonged assessment process of journal publication.
Ismail	Inadequate funding.
iii. Personal barriers	
Abdullah	IT skills; Abundant online information retrieval; Cultural constraint.
Bakeri	IT skills; Abundant online information retrieval; Personal conviction.
Fatimah	N/A
Ismail	N/A
BARRIERS AFFECTING INFORMATION BEHAVIOUR	
Theme 16: Personas have variation of reactions for problem solving in information-seeking	
Abdullah	Contacting the authors / publishers; Asking their secretary, family members & others
Bakeri	Contacting the authors / publishers; Asking their colleagues & friends; Asking their secretary, family members & others; Asking university librarian
Fatimah	Contacting the authors / publishers; Asking their colleagues & friends; Asking university librarian; Individual membership & subscription to electronic academic resources
Ismail	Contacting the authors / publishers; Asking their colleagues & friends; Asking university librarian; Asking their overseas supervisors; Using other library websites; Finding a similar information