INFORMATION-SEEKING BEHAVIOR OF SOCIAL SCIENCES SCHOLARS: A NIGERIAN CASE STUDY

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ABSTRACTS

This article examines the information-seeking behavior of scholars in the social sciences, based on the premise that information-seeking behavior follows universally applicable stages and patterns worldwide. The study was conducted at the Nigerian Institute of Social and Economic Research (NISER). Fifty eight active social sciences scholars were interviewed via a questionnaire about their information sources for research and consultancy purposes, their preference for electronic or printed formats, their use of electronic or Internet resources, and how they meet or satisfy their information needs, among others.

Results show that journals and books were the most preferred information sources, and a large majority of scholars "regularly" used electronic information resources for their research and consultancy needs. The findings of the study also demonstrate diverse usage patterns for electronic information resources among users of different academic ranks and age range.

Based on the research findings, the author provides suggestions on how current information services and products can be improved to better serve the users. The author also makes recommendations for improving library services and technologies to better meet the information needs of social sciences scholars in general.

Key words: *Information-seeking behavior, social sciences scholars, information sources, electronic information resources, library, NISER*

INTRODUCTION

Several studies that investigate the information-seeking behavior of social sciences scholars within the last two decades were carried out in the developed countries, and were based on Ellis's model or similar models that are explicit revisions of Ellis's model. David Ellis was the first to model the process of information-seeking behavior of social scientists- he described six fundamental stages of their information seeking- *starting, chaining, browsing, differentiating, monitoring, and extracting.*

Additionally, in most of the previous studies, the social sciences scholars investigated were those that had among others, the responsibility to teach courses in their schedule of work. Thus, the information-seeking behavior of this category of scholars was certainly influenced by the afore-mentioned responsibility. In the light of this, the present study takes a clear view of the information-seeking behavior of social sciences scholars in a developing country who focus almost entirely on research and consultancy without recourse to teach in their schedule of work. While the study is not based on a clear-cut categorization of the stages of an information-seeking model, it elicits findings that have bearing to information derived from the literature.

LITERATURE REVIEW

There are several concepts of information-seeking behavior in the literature. Wilson's (2000) investigation of human information behavior revealed that information-seeking behavior is the purposive seeking for information as a consequence of a need to satisfy some goal. Wilson also described information-seeking behavior as the totality of human behavior in relation to sources and channels of information, including both active and passive information-seeking, and information use.

Krikelas (1983) examined the patterns and concepts of information-seeking behavior. He defined information-seeking behavior 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).

During the 64th IFLA General Conference held in Amsterdam, Ucak and Kurbanoglu (1998) presented a paper on the "Information Need and Information Seeking Behavior of Scholars at Hacettepe University, Turkey." The paper reported that research results in the areas of user studies indicate that the information seeking behavior of scholars are dependent on their field of research and vary from one discipline to another. Ucak and Kurbanoglu further reported that as for choices for reference sources, social scientists and humanities prefer encyclopedias and dictionaries to handbooks; and bibliographies to indices and abstracts. Availability seems to be the most important factor for choosing the periodicals in all the disciplines they surveyed. Similarly, Sethi (1990) surveyed 256 social science faculty members in Indian universities. The study found that respondents preferred journals, books, government documents and reference services to fulfill their information needs as opposed to indexing and abstracting sources, book reviews, conference proceedings, dissertations and theses, newspaper clippings and non-book sources that are in lesser use. Sethi's study further revealed that academic staffs consider seminars and conferences as the third important source of information after journals and books.

Shokeen and Kushnik (2002) studied the information-seeking behavior of social scientists working in the universities located in Haryana. They reported that most of the social scientists visit the library daily. The preferred methods of searching the required information were by searching through indexing and abstracting periodicals, and citations in articles respectively. Sheeja (2010) carried out a comparative study of information-seeking behavior and user perceptions of academic researchers in science and social sciences in India. He reported that social sciences scholars are dissatisfied with the effectiveness of the library in keeping them up to date with latest developments.

In another study on the information-seeking behavior of the social sciences faculty at Kuwait University, Marouf and Mumtaz (2010) reported that the respondents heavily depend on books and journals for teaching and on a larger variety of materials for research purposes. Their use of informal sources is comparatively less than formal sources. Among the informal sources, conferences, subject experts, and colleagues are given higher importance than librarians and government officials. Journals and books are used more frequently than raw data, technical reports, and manuscripts and primary materials. Their satisfaction level with all the sources is positive but higher for journals and books. The level of satisfaction with informal sources is slightly higher than formal sources. Their library use is very low with complaints about the quality of staff, resources, especially in Arabic, and access to international resources.

Francis (2005) focused on a study that described the information-seeking behavior of social sciences faculty at the University of West Indies (UWI). She reported that social scientists prefer journal articles in electronic format over print. In their study of Web searching behavior of high school students, Fidel et. al, (1999) noted that the present era is the era of information and knowledge revolution. Many electronic resources are available in the library. The increase in information available on the Web has affected information-seeking behavior. Innumerable types of information, in a large variety of containers, and in many different locations, are all available in one place. Ge's multidisciplinary study focused on the information-seeking behavior of academic researchers in the digital age, and revisited David Ellis's model of information-seeking of social scientists (Ge, 2010). He noted that the study of electronic information-seeking behavior in the social sciences dates back to the 1980s but David Ellis was the first to model the process of information-seeking behavior of social scientists. Ellis described six fundamental characteristics of information seeking practiced by social scientists: *starting, chaining, browsing, differentiating, monitoring, and extracting*. Ge also noted that Ellis's comparison of the different activities reported by social scientists led to the conclusion that these six categories were sufficient to represent the different information-seeking patterns of social science researchers. However, in his book, *Looking for*

Information, Case (2002) indicates that the Ellis model makes no claim of considering the many factors and variables generally involved in information seeking. For example, the type of need and what sort of information or "help" might satisfy it, or the availability of sources and their characteristics.

Ge also reported that among the eight types of electronic information resources, the Web was used by 96.7% of his study participants for research information-gathering; databases were used by 90.0% of the participants; e-mail was used by 88.3% while the least used electronic information resources were FTP (30.0%). Moreover, the most frequently used electronic information resources were also the Web with 48% of the users claiming they visited the Web as an information-gathering tool daily or multiple times a day. Forty percent of e-mail users interviewed used e-mail as an information-gathering tool daily or multiple times a day while the least frequently used electronic information resources are the FTP, which were rarely used by more than 75 percent of the study participants. The study data shows that the number of years of use does not necessarily relate to frequency of usage.

Al-Suqri (2007) investigates the information needs and information-seeking behaviors of Social Sciences scholars at Sultan Qaboos University (Oman), as an example of a developing country in the Middle East. He reported that the respondents make increasing use of electronic resources but retain a preference for print materials and informal sources of information. The findings also showed that the social sciences scholars face three main types of barriers to information seeking which may be different from those faced by their counterparts in Western countries. These include: (a) limited availability of resources, especially full text resources; (b) poor Internet connection speeds or Internet availability; and (c) a lack of sufficient Arabic language sources. In addition, the information-seeking practices are found to vary with age, academic rank, and academic department or college.

Al-Suqri (2011) further revealed that several studies have also provided evidence of the ways in which the information-seeking behavior of social scientists is being changed by the availability of Information Technology and electronic resources. He stated that a review by Folster (1995) of early studies of information-seeking among social sciences researchers concluded that this group placed little value on computerized services and informal sources, preferring to use printed books and journals. Later researchers however, have provided evidence that social sciences faculty make extensive use of electronic resources in their research, and that information technology is having a major impact on their patterns of communication and information-seeking behavior (Costa & Meadows, 2000; Meho & Haas, 2001; and Shen, 2007).

Al-Suqri (2011) actually developed an integrated model of social science information-seeking behavior based on a synthesis of established models. The synthesized model describes a pattern of information-seeking behavior that includes eight generic stages: *initiation, exploration, monitoring, categorization, sifting, selecting resources, collecting, and ending.*

- **Initiation –** at this stage, the researcher recognizes a need for information, becomes aware of a lack of knowledge and understanding, and begins searching for information from various sources in order to resolve this feeling of uncertainty. In Al-Suqri's study, for respondents to ensure that they have adequate skills and knowledge to be able to use the resources that will be required to meet their information needs, some engage in seeking advice from information specialists (e.g. reference librarian) or other experts, while others gain familiarity with particular sources of information, such as databases.
- **Exploration** is the actual search for information on a topic, and involves understanding basic concepts and identifying related personal and social factors that affect the process and its outcomes. Within the process of exploring different resources, many respondents reported relying initially on their own personal collections, or seeking the advice of colleagues, and then moving unto more impersonal sources such as the Internet for more focused searches. Conversely, others started with the Internet, for reasons including the vast amount of information

available, and the flexibility and ease of use. Yet for some, personal experience is always the first source before they turn to the Internet to narrow down their research topics.

- **Monitoring** is the process by which scholars stay informed of new information in their field of interest by regularly following published sources or keeping in touch with personal contacts. Overall, it was found that monitoring of relevant sources is commonly and regularly used among most participants in Al-Suqri's study, across all specialist areas. In most cases, it takes the form of regularly reviewing journals in their subject areas, as well as browsing on-line reference sources. Many respondents also claim that they do monitor the Internet and e-journals by making a regular check of what is available on the Internet and also checking the new issues of e-journals. They also check table of contents, indexes, and review websites available on-line. Some respondents reported being very proactive in their monitoring of new information, not only by checking published sources but by contacting colleagues and even writing established experts in the field to check for updated information. Attending conferences was mentioned as another way of keeping up to date with developments in one's specialist field.
- **Categorizing** consists of using known differences between sources to evaluate information and clarify issues. At this stage, the location as well as the format of information is important to the process of categorizing the information obtained. Respondents in Al-Suqri's study mostly reported relatively well-developed methods of categorizing and storing their research information, and it was evident that individuals had established practices which they generally followed when conducting research. With regard to printed sources, these were generally organized in physical folders or binders, labeled with subject headings and stored in the respondent's office or at home, with some form of referencing or documentation to enable the respondents to locate the information easily.
- **Sifting** involves going through information resources and identifying relevant material from them. It was found that nearly all respondents employed a process of skimming key elements of resources, which provided them with a concise overview of what the resource contained, and its key points. These included, for example, the table of contents, the index, and the abstract. Sometimes, they also read the introduction and conclusions to glean the key points. In the case of some respondents, this process was often found to be sufficient to provide them with all the information they needed, while others used this process to guide them to the relevant parts of the resource that they should read. Although few respondents read the whole resource immediately, a common practice was to skim it initially, and to save useful resources for complete reading at a later stage, when searching was complete.
- **Resource Selection** involves choosing the most relevant information sources that will be used to meet the information need. In this stage, scholars choose the specific resources that will be used in the research. An important consideration in this process is to judge the quality and validity of the information, particularly information that is retrieved from the Internet. Respondents reported using the sifting process described above to make judgments about whether certain resources are likely to be useful for their research, skimming the abstract or table of contents, for example. Their existing knowledge of the author or journal is also important in the resource selection process, with priority being given to well-known, reputable sources.
- **Collection** involves the actual task of gathering selected information that addresses the information need. The respondents in Al-Suqri's study were split in terms of their preferences for obtaining relevant resources immediately or waiting until a later stage. Those who ordered articles immediately claimed that this strategy saved time and prevented the possibility that they would not be able to find the resource at a later stage. However, others highlighted the advantages of being able to select only

the most relevant resources to order, if they waited until all their searches were complete.

The majority of respondents also expressed the view that they preferred to print documents out rather than reading them from the computer screen. A practical advantage of this approach cited by some respondents was that it offered them the flexibility of being able to read the resources in any location or at any time.

- **Ending** refers to the completion of the search and the generation of an output based on the research, such as a lecture, publication, conference paper or other output. A good number of the respondents made the point that the end purpose of the search needs to be clearly defined at the outset in order to ensure that appropriate material and information is collected to achieve this purpose. According to them, this should be decided before searching or seeking for information because in some ways it will impact what resources someone should search, and how much information someone needs.

Nigerian Institute of Social and Economic Research (NISER)

The Nigerian Institute of Social and Economic Research (NISER) is a semi-autonomous, national policy research institution. NISER consists of three research departments namely, Surveillance & Forecasting, Economic Policy Research, and Social & Governance Policy Research. Although it is a parastatal institution, it enjoys independent status, gained in 1977 and reinforced by its academic origins as a research institution of the University of Ibadan.

NISER headquarters is permanently located in Ibadan, with two liaison offices in Abuja and Lagos and six zonal offices in Akure, Bauchi, Enugu, Minna, Port-Harcourt and Sokoto. The Institute is headed by a Director-General, who is the Chief Executive, and it has 9 management staff, 189 non-research staff, and 65 research staff. All the researchers are located at the headquarters of the Institute.

The functions of the Institute are to:

- provide consultancy services to the Federal and State Governments, their agencies and organizations, in the field of economic and social development;
- conduct research into the economic and social problems of the country with a view to the applications of the results thereof;
- organize seminars and conferences on problems of economic and social development in the country, whether on its own accounts or on behalf of the Government of Nigeria or their agencies; and
- cooperate with Nigerian universities, and research institutions and other institutions in the mobilization of the country's research potentials for the task of national development and dissemination of research findings for the use of policy makers at all levels.

The potential users of NISER's research outputs are the public sector in general and the Federal Government in particular, primarily through the National Planning Commission. Other users include members and committees of the National Assembly, the Senate and the private sector.

NISER library consists of Books and Serial sections as well as offices and workrooms. The Books section is located on the ground floor and houses books and monographs on social sciences. Books are arranged on open shelves according to Dewey Decimal Classification scheme. There is also recent accession shelf where new books are displayed. The information display board is at the lobby. Collection in Books section includes books, pamphlets, reprints, maps, annual reports, and conference and seminar papers.

The Serial section is located on the first floor. All government publications (gazettes included), daily newspapers, magazines, press library containing newspapers clippings and over 900 journals subscribed to by the library are found on this floor. Like books, journals are

also arranged according to Dew Decimal scheme and can be located either by the title or (call number, if it is known) through the Kalamazoo record with the help of the Library assistants at the circulation desk. Only current issues of journals are displayed and these are found at the slanted part of the racks.
Government publications (including gazettes) are classified according to GWAN scheme of classification and arranged on the shelves in alphabetical order of Federal Departments, States and within each State according to subject.
Articles of research interests are arranged in files according to subjects and put on shelves. Readers are advised to seek help from the Library Assistants in order to have access to the press library.
The card catalogue is a detailed index to the library's book collection. It is divided into author, title and subject. Cards at the Author/Title entries are interfiled but the catalogue at all the levels (Author, title, and subject) are filed alphabetically word by word.

METHODS

The study was based on questionnaire administered to the social sciences scholars, all of whom have their offices located at the headquarters of the Institute. At the time of data collection in May-June 2013, there were about 65 scholars at the Institute, distributed throughout the three research Departments and representing a range of academic ranks. However, 60 scholars were available for sampling - thus the questionnaire was administered to all – and 58 completed and returned their questionnaire. This represents a response rate of 97%, an acceptable level of response in survey research.
The questionnaire was structured and comprised 20 closed-ended questions, 9 of which were rated on the Likert scale. The questions were also developed from domains that emerged from the literature in concert with the researcher's experience. The first three questions measured the demographics of the respondents while questions 4 through 8 sought their information sources. Questions 9 to 11 asked the respondents whether they prefer journal articles in electronic or printed format and how often and frequently they use electronic or Internet resources. Questions 12 through 19 sought to know how the respondents meet or satisfy their information needs; the way they organize and store information; their approaches to reading a whole document or requesting for a relevant article, and whether they judge the quality and validity of information resources before using them. The last question sought to clarify whether the respondents clearly define the end-purpose of their search at the outset.

FINDINGS

Demographics

The respondents were diverse in terms of gender, rank, department and age. Of the 58 respondents, 52(89.7%) were male and 6(10.3%) female. While there were 10(17.2%) Research Professors, 11(19.0%) Associate Research Professors, 13(22.4%) Senior Research Fellows, 14(24.1%) Research Fellow I, 8(13.8%) Research Fellow II, only 2(3.4%) were Junior Research Fellows.
23(39.7%) respondents are in Social and Governance Policy Research Department, 22(37.9%) are in the Department of Economic Policy Research, while 13(22.4%) are in Surveillance & Forecasting Department
Frequency distribution of respondents' age range showed that 11(19.0%) are within 31-40 years, 26(44.8%) are within 41-50 years, 15(25.9%) are within 51-60 years, while 6(10.3%) are above 60 years.

Preferred Information Sources

Respondents were asked about information sources for research and consultancy. Journals and books were the most preferred information sources. Book reviews, abstracts, indexes,

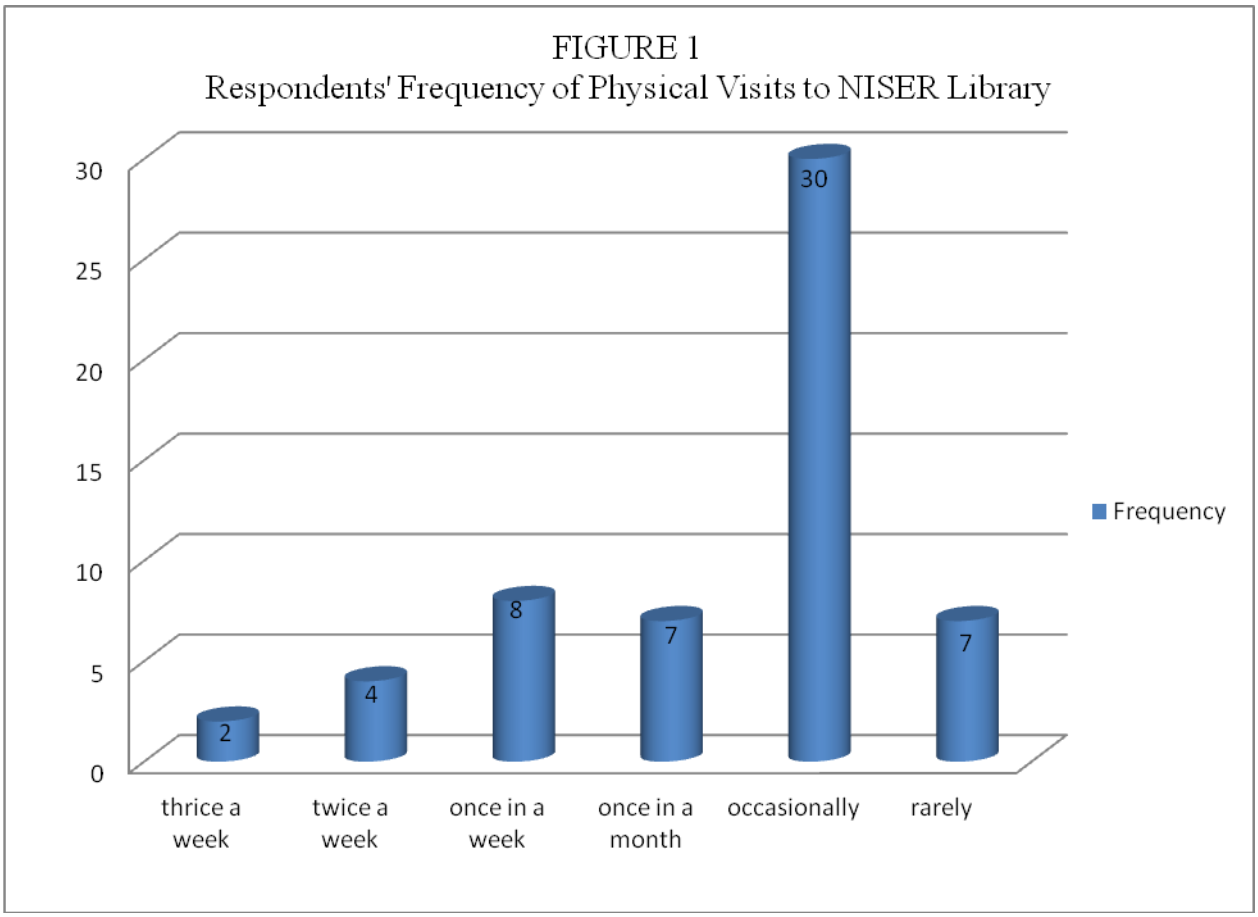
conference proceedings, government documents, dissertation and theses, and newspaper clippings were also preferred information sources.

Preferred Reference Sources

In a related question, respondents were asked to indicate the reference sources they preferred most. The majority (53.4%) preferred bibliographies, while abstracts (10.3%) and encyclopedias (12.1%) were the least preferred sources.

Visits to NISER Library

Figure 1 (bar chart) shows that a simple majority of the respondents (30; 51.7%) visited NISER library occasionally, while 8(13.8%) visited once in a week, and 7(12.1%) do so once in a month. It is interesting to note that 7(12.1%) respondents rarely visited the NISER library.



Importance Rankings of Informal Sources

On a five-point scale (1 being the least important and 5 being the most important), conferences received the highest ranking, with a score of 4.5 on average, thus qualifying it as the most important popular informal source for research and consultancy.

Subject experts and colleagues were ranked second and third respectively in importance. Government officials were rated fourth while librarians were rated the least important.

Use of Electronic Information Resources in Research and Consultancy

The data obtained from the social sciences scholars provides insight into the role of electronic information resources in their information-seeking behaviors. The following categories were examined during the study;

Frequency of Use of Electronic Information Resources.

A large majority of the respondents (53; 91.4%) "regularly" used electronic information resources for research and consultancy. The rest used these resources "occasionally" for the same purpose.

Frequency of Use of Internet Resources.

Table 1 shows that more than 90 percent of the social sciences scholars visited the web for information-gathering on a daily or multiple times a day basis and almost all scholars used e-mail for the same purpose daily or multiple times a day. However, less than 10 percent read listservs daily or multiple times a day while almost 75 percent rarely used this resource. Further, more than 40 percent of database users accessed them daily or multiple times a day. Interestingly, more than one-quarter of the scholars rarely accessed databases for research and consultancy purposes. In addition, more than 50 percent of e-journal users accessed e-journals daily or multiple times a day whereas online catalogs were not frequently used because about 70 percent rarely used the resource. Portals and FTP were not frequently used as well. More than 75 percent and almost 90 percent of the researchers rarely used the resources respectively.

TABLE 1

Frequency of Respondents' Use of Internet Resources for Research & Consultancy

Internet Resources	Multiple Times a Day	Daily	Weekly	Monthly	Rarely
Web(www)	36(62.1%)	20(34.5%)	2(3.4%)	0	0
E-mail	38(65.5%)	19(32.8%)	1(1.7%)	0	0
Listervs	3(5.2%)	2(3.4%)	8(13.8%)	2(3.4%)	43(74.1%)
Database	11(19.0%)	13(22.4%)	8(13.8%)	10(17.2%)	16(27.6%)
E-Journals	15(25.9%)	16(27.6%)	11(19.0%)	5(8.6%)	11(19.0%)
On-line catalogs	2(3.4%)	4(6.9%)	8(13.8%)	4(6.9%)	40(69%)
Portals	2(3.4%)	6(10.3%)	5(8.6%)	1(1.7%)	44(75.9%)
FTP	3(5.2%)	4(6.9%)	0	0	51(87.9%)

Use of Electronic Resources vs Use of Print Resources

Respondents were asked to give an estimate of the percentage of their research and consultancy needs being satisfied by print and electronic information resources. Overall, the respondents used electronic resources to satisfy more than 60 percent of such needs, and consequently used print sources for the remaining 40 percent. Indeed, many scholars displayed a marked preference for electronic resources over print.

Use of Print vs Electronic Resources by Rank and Age Range

The findings of the study demonstrate diverse usage patterns for electronic information resources among users of different academic ranks. Junior Research Fellows, Research Fellows, Senior Research Fellows, and Associate Professors are more enthusiastic users of electronic information resources, relying on electronic resources more heavily than print resources. In particular, Junior Research Fellows use electronic resources about twice (70%) as much as Research Professors (36%) to satisfy their research and consultancy needs (see fig 2). Presumably, these junior researchers are younger and more comfortable with emerging technologies as demonstrated by data on the influence of age on scholars' use of electronic information resources (fig 3). The data revealed that scholars not more than 50 years approached electronic information resources much more than their older counterparts. Indeed, those above 60 years use electronic resources to satisfy only 42 percent of their needs.

FIGURE 2
Percentage of Research & Consultancy Needs satisfied by Print vs. Electronic Resources for Different Academic Rankings

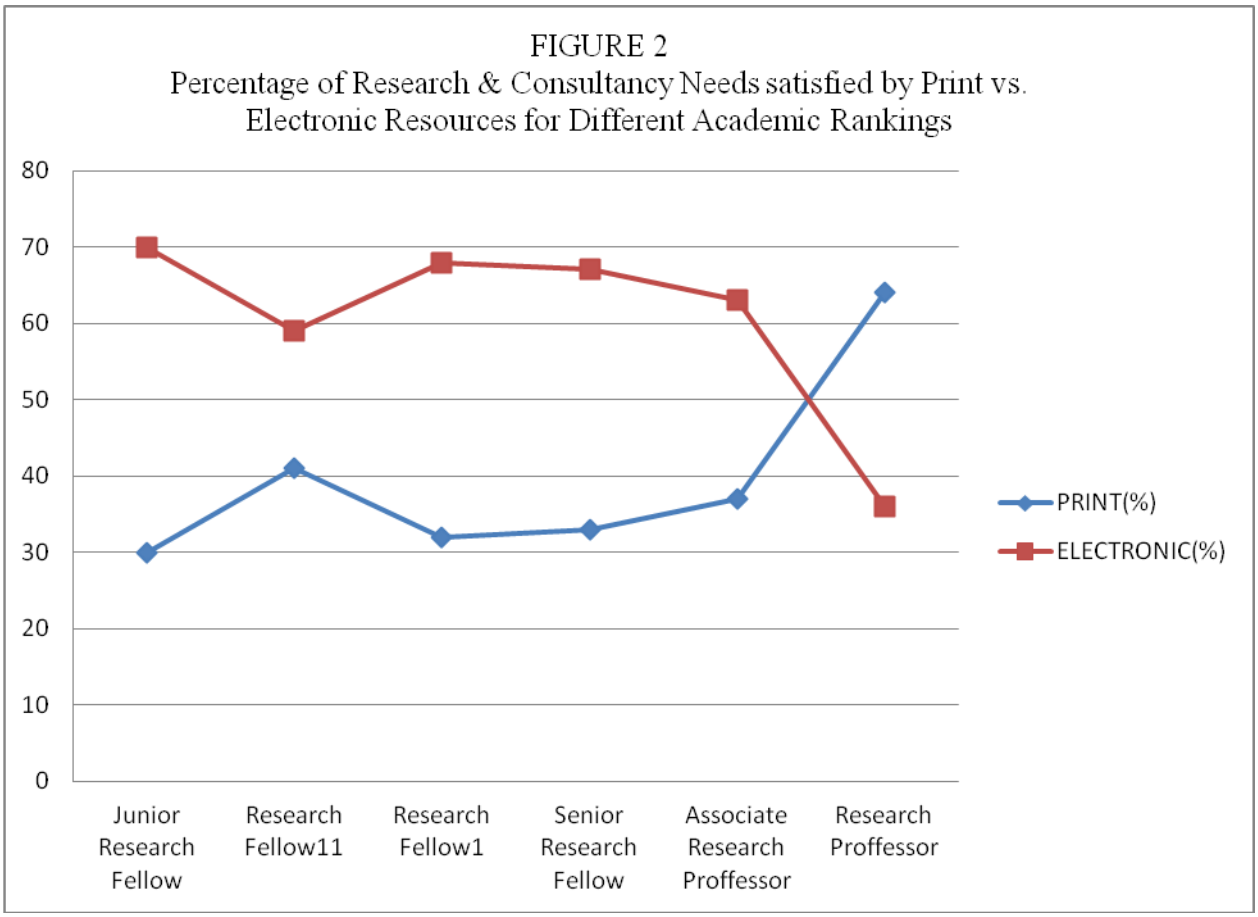
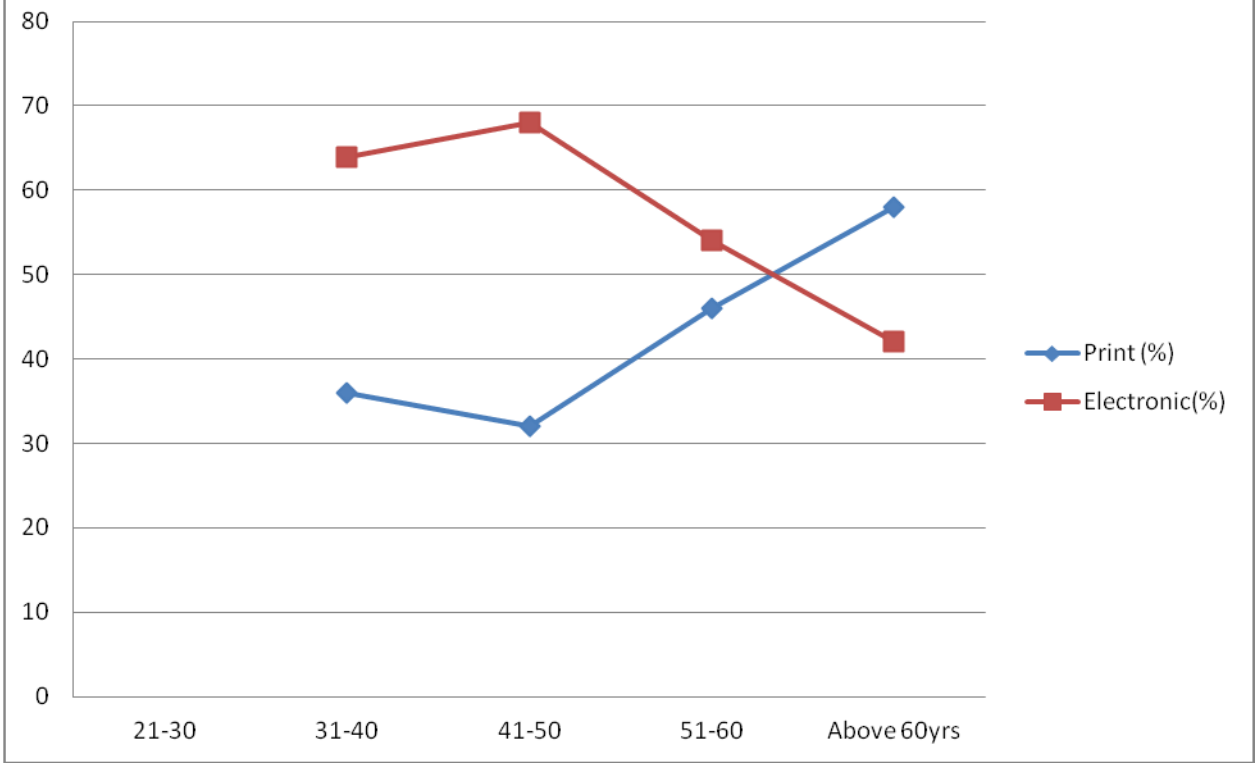


FIGURE 3
Percentage of Research & Consultancy Needs satisfied by Print vs. Electronic Resources for Different Age Range



Adequacy of Skills and Knowledge to Use Resources
The respondents were asked to indicate what they usually do to ensure they have adequate skills and knowledge to use the resources required to meet their information needs. A large majority (48; 82.8%) try to gain familiarity with the particular information resources (e.g. databases). Nine respondents (15.5%) usually seek advice from information specialists (e.g. reference librarians or other experts).

Initial Information Search
Respondents were also asked about what they do initially, when looking for information to meet their research and consultancy needs. More than 75% percent start with the Internet because of the vast amount of information available and the flexibility and ease of use. Initially, about 20 percent rely on their personal collections and less than 5 percent seek advice of colleagues.

Methods of Staying Informed
For the purpose of staying informed in their fields of interest, majority of respondents "always" check what is available on the Internet, and browse on-line reference sources. In addition, they "frequently" review journals, attend conferences, review relevant websites, check new issues of e-journals, contact colleagues and established experts, and check table of contents, indexes and abstracts pertaining to their subject areas.

Method of Categorizing and Storing Research Information

Respondents were, by and large, not in agreement with a statement that ascertained whether they usually organize printed information sources in physical folders or binders, labeled with subject headings, and store them in their offices or at home. Indeed, more than 90 percent disagreed or strongly disagreed whereas only one respondent (1.7%) agreed or strongly agreed with the statement.

Approaches to Reading Documents

The scholars were asked to indicate the approach they normally employ before reading a whole document. Majority would first read the table of contents, the index and the abstract. This category is followed by those who first read the introduction and the conclusion. Yet, thereafter, majority don't read the whole document immediately but keep it for reading at a later stage. It is noteworthy that none of the scholars usually skip the two approaches before reading the whole document.

Quality and Validity of Information Resources

Scholars were further asked to indicate whether they judge the quality and validity of information resources before using them for research purposes. The results show that all of them do so but majority arrive at their judgment by skimming the abstract, index or table of contents while others base their judgment on their existing knowledge of the author as well as the date of publication of an article.

Request for a Relevant Article

A question was asked to find out when the respondents usually order for an article relevant to their research and consultancy needs. It was found that more than 70 percent would order for an article as soon as possible while less than 30 percent would do so later, after all their searches are complete.

Defining the End-purpose of a Search

Social Sciences scholars are quite diverse in terms of defining the end-purpose of a search before searching for or seeking needed information. More than 30 percent always define the end-purpose of the search at the outset. More than 45 percent do so frequently, while about 10 percent do so occasionally. Contrarily, less than 10 percent rarely or never defined such.

CONCLUSIONS

This study is based on the premise that the information-seeking practices of the study sample could be readily matched to the stages of Ellis's or similar models of information-seeking behavior, suggesting that, in general terms, information-seeking behavior follows universally applicable stages and patterns worldwide. The study is expected to make a contribution to the development of an expected knowledge base which will facilitate library and information science research in the 21st century, as well as providing practical information to help LIS specialists address the current barriers to effective information-seeking in developing countries' research communities.

NISER has social sciences scholars in three research departments, but the largest group (39.7%) is in Social & Governance Policy Research. The study shows that scholars used a variety of sources to satisfy their information needs. Journals and books are the most preferred information sources for research and consultancy. It is rather surprising that books – generally most preferred for teaching purposes world wide – are so heavily relied upon by the scholars for their research and consultancy needs. Book reviews, abstracts, indexes, conference proceedings, government documents, dissertations and theses, and newspaper clippings are preferred sources. The successful operation of any library depends to a large extent on the choice of library collection. The choice of the collection should meet the needs and requirements of end users. Consequently, librarians must be aware of how users seek information. This study revealed that a majority of the scholars visits NISER library

occasionally despite the convenient access to the library, which is centrally located within the premises and very near the researchers' offices. This suggests that NISER library collection is not meeting the information needs of the research community.

In the light of the findings of this study, the following recommendations are made to improve the efficiency, effectiveness, and quality of NISER library as well as the information-seeking behavior of social sciences scholars in general:

Libraries should be more user-centred rather than system-centred. Researches in information-seeking behavior and user satisfaction should enable libraries to evaluate and realign their resources and services according to users' requirements. Specifically, NISER library cannot be said to be user-centred because of the alarming rate of its low patronage by the targeted users (more than 50 percent of the users visit the library occasionally, i.e. less than once in a month!). This study would supply the library with current data on its targeted user population, which should be used to make important management decisions about collections, services, information formats, use of resources, Listservs, on-line catalogs, portals, and FTP. The library should conduct information-seeking behavior studies at regular intervals to develop user-centred library and information services. In the same vein, the library should regularly conduct a user education program tailored to the needs of the specific disciplines. It is recommended that the program should be a cooperative effort between the librarian and the scholar so that both sides can contribute their own expertise to the solution of the problem. It therefore follows that librarians running such program should gain the necessary expertise prior to undertaking such a project.

With regards to public relation, it is recommended that NISER library should promote its activities through journal, bulletin board, and library websites. Library websites can cover information about a library, its activities, collections, on-line databases and methods of access (Patitungkho & Deshpande, 2005).

The use of electronic or digital resources is well – established among social sciences scholars. Therefore, it is recommended that NISER library should enhance access opportunities to e-resources to meet users' research and consultancy needs. In addition, major transformations have occurred in the digital world within the last decade. Web 2.0 technologies such as Face book, Flickr, blogs, YouTube, and Twitter have emerged. Social networking software offers a new approach for academic libraries, since it allows library users to build relationships with library staff and other library users. Libraries are now looking to stay connected to users through various forms of social media (Ge, 2010). The present study revealed that social sciences scholars considered conferences, subject experts, and colleagues as important information sources for research and consultancy. It will be significant to introduce some kind of social media services to facilitate or actualize the use of these sources.

The rise of Face book, Twitter, blogs, and other social computing tools has undoubtedly influenced the information-seeking behaviors of scholars (Ge, 2010). These new and emerging technologies would, most likely, be having a significant research impact that this article does not address, hence the need for further exploration and study.

REFERENCES

Al – Suqri, M. Nasser. (2007). Information needs and seeking behavior of social science scholars at Sultan Qaboos University. *ProQuest Dissertations & Theses*. Emporia State University.

Al – Suqri, M. Nasser. (2011). Information-seeking behavior of social science scholars in developing countries: A proposed model. *The International Information and Library Review*, 43, (1), 1 – 14.

Case, D. O. (2002). *Looking for Information*. San Diego, CA: Academic Press.

Costa, S. and J. Meadows. (2000). The impact of computer usage on scholarly communication among social scientists. *Journal of Information Science*, 26, (4), 255 – 62.

Fidel, R., R.K. Davies., M.H. Douglass., J.K. Holder., C.J. Hopkins., E.J. Kushner.,B.K. Miyagishima., and C.D. Toney. (1999). A visit to the information mall: Web searching behavior of high school students. *Journal of the American Society for Information Science*, 50, (1), 24 - 37

Folster, B. Mary. (1995). Information-seeking patterns: social sciences. *The Reference Librarian*, 49, (50), 83 – 93.

Francis, Hannah. (2005). The information-seeking behavior of social faculty at the University of West Indies, St Augustine Campus. *Journal of Academic Librarianship*, 31, (1), 67 – 72.

Ge, Xuemei. (2010). Information-seeking behavior in the digital age: A multidisciplinary study of academic researchers. *College & Research Libraries*. September: 435 – 52

Krikelas, James. (1983). Information-seeking behavior: patterns and concepts. *Drexel Library Quarterly,* 19, (2), 5 – 20

Marouf, L. and A.M. Anwar. (2010). Information-seeking behavior of the social sciences faculty at Kuwait University, *Library Review*, 59, (7), 532 – 47

Meho, L.I. and S.W. Haas. (2001). Information-seeking behavior and use of social science faculty studying stateless nations: A case study. *Library and Information Science Research*, 23, (1), 5 – 25.

Meho, L.I. and H.R. Tibbo. (2003). Modeling the information-seeking behavior of social scientists: Ellis's study revisited. *Journal of the American Society of Information Science and Technology*, (54), 6, 570 – 87

Patitungkho, K. and N.J. Deshpande. (2005). Information-seeking behavior of faculty members of Rajabhat universities in Bangkok. *Webology*, 2 (4).

Sethi, A. (1990). *Information-seeking behavior of social scientists: An Indian conspectus*. New Delhi: Hindustan Publishing Corporation.

Sheeja, N.K. (2010). Science vs. Social Science: A study of information-seeking behavior and user perceptions of academic researchers. *Library Review*, 59, (7), 522 – 31.

Shen, Yi. (2007). Information-seeking in academic research: A study of the sociology faculty at the university of Wisconsin – Madison. *Information Technology and Libraries*, (26), 1.

Shokeen, A. and S.K. Kushik. (2000). Information-seeking behavior of social scientists of Haryana universities. *Library Herald*, 40, (1), 8 – 11.

Ucak, N.O. and S.S. Kurbanoglu. (1998). Information need and information-seeking behavior of scholars at a Turkish university. *IFLANET.* Paper presented at the 64th IFLA General Conference. August 16 – 21, at Amsterdam,Netherlands.

Wilson, T.D. (2000). Human information behavior. *Informing Sciences*, 3, (2), 49 – 55.