Use Of Electronic Journals By Library And Information Science Faculty Members In Performing Various Academic Tasks: A field Study Performed At The School Of Information Sciences At The University Of Pittsburgh (Modified version)/ By Dr. Hossam Eldin Mohamed Refaat Abouserie. Department Of Library And Information Sciences, Faculty Of Arts, Helwan University, Helwan, Egypt, 2006. hossam_usa@helwan.edu.eg

Summary*

The purpose of this study was to explore and investigate the ways faculty at The School of Information Science at the University of Pittsburgh use electronic journals to obtain information to support their academic tasks, teaching, research and services. Library and Information Sciences faculty at the University of Pittsburgh were chosen as the population for this study. The study matched e-journals, faculty use, for different academic activities or tasks they perform, in order to answer the following questions:

1-What are the main academic activities that highly depend on e-journals?  
2- To what degree does each faculty member depend on e-journals?  
3- What are the main reasons for using E-Journals?  
4-What characteristics of electronic sources limit using of E-Journals?

The study matched the basic academic tasks of Information Science faculty with electronic journals to determine to what degree they depend on this source. Two hypothesis were addressed:

1-There will be a difference in using electronic journals to perform the basic tasks according to faculty rank, and gender.  
2-The degree to which faculty depend on electronic journals will differ across the academic tasks/activities, as follows: A) They will depend most on electronic journals for research tasks. B) They will depend least on electronic journals for service tasks.

* This study is one of the suggested future studies listed by the author in a doctor dissertation titled "Information seeking and communicating behavior of social science faculty in an academic environment with a special reference to the use of electronic journals: A field study".
Introduction

The amount of published information is increasing at a tremendous pace. Explosion is the only suitable word to describe the emergence of information (Chen, 1982). Information can be stored in a variety of sources, in different formats and in all languages, making the task of the faculty to find the required information at the right time a major challenge. As the amount of available information grows, the problem of managing it becomes more difficult, and thus leading to information overload.¹ Such overload makes it impossible for any faculty member in any field to locate and obtain everything published and related to his or her area of interest. Therefore, in order to meet the information needs of the user communities, the information professional must understand the nature of the user community and become familiar with the information seeking habits of the user (Large, Tedd, and Hartley, 1999). To achieve this goal, this study will investigate the ways through which Library and Information Science faculty use electronic journals in performing various faculty tasks, as the increase of electronic journals suggests that they are popular for scientific communication among members of the academic community. (Mgobozi, Margaret, Ocholla, and Dennis, 2002) This section focuses on the basic three tasks the faculty performs in the academic environment, then it present basic information on electronic journals.

Faculty roles and responsibilities

The roles and responsibilities of faculty members are similar to the basic functions of higher education, "Declaration of Principles". (Hamrick, 2008) According to the Declaration of Principles, the functions of colleges and universities are "to promote inquiry and advance the sum of human knowledge, to provide general instruction to the students, and to develop experts for various branches of the public service" (Joughin, 1969). The faculty role encompasses three areas of responsibility: Teaching, Research, and Service. The amount of time and effort the faculty spend and make in each area varies from one institution to another and from one faculty to another within the same institution.² See figure (1).

Teaching

The teaching role of faculty members reflects their centrality in addressing the primary educational mission among colleges and universities. As faculty members

¹ http://en.wikipedia.org/wiki/Information_explosion
² http://www.preparing-faculty.org/PFFWeb.Roles.htm
teach, they disseminate information to students and assist them in applying the knowledge. (Hamrick, 2008)

Research

Faculty members engage in research to contribute to the knowledge base of the discipline. Research is associated with conducting empirical studies, whether confirmatory or exploratory, but in some academic disciplines research also encompasses highly theoretical work. (Hamrick, 2008)

Services

Institutional service performed by faculty members includes serving on internal committees and advisory boards, mentoring and advising students, and assuming part-time administrative appointments as program leaders. In some cases, faculty members also assume term appointments in fulltime roles as mid-level or senior level institutional administrators. (Hamrick, 2008)

Figure (1) Faculty roles and responsibilities

Electronic Journals

Many definitions have been given to Electronic Journals, such as, 1- scholarly journals or magazines that can be accessed via electronic transmission. 2- serial publications available in digital format. 3- a specialized form of electronic document: they have the purpose of providing material for academic research and study.

Types and Formats

Electronic journals are formatted approximately like printed journal. Some electronic journals are online-only journals; some are online versions of printed journals, and some consist of the online equivalent of a printed journal, but with additional online-only material. Some have paper equivalents, some are purely...
Some are published in electronic form, some are digitally reformatted print journals. Some electronic journals are distributed on CD-ROMs, some over the internet. Of the internet-available ones, some are delivered over the World Wide Web, some by e-mail. Some are ASCII text, some are HTML WWW pages, some use proprietary formats such as Adobe's PDF (Portable Document Format). Some are free, some are available by subscription only. Some are peer-reviewed scholarly journals; many are not quality-controlled.

Features of Electronic Journals

- "They can be delivered to the desktop
- They can be read by more than one person at a time.
- The text can be searched.
- They can include multimedia and graphics, in color, at marginal cost.
- They can be published more quickly than paper publications.
- They can be interactive; that is, they can foster an online exchange of ideas by e-mail.
- If they are on the WWW, they can take advantage of the ability to make hyperlinks, both internally and to other publications. Articles can be retrieved directly through links from abstracting and indexing databases.
- The content can be reproduced, forwarded, modified, leading to possible problems with copyright protection and preserving authenticity".

Pros and cons of Electronic Journals

Arguably, electronic journals have an impact on scholarly communication as they offer many potential benefits including prompt full-text accessibility. It is essential to understand the perceived impact these journals have on the university academic environment as a whole. (Mgobozi & Margaret & Ocholla & Dennis, 2002)

Review process: Electronic journals help in speeding up the review process, and thus avoiding any delay that may occur in publishing or distributing regular issues. (Weller, 2000).

Up to date: Information published in electronic journals tends to be up-to-date, as there are no printing and distribution delays. Published electronic articles may be
available within forty-eight hours after being approved by the peer review team. (Rao, 1998)

**Cost:** Electronic journals help in saving costs, where electronic publishing is less costly than traditional publishing. Electronic journals are cost effective as far as the printing of paper and mailing to subscribers is concerned (Rao, 1998).

**Saving space:** Electronic journals help in saving space, as there is no need to worry about the storage space, in that their storage is more efficient than having shelf-space for a number of volumes (Cook, 1992).

**Subscription cost:** Electronic journals help in reducing the subscription costs, as the subscription costs of electronic journals are much less than those associated with paper journals (Harter, 1998).

**Search techniques and mechanisms:** Electronic journals provide powerful searching tools. Words and terms in the records on the database can be searched and combined with the help of the Boolean operators (AND, NOT, OR). Specific periods or years can also be used to broaden or narrow the search (Fisher 1995). Several databases can be searched simultaneously, allowing large collections of material to be retrieved instantly. (Fisher, 1995)

**Access:** Electronic journals allow easy access to articles around the globe. They provide immediate access to needed information (Bandyopadhay, 1999). Thus, finding articles or journals can take seconds rather than longer waiting periods encountered with printed journals (Chan, 1999). Electronic journals also include active hyperlinks that enable researchers to access various references related to their areas of interest (Kling, 2003).

**Interactivity:** Electronic journals also allow interactivity among readers and authors and editors, by incorporating mechanisms to send feedback via email.

**Size of article:** Electronic journals help in solving some of the problems traditionally faced, such as the limits of the research article.

**Scholarly communication:** The length of time between submission and publication, and the scope / breadth of distribution are other advantages. Electronic journals also improve the speed of communication by providing updates on recently published material and allowing for swift transmission of research results and scholarly communication (Mountifield and Brakel, 1994). Chan (1999) concurs that electronic transmission of journals saves valuable time, more especially with the review process, thus establishing network communication among authors, editors and referees.
On the other hand, electronic journals have some disadvantages. The cost of creating the electronic environment is high.

**New electronic environment:** The cost of the electronic environment requires hardware, software, maintenance, upgrades, updates, etc. In addition to this, electronic journals are threatened by various risks, where plagiarisms and intellectual property violations are obvious (Gold, 1994).

**Peer review:** In some cases, the absence of the peer review process negatively affects the creditability associated with published works (Collins and Berge, 1994).

**Bibliographic and index tools:** Lack of bibliographies and index tools that inform people about the existence of this type of journal affects access to information. (Collins and Berge, 1994).

**Training users:** The need to train users in using information technologies on a frequent basis as systems change is another challenge. (Crawford, 1996).

**Technology and equipment:** There are still problems related to the advent of electronic journals and their use. For storage and display electronic journals rely on technology and equipment that is rather expensive and not affordable by poor users (Chan, 1999).

**Computer literacy:** Computer literacy is still a problem. Though information delivered electronically may be cheap, the cost of computer hardware needed is high (Sweeney 1997).

**Network connection:** Files that are transferred electronically also cause network problems. The speed and bandwidth of networks could be affected, as electronic journals become more technologically advanced.

**Interface:** Electronic interfaces can take a long time to master, thus frustrating end-users.

**Subscription:** Some electronic journals are not free and they do charge subscription fees (Chan, 1999).

**Study Methodology**

This study design is using the qualitative methodology. The case study methodology is adopted to study behavior of Library and Information Sciences faculty at School of Information Sciences, University of Pittsburgh. The Task or activity/ Sources approach is adopted for this study, measuring the extent to which users actually use e-journals for different tasks they perform. The qualitative case study approach used allow extensive description and analysis.
The University of Pittsburgh

The University of Pittsburgh was founded in 1787 as a small, private school. It became a state-related university in 1966. At the present time, the University system consists of five campuses, main one and four regional campuses. The main campus, Pittsburgh campus, is the one located in the Oakland section of the city, and regional campuses in Bradford, Greensburg, Johnstown, and Titusville.

The School of Information Sciences

The School of Information Sciences, SIS, is one of the top ten schools in the nation in the education of information professionals, with a history that reaches back more than a hundred years. Throughout that history, SIS has built and sustained a tradition of innovation and excellence. The School of Information Sciences, SIS, has three programs in Information Science, Telecommunications, and Library and Information Science which are considered among the very best in the United States of America. All programs at The School of Information Sciences are accredited by the American Library Association, ALA.

Missions

“The SIS faculty, staff, students, and programs - uniquely interdisciplinary, multicultural, and international by design - are dedicated to the building of a global society and an informed citizenship based upon the foundation of knowledge made possible only through access to reliable and useful information. SIS will pursue excellence in teaching, research, and service to ensure that the information needs of society can be met because access to information enhances the quality of life for all people and organizations.

Mission of Library & Information Science

The faculty of the Department of Library and Information Science (DLIS) has the following missions:

1-To educate men and women at the master’s, certificate, and doctoral levels to become leaders in libraries, archives, and information centers;

2- To conduct research to advance the information sciences;

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3-To perform public service to support the information professions and the public good

**Mission of Information Science & Telecommunications**

The Department of Information Science and Telecommunications has a faculty and student body from a wide variety of backgrounds.

1-To perform research on;
2-To educate students about and to serve society with regard to technologically-based systems;
3-To educate through traditional degree programs, certificate programs and occasional informal educational experiences

**Questionnaire**

The questionnaire was the major research instrument for this study. The questionnaire was sent to the academic staff via email. This was intended to save time and effort while sending and receiving information, and to facilitate the reading process. Since mailed questionnaires are often plagued with a low response rate, in that a small percentage of them are completed and returned, the questionnaire was distributed via mailing lists through the Internet three times during the 2005 semesters. It was sent to faculty at Library and Information Science schools at the University of Pittsburgh. The questionnaire included questions that covered faculty activities teaching, research, services, the degree or the level of dependence on electronic journals, evaluations of such source, and recommendations for improving access to these sources.

**Scope of the study**

The use of Electronic Journals by Library and Information Science faculty members in performing various academic tasks at The University of Pittsburgh was studied.

The University of Pittsburgh was selected as it provides its faculty members with access to over than 5000 electronic journals (Speier, Palmer, Wren and Hahn 1999). The school of Information Sciences was chosen as the site of this study since it is a major research school whose faculty are involved in high quality academic tasks, teaching, research and service. The sample is also large enough to have a significant representation of the major Library and Information Science field.
Focus of the study

The research covered faculty research behavior in one American school, focusing on the Library and Information Science faculty. The faculty had been selected as the target and not graduate or undergraduate students because the faculty is the heart of the university that performs its main tasks: teaching, research and service. Because they have the top positions at the university, the tasks they do will have the greatest impact on the institution.

Population for the study and its distribution

The subjects were drawn from full time faculty at all ranks whether in the tenure stream or not. A questionnaire was distributed during working hours (8 AM- 5 PM). It was distributed to faculty via email, to insure that faculty at Library and Information Science schools received it, and to facilitate the reading process when studying the responses received.

This section of the study provides demographic information about the sample in the study. It presents information about gender, academic ranks, and sample response rate.

Gender

The question was \textit{Gender: } \textit{Male ( ) Female ( )}. The total number of faculty members who participated in the study was 13; 9 of them were males, and 4 were females. Therefore, 69.23 % were males, and 30.76 % were females. This indicates that males participated in the study were two times females participated in the study. See table (1) for details.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>69.23 %</td>
</tr>
<tr>
<td>Female</td>
<td>4</td>
<td>30.76 %</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Source: Survey of Library and Information Science faculty (n=13)
Figure (2) Percentage of Library and Information Science faculty responding by gender: University of Pittsburgh 2006.

Source: Survey of Library and Information Science faculty (n=13)

**Academic Rank**

The question was *Rank:  Instructor ( ) Lecturer ( ) Assistant professor ( ) Associate professor ( ) Professor ( ) Other-------- ( )*

The largest group of those who answered the questionnaire were associate professors, 76.92 %; 7.69 % were professors; 0 % were assistant professors and 7.69 % for each instructors and lecturers. Since the majority of respondents were professors, and associate professors, it can be assumed that they are involved in performing the main academic teaching tasks. See table (2).

Table (2). Percentage of Information and Library Sciences faculty responding by rank: University of Pittsburgh 2006.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>1</td>
<td>7.69 %</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>0</td>
<td>0 %</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>10</td>
<td>76.92 %</td>
</tr>
<tr>
<td>Instructor</td>
<td>1</td>
<td>7.69 %</td>
</tr>
<tr>
<td>Lecturer</td>
<td>1</td>
<td>7.69 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
<td><strong>100 %</strong></td>
</tr>
</tbody>
</table>

Source: Survey of Information and Library Sciences faculty (n=13)
Sample Response Rate

In order to obtain a quick return and a high response rate, the questionnaire was designed electronically and was accessible for faculty members through the web. The questionnaire was designed electronically using Microsoft Office Front Page and was built and established on the Egyptian Universities Networks, EUN, web site. The questionnaire was sent via email over five times during the spring of 2005 to all faculty members in the School of Information Sciences at the University of Pittsburgh. The faculty members’ email addresses were obtained from the school’ web site. The questionnaire was sent on February and March of 2005. Out of 55 faculty surveyed, 13 responded to the questionnaire. A Microsoft Office Access Database was created in order to facilitate the process of extracting and analyzing the data. The Microsoft Office Access Database helped in creating the reports and tables required for the analysis. Microsoft Office Excel was used in designing Figures to illustrate data and in performing various calculations.

The study was performed at one school at the University of Pittsburgh. The response rate was about 23.63 % after sending five emails during the spring of 2005. See table (3).
Table (3). Response rate of Library Science faculty: University of Pittsburgh 2006.

<table>
<thead>
<tr>
<th>Population</th>
<th>Number of responses</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>13</td>
<td>23.63 %</td>
</tr>
<tr>
<td>Non-Respondents</td>
<td>42</td>
<td>76.36 %</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Source: Survey of Library and Information Science faculty (n=55)

Figure (4). Response rate of Library and Information Science faculty: University of Pittsburgh 2006.

Testing the hypotheses of the study

The two hypotheses were tested using information about the average use by Information and Library Science faculty members of various types of information sources. In order to calculate and test the hypothesis, the average use per Information and Library Science faculty per typical month shown in the table cells was calculated. These numbers are the results of three processes as follow:

1) Calculate the mid range of the main table in the questionnaire (No use, 1-4, 5-14, 15-29, 30-More) to be (0, 2.5, 9.5, 22, 35); 2) Count the number of hits in each cell from the 13 respondents; 3) Calculate the mean by dividing the sum of the results of each row by the number of respondents.

Hypothesis of the study

The study matched the basic academic tasks of Information Science faculty with electronic journals to determine to what degree they depend on this source. Two hypothesis were addressed:

1-There will be a difference in the using electronic journals used to perform the basic tasks or activities according to faculty rank, and gender.
2- The degree to which faculty depend on electronic journals will differ across the academic tasks/activities, as follows: A) They will depend most on electronic journals for research tasks. B) They will depend least on electronic journals for service tasks.

The first hypothesis was that there will be a difference in the sources used to perform the basic teaching tasks or activities according to faculty rank, and gender. The following table was in the questionnaire.

**Hypothesis (1)**

**Part (1) Faculty Rank**

In order to test the hypothesis (1) and show the variance in using various information sources according to rank, a query was made using Microsoft Office Access to calculate the use of various information sources according to various ranks. The result of this query provided a report that presented the use of sources according to the teaching tasks / activities. Numbers of hits were multiplied by the mid-ranges and were summed and divided by total numbers of individuals of each rank in the sample, in order to calculate the average use of various information sources per faculty member by rank. The study found the average number of uses over all types of information sources per faculty member per typical month by rank as follows. Emails and directories and search engines were found to be the type of sources used most by faculty members at all ranks, while news groups and scholarly electronic archives were the least used sources.

The study found the average number of monthly uses per faculty member is higher for professors than for any other rank, followed by Associate professors and lecturers in second and third places. Assistant professors and Instructors are at the end of the list. See table (4) for details.

**Figure (4). Total average use of electronic journals per Library Sciences faculty member per typical month by rank: University of Pittsburgh 2006.**

<table>
<thead>
<tr>
<th>Use of Electronic Journals</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.5</td>
<td>Professor</td>
</tr>
<tr>
<td>19.4</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>0</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>2.5</td>
<td>Lecturer</td>
</tr>
<tr>
<td>0</td>
<td>Instructor</td>
</tr>
</tbody>
</table>

Source: Survey of Information and Library Sciences faculty (n=13)
Figure (5). Total average use of electronic journals per Library Sciences faculty member per typical month by rank: University of Pittsburgh 2006.

**Use of Electronic Journals**

![Use of Electronic Journals](chart.png)

Source: Survey of Information and Library Sciences faculty (n=13)

**Part (2) Faculty Gender**

In order to test the fourth part of hypothesis (1) and show the variance in using various information sources according to gender, a query was made to calculate the use of various information sources according to gender. The result of this query is a report that presented the use of sources according to the three main tasks. Numbers of hits were multiplied by the mid-ranges and summed and divided by total number of faculty members respondents of each gender, in order to calculate the average use of various information sources per faculty member by gender. The study found the total use of females is higher than males. See table (5) for details.

**Table (5) Use of electronic journals by Library & Information Science Faculty: University of Pittsburgh 2006.**

<table>
<thead>
<tr>
<th>Use of Electronic Journals</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.55</td>
<td>Male</td>
</tr>
<tr>
<td>33.75</td>
<td>Female</td>
</tr>
</tbody>
</table>

Source: Survey of Information and Library Sciences faculty (n=13)
Hypothesis (2)

The second hypothesis indicates that the degree to which faculty depend on electronic journals will differ across the teaching tasks/activities, as follows: The degree to which faculty depend on electronic journals will differ across the academic tasks/activities, as follows: A) They will depend most on electronic journals for research tasks. B) They will depend least on electronic journals for service tasks. The study found research is the main activity that Information and Library Science faculty depend on electronic journals, followed by teaching with almost similar amount 7.5 and 7.38. However, service comes at the end of the list with the amount of 1.3.

The question was *[Over the last typical month how often did you access Electronic journals in Teaching, Research and Service?]*

<table>
<thead>
<tr>
<th>Tasks / Usage of Electronic Journals</th>
<th>No Use</th>
<th>1-4</th>
<th>5-14</th>
<th>15-29</th>
<th>30-More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performing research</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serving the community in and out the university</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table (6) Tasks distribution of Library and Information Science faculty

<table>
<thead>
<tr>
<th>Teaching activities</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching students</td>
<td>7.38</td>
</tr>
<tr>
<td>Performing research</td>
<td>7.5</td>
</tr>
<tr>
<td>Serving the community in and out the university</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Source: Survey of Information and Library Sciences faculty (n=13)

Evaluation Criteria

In order to measure the level of satisfaction, numbers of hits in each cell were multiplied by 1, 3, and 5 to represent low, med, and high values, and summed, then the result was divided by the total number of respondents. The question was: /-Please evaluate each of the following sources based on the last time of usage/)

The study found faculty members to be satisfied most with electronic journals, index and abstracts and full text databases and, scholarly electronic archives, while they were least satisfied newsgroups and directories and search engines. See table (7) for details.

Table (7) Faculty evaluation of electronic journals by CARS criteria of evaluation: University of Pittsburgh 2006.

<table>
<thead>
<tr>
<th>Electronic Journals / Level of satisfaction</th>
<th>High</th>
<th>Med</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creditability</td>
<td>5</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Accuracy</td>
<td>5</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Reasonableness</td>
<td>5</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Support</td>
<td>3</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Survey of Information and Library Sciences faculty (n=13)
Analysis of open ended questions

Several of the survey questions were open-ended, offering respondents the opportunity to make longer comments about their use of electronic resources. These comments are summarized below.

Other reasons for using electronic sources

The question was \textit{In addition to these factors (credibility, accuracy, reasonableness, and support), what other reasons do you have for using electronic sources of information?}

When offered the opportunity to explain the factors, in addition to those explicitly identified, that contributed to their use of electronic sources, 10 faculty members chose to comment. Examination of their comments suggests that they can be categorized in the following areas: \textit{accessibility (4 respondents), ease of access (5 respondents), timeliness, fast access, currency, (1 respondents for each).}

Other reasons for not using electronic sources

The question was \textit{What characteristics of electronic sources limit your use of them?}

When offered the opportunity to explain the factors that limited their use of electronic sources, 6 faculty members chose to comment. Examination of their comments suggests that they can be categorized in four areas:
Suggestions, comments, and recommendations

The question was [Please use the space below for any suggestions comments, and recommendation for improving use of electronic sources]

When faculty members were offered the opportunity to present their suggestions comments, and recommendation for improving use of electronic journals, 4 faculty members chose to comment. Examination of their comments suggests that they can be categorized in the following areas: Subscribing in certain types of journals (1 respondents), training (1 respondents), peer review (1 respondents), improving interface (1 respondents)

Implications and Suggestions

Based on previous analysis, the study showed a difference in using various information sources, where the study found variability in the sources used according to rank and gender. Thus, in order to provide high quality service, the University Library System should provide the sources that meet each category.

The study also showed a variance satisfaction with electronic sources, where faculty members are most satisfied with Index and abstracts and Full Text Databases and Electronic Journals and least with Directories and Search Engines and Scholarly Electronic Archives.

Faculty members consider electronic journals high creditable, most accurate, high reasonable and most supportive. In addition to this, they consider electronic journals convenient to meet their needs. Therefore, this part suggest specific action for the University Library System, where a single access point for all types of materials, with the ability to search only for specific types of materials, and linkages to the documents themselves.
Appendixes

1) Formal Email
2) Paper-Based Questionnaire
3) Web-Based Questionnaire
Use of Electronic Journals by Library and Information Science faculty members in performing various academic tasks: A field Study performed at the School of Information Sciences at the University of Pittsburgh

I am a lecturer at the Department of Library and Information Sciences at Helwan University, Cairo, Egypt. I am performing a study on the Use of Electronic Journals by Library and Information Science faculty members in performing various academic tasks. I appreciate your participation, as it will assist in understanding faculty trends and activities in the academic environment. This questionnaire will take less than 5 minutes from each participant to complete it.

http://www.eun.eg/helwan_poll/journals.htm

There are no foreseeable risks associated with this project. This is an entirely anonymous questionnaire, and so your responses will not be identifiable in any way. Data and information gained from this questionnaire will be confidential and will be used only for scientific purposes. Participation is completely voluntary and the subjects may withdraw from the study at any time and for any reason without penalty. In the meantime, if you have any questions, please ask me.

Thank you.

H. Abouserie, PhD.
E Mail: hossam_usa@helwan.edu.eg
Over the last typical month how often did you access Electronic journals in Teaching, Research and Service?

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<td>Performing research</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Serving the community in and out the university</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please evaluate E-Journals based on the last time of usage according to Credibility:

- Credibility: known or respected authority;
- Accuracy: Correct, up to date, comprehensive;
- Reasonableness: Fair, balanced, objective, reasoned;
- Support: Listed sources, contact information, claims supported;

<table>
<thead>
<tr>
<th>Type of Evaluation</th>
<th>Low</th>
<th>Med</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility of E-Journals</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Accuracy of E-Journals</td>
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<tr>
<td>Reasonableness of E-Journals</td>
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<tr>
<td>Support of E-Journals</td>
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</tbody>
</table>

-What other reasons do you have for using E-Journals?

-What characteristics of electronic sources limit your use of E-Journals?

-Please use the space below for suggestions, comments and recommendations for improving use of Electronic Journals

-Background information

- Gender: Male ( ) Female ( )

- Rank: Instructor ( ) Lecturer ( ) Assistant professor ( ) Associate professor ( ) Professor ( ) Other ( )
Over the last typical month how often did you access Electronic journals in Teaching, Research and Service?

<table>
<thead>
<tr>
<th>Tasks / Usage of Electronic Journals</th>
<th>No use</th>
<th>1-4</th>
<th>5-14</th>
<th>15-29</th>
<th>30-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performing research</td>
<td></td>
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<tr>
<td>Serving the community in and out the university</td>
<td></td>
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</tbody>
</table>

Please evaluate E-Journals based on the last time of usage according to:

- **Credibility:** known or respected authority; **Accuracy:** Correct, up to date, comprehensive;
- **Reasonableness:** Fair, balanced, objective, reasoned; **Support:** Listed sources, contact information, claims supported;

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<tr>
<td>Support of E-Journals</td>
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</tr>
</tbody>
</table>
In addition to these factors (credibility, accuracy, reasonableness, and support), what other reasons do you have for using electronic journals of information?

What characteristics of electronic journals limit your use of them?

Please use the space below for suggestions comments, and recommendation for improving use of Electronic Journals

-Background information

-Gender:  Male  ○  Female  ○

-Rank:  Instructor  ○  Lecturer  ○  Assistant professor  ○  Associate professor  ○  Professor  ○  Other  ○  Submit
Bibliography

-Electronic Reference Format Recommended by the American Psychological Association: [also online], available from <url:http://www.apa.org/journals/webref.html> [accessed 2002]
-The questionnaire was available at the following address <http://www.eun.eg/helwan_poll/journals.htm>
-The use of electronic journals for the dissemination of scholarly information by the University of Natal and the University of Zululand. Mgobozi, Margaret N. & Ocholla, Dennis N. South African Journal of Library & Information Science; 2002, Vol. 68 Issue 2, p81, 13p, 8 charts)


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