Use of Networked Information Sources and Services by Information and Library Science Faculty in Teaching: A case study performed at The School of Information and Library Science at The University of North Carolina / By Dr. Hossam Eldin Mohamed Refaat. 2005.

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Summary

The purpose of this study was to explore and investigate the ways faculty at The School of Information and Library Science, ranked # 1 in 2004, at the University of North Carolina, obtain information to support their teaching tasks. Information and Library Science faculty at the University of North Carolina were chosen as the population for this study. The study matched the various networked information sources and services, faculty use, for different teaching activities or tasks they perform, in order to answer the following two questions: 1-What are the types of information sources, the faculty consult to support their teaching activities / tasks? 2-To what degree does each faculty member depend on different information sources? The study matched the basic teaching tasks of Information and Science faculty with different networked information sources to determine to what degree they depend on each source. Two hypothesis were addressed: 1-There will be a difference in the sources used to perform the basic teaching tasks or activities according to faculty rank, and gender. 2-The degree to which faculty depend on Networked Information Sources electronic sources will differ across the teaching tasks/activities, as follows: A) They will depend more on electronic mails for teaching tasks than News groups. (Approved). B) They will depend more on electronic journals for teaching tasks than electronic archives. (Approved). C) They will depend more on electronic databases for teaching tasks than Internet directories and Search Engines. (Disapproved)

Introduction

The University is an important and unique reflection of modern society. Since its creation it has carried out social and political tasks. New tasks have supplemented the original roles of preparing men for the ministry and transmitting a culture to future generations. The university now prepares students to join many professions through the teaching and training processes; it critiques society and tries to develop it through

services and activities; and it produces knowledge through research and study (Blackburn and Lawrence, 1995).

Definitions

Although thinkers and writers define the university from different perspectives, the aims and goals of the university are still well determined. The roles the university plays to develop society are not restricted to educational or teaching processes, but they also include research and service. The following are some definitions given to the university.

-"A body of mature scholars and scientists, the faculty, with whatever plant and other equipment may incidentally serve as appliances for their work" (Veysey, 1974, P.121).

-"An educational institution of great size, and which affords instruction of an advanced grade in all learning" (Veysey, 1974, P.11).

The university was also described as "one of the world's most dominant and enduring social organizations" (Blackburn and Lawrence, 1995, P.1). It is also seen as "a fascinating specimen of social organization, remarkably unlike any other" (Caplow and McGee, 2001, P.4). These definitions concentrate on different roles and functions. While the first definition focuses on the structure composing the university, the second definition focuses on the role of the university as an educational institution, and the third and the fourth concentrate on the university as a social organization. The four definitions complement each other and can be considered different scenes for the same picture.

The American university

The American university is considered to be **"**a national treasure, created and developed with ingenuity and devotion and vested with the capacity to serve society into the indefinite future, as it has done since its establishment" (Ehreberg, 1997, P.18). The American university, claimed to the best in the world, is a unique system because it provides high quality education, uses new methods in teaching, depends on advanced technologies for illustration, and finally provides freedom in performing the major tasks, teaching, research and service.

Although the university as a social institution carries out the main functions and the basic roles, teaching, research, and service, which can be achieved in other institutions, the way it performs its tasks --to reach its goals-- is unique and comprehensive. And although these responsibilities may be differently determined

from one person to another, they are classified into three main tasks: teaching, research, and service. This section discusses the three basic responsibilities of the university showing the main characteristics of each function.

The Academic World

The following model shows the academic world that includes the main tasks performed in the academic environment.

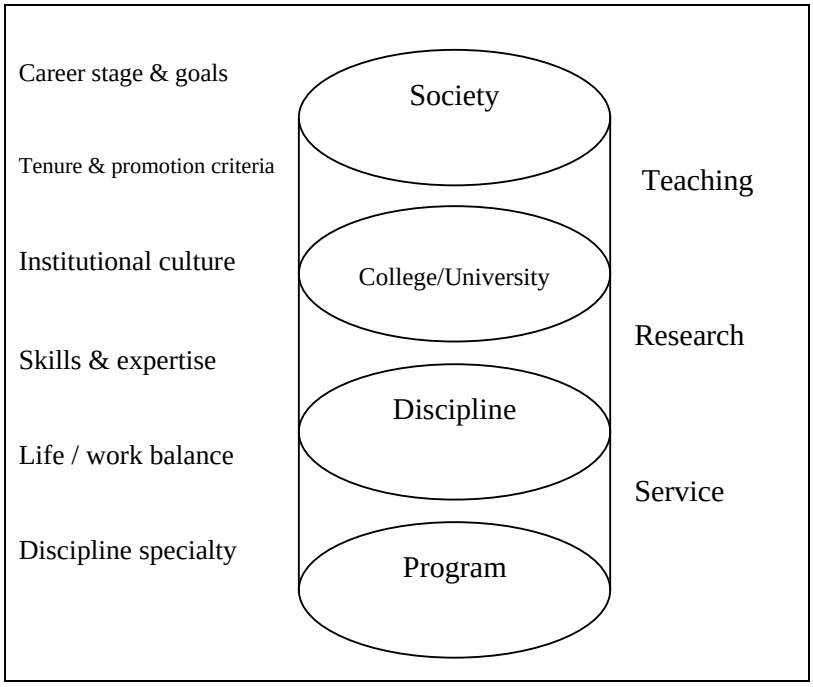


Figure (1) The academic world (Blackburn and Lawrence, 2001).

Teaching

Teaching is often the main and first task the academic faculty focus on, as was indicated by three surveys of the Carnegie Foundation in 1969, 1975, and 1996, which showed that seven faculty members out of 10 considered the teaching task to be their main responsibility (Graubard, 2001). The original study made in 1919 found similar results, in that faculty members spent 63 percent of their time on teaching, 8 percent on research, and 29 percent on other activities (Graubard, 2001). Cook, Wright and Hollenshead (1996) tried to understand how satisfied faculty members at the University of Michigan were with their roles as teachers, in order to determine the factors and conditions that lead to career satisfaction. They examined faculty experiences and how they differ by rank in performing the tasks: teaching and advising students, scholarship, professional growth and creative work, clinical responsibilities, and service. The survey by Sheehan and McCann (2000) aimed to

provide data to the public and state policy makers regarding the activities of faculty throughout Ohio's state. The survey used a Faculty Service Report (FSR) to collect data. It focused on full time faculty activities at the academic environment. These studies point to teaching as the main focus of faculty. The following points show the uniqueness of teaching at the university.

Producing knowledge

Teaching at the university is unique. It differs from teaching at high schools and other educational institutions in many ways. One important difference is that faculty members do not only teach the most recent trends in various fields (Falk, 1990), but they also produce and add to the existing human knowledge (Blackburn and Lawrence, 1995). Therefore, teaching at the university is associated with research to a great extent.

Types of instruction

Types of instruction can be another clear difference, especially in American universities, where three basic types of instruction exist: the laboratory, the lecture, and the seminar. The lecture is widely used in the natural and Social Sciences. The laboratory is used by the chemist, the physicist and the biologist. The seminar is used by the research-minded historian, economist, and philologist (Veysey, 1974). Using different techniques and tools in teaching for the purpose of providing a good education --like advising students, providing training, conducting workshops--are some indictors of what the university does to prepare students for the future.

Using new techniques

According to Mathis and Chalofsky, the university instructor has the ability to use a variety of "techniques, tools, and technologies, in order to enhance teaching in a face-to-face environment as well as at a distance. The following list reflects some of the techniques currently in use at many colleges and universities.

1-Satellite and one-way transmission of educational television

2-Two-way or multi-way compressed video teleconferencing

3-E-mail and the use of electronic mailing lists and list-serve

4-WWW and on-line course resources

5-CU-SeeMe and real-time video conferencing over the Internet" (Mathis and Chalofsky, 1998, P.183-184).

Although previous techniques and technologies have a great impact on teaching, in that they help in reaching different environments, in saving time and

energy and in clarifying new ideas in various fields, many see that using information technologies will restrict the learning process to those who have the capabilities to own such tools and techniques. Therefore, a sizable percentage will not have the same chance others have. Moreover, faculty members will be required to do more tasks than the ones they already do, in that they have to train their students on how to use programs, where to find the information, etc (Ehreberg, 1997). So, although the new technologies have helped in reaching various environments and communicating with different communities, they have added more responsibilities on the shoulders of those using them.

Heterogeneity

"Higher education is voluntary; students of any age are found in all classes" (Falk, 1990). Because the university is open for everyone, it has no restriction in accepting students in its programs. Students from different backgrounds, races, colors, religions, ages, etc., are welcomed and accepted as long as they meet the entry requirements.

Lehrfreiheit

This is a German expression, which refers to "the right to teach freely without interference by anyone" (Falk, 1990, P.60). No one has the right to determine what to teach, how to teach, or even who to teach. Therefore, academics have the freedom in performing their major tasks and doing their own activities.

Teaching Methods

Lecturing students can be the most popular instructional style in the academic environment, where the academic member presents a speech about a certain topic, then opens the discussion with class attendants (Falk, 1990, P.62). Professors, in order to successfully teach, have to consider the following: collecting resources related to a specific topic, presenting the topic to their students in a logical way, discussing certain cases, concluding specific results, and showing dimensions and future trends.

Student Advising

"Student advising is considered to be one of the student's most effective out-of-class relationships; therefore, it may influence the student's success in college" (Mathis and Chalofsky 1990, P.72). It is considered to be an important part of the teaching process because it is usually done privately and individually, so it has a great impact on students.

Training

Training can be offered in different areas like using a new computer service, campus tutor, safety, etc. The university announces this activity by posting messages through bulletin boards, email, or the mailing lists. Training is optional and offered for free, and it is offered to those who seek excellence in performing their tasks in their profession.

Grades

Grades are considered to be the final evaluation of students in a course, and it is a must that a professor has to determine at the end of every semester. No one has any influence on the professor's decision (Falk, 1990). Letter grades, from A to F, including pluses and minuses, are not the only grades used; there are others like numeric grades, satisfactory and unsatisfactory grades, S / U, audit grades, etc.

Purpose of the study

The purpose of this study was to explore and investigate the ways faculty at one school at one academic institution, the University of North Carolina, obtain information to support their teaching tasks. Information and Library Science faculty at the University of North Carolina were chosen as the population for this study. The study matched the various networked information sources and services faculty use, for different teaching activities or tasks they perform, in order to answer the following two questions:

1-What are the types of information sources, the faculty consult to support their teaching activities/tasks?

2- To what degree does each faculty member depend on different information sources?

The study matched the basic teaching tasks of Information and Science faculty with different networked information sources to determine to what degree they depend on each source.

Methodology

Information Seeking Behavior is an important area in the library science discipline. Many researchers have studied it from different perspectives using different approaches and methodologies. Organizing the process into steps, which the users follow to obtain information, and generalizing the findings over all the tasks the users performs, are the common aspect of the researchers' findings. See table (1) for details.

Theoretical foundation for Information Seeking Process

1 Phases of construction (Kelly)	2 Levels of Need (Taylor)	3 Level of specificity (Belkin)	4 Expression (Taylor, Belkin)	5 Mood (Kelly)
Confusion	Visceral	Anomalous State of Knowledge	Questions connections	Invitational
Doubt	Conscious	New Problem New situation		
Threat		Experiential Needs	Commands Gaps	
Hypothesis Testing	Formal			Indicative
Assessing	Compromised			
Re construing		Defined Problem Well Understood Situation Information Needs Coherent State of Knowledge		

Table (1) Theoretical foundation for Information Seeking Process (Kuhlthau, 1991)

This study design will embrace the qualitative methodology, in that it will focus on subjective meanings, symbols and descriptions. "Using the survey method to study Information Seeking Behavior often results in descriptive statistical data; such as type of sources used and rating of the sources"(Wang, 1999, P.61).

The case study methodology will be used to study behavior of Library and Information Sciences faculty at top American school. The **Task or activity/ Sources approach** will be adopted for this study, measuring the extent to which users actually use different kinds of sources, media, system, documents, materials, or channels for different tasks. The qualitative case study approach used will allow extensive description and analysis. This methodology has many advantages, summarized as follows:

"1-Case studies allow generalizations either about an instance or from an instance to a class. Their peculiar strength lies in their attention to the subtlety and the complexity in its own right" (Bassey, 1999, P.23). Therefore, results from this study

will help in improving other schools that have the same environment whether they are in same state or in other states in USA.

2-“Case studies present research or evaluation data in a more publicly accessible form than other kinds of research report, although this virtue is to some extent bought at the expense of their length” (Bassey, 1999, P.23). Therefore, the case study would be a useful tool for library managers and those who specialize in library and information science, in that they will find such studies more accessible.

Methods or tools for collecting data

Questionnaire

The technique

A questionnaire was the major research instrument for this study. According to Drew “a questionnaire must be constructed in such a manner that it will extract accurate information from the subjects. As a minimum, this means that the questions must be written clearly, and in a fashion that minimizes the possibility of misinterpretation by respondents. The questionnaire may be personally distributed by hand or distributed to respondents through the mail” (Drew, 1980, P.122-123). 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 over five three times during the 2005 Spring semester. It was sent to faculty at Library and Information Science schools at the School of Information and Library Science at the University of North Carolina.

The content[*]

Researchers in the area of information seeking behavior indicated that “users’ Information Seeking Behavior is influenced (or determined) by some or all the following:

1-Individual characteristics of the user (such as domain knowledge, previous experience, preferred cognitive style, etc.),

2-The user’s task, goal, or information need,

[*] The questionnaire was available at the following address <http://www.eun.eg/helwan_poll/teaching.htm>

3-Characteristics of the user's organizational role and typical problems encountered within that environment.

4-The retrieval system" (Hert, 1998, P.305).

The questionnaire included questions that covered faculty teaching activities, networked sources used to obtain information, the degree or the level of dependence on each source, evaluations of each source, and recommendations for improving access to these sources.

The Scope of the study

The Information Seeking Behavior of Information and Library Science faculty at the School of Information and Library Science at the University of North Carolina was studied. The school was chosen as the site of this study since it is a major research university, ranked number 1 in USA in 2004, whose faculty are involved in high quality teaching activities and tasks.

The focus of the study

The research covered faculty teaching behavior at one American school. 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.

The population of 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 the Information and Library Sciences School would receive it, and to facilitate the reading process when studying the responses received.

Questions of the study

The study asked the following questions:

1-What are the types of Networked Information Sources the faculty consult most to support their teaching activities/tasks? and

2- To what degree does each faculty member depend on different information sources?

The teaching tasks of Information and Library Science faculty were matched with different information sources to determine what degree faculty depend on each

source. Data were collected through a questionnaire distributed electronically through the Web in spring 2005.

Hypotheses of the study

The Hypotheses underlying the study were:

1-There will be a difference in the sources used to perform the basic teaching tasks or activities according to faculty rank, and gender.

2-The degree to which faculty depend on Networked Information Sources electronic sources will differ across the teaching tasks / activities, as follows:

A) They will depend more on electronic mails for teaching tasks than News groups. (Approved)

B) They will depend more on electronic journals for teaching tasks than electronic archives. (Approved)

C) They will depend more on electronic databases for teaching tasks than Internet directories and Search Engines. (Disapproved)

The School of Information and Library Science

"Located in the heart of the University of North Carolina, UNC-Chapel Hill campus, **the School of Information and Library Science (SILS)** prides itself on providing high quality educational and research opportunities in a dynamic, interdisciplinary learning environment. Currently ranked #1 in the nation by U.S. News & World Report, SILS consistently takes a leadership role in today's ever-changing information and library science landscape. Located on the central campus quad, Manning Hall houses the School's classrooms, offices, computing laboratory and the library".[**]

Mission Statement

"SILS seeks to advance the profession and practice of librarianship and information science, to prepare students for careers in the field of information and library science, and to make significant contributions to the study of information. Faculty members further these goals by teaching and advisory work, by research and scholarly publication, and by service to the school, the University, the state, and the professional community". [***]

[**] <http://sils.unc.edu/about/>[*]
[***] <http://sils.unc.edu/about/>

History

The idea of establishing a Library science education began at UNC-Chapel Hill in 1904. The idea became almost true in 1929 by when the new library building was finished on the UNC campus. The first class started in the fall of 1931, with a class of 37 students and five faculty members. Later the school received a grant from The Carnegie Corporation with the amount of $100,000 to enable the school to operate for three years and make permanent its conditional accreditation from the American Library Association. Then in 1987, the School of Library Science changed the program and the name of the school to include Information Science to add this attractive discipline in the school focus. Later, the number of student enrolled in the information science program started to increase and grow. Since its beginning 73 years ago, the school has sent out more than 3,500 trained information specialists and librarians.[*] The following table shows the current programs, majors and the degrees offered at the school of Information and Library science.

Table (2) Programs at The Information and Library Sciences School Demographic information**

Programs offered at The Information and Library Sciences School	
Undergraduate Programs	**Major** Bachelor of Science in Information Science (BSIS) **Minor** Information Systems
Graduate Programs	**Master's Degrees** Master of Science in Information Science (MSIS) Master of Science in Library Science (MSLS) Dual Degrees with other schools and departments Certificates of Specialization **Doctoral Degrees** Doctoral program (Ph.D.)
Certificates	Certificate of Advanced Studies
Graduate Minor	Minor in Information and Library Science
Continuing Education	Distance education On-site workshops
International Programs	International programs

[*] http://sils.unc.edu/about/history.html

** http://sils.unc.edu/programs/

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 ***[-Gender: Male ( ) Female ( ])].***

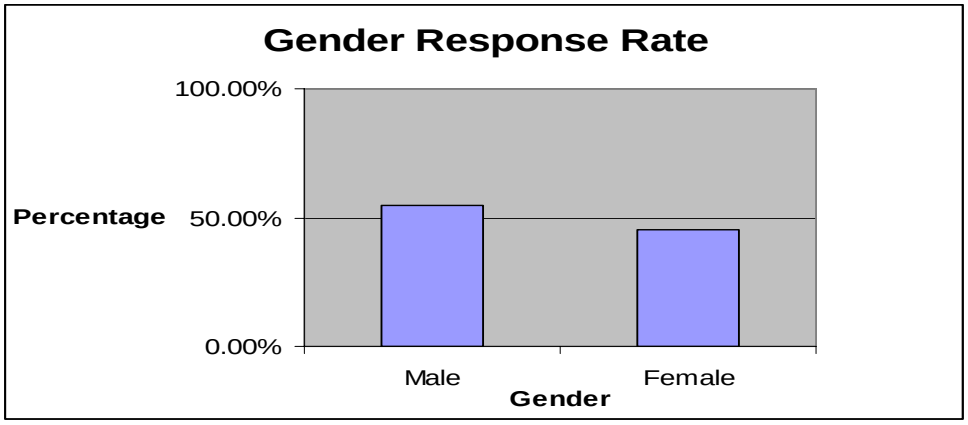
The total number of faculty members who participated in the study was 11; 6 of them were males, and 5 were females. Therefore, 54.54 % were males, and 45.45 % were females. This indicates that males and females participated almost equally in the study. See table (3) for details.

Table (3) Percentage of Library and Information Science faculty responding by gender: University of North Carolina 2005.

Gender	Respondents	Percentage
Male	6	54.54 %
Female	5	45.45 %
Total	11	100 %

Source: Survey of Library and Information Science faculty (n=11)

Figure (2) Percentage of Library and Information Science faculty responding by gender: University of North Carolina 2005.



Source: Survey of Library and Information Science faculty (n=11)

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, 54.54 %; 27.27 % were professors; 9.09 % were assistant professors and instructors for each, and lectures did not participate in the study. Since the majority of

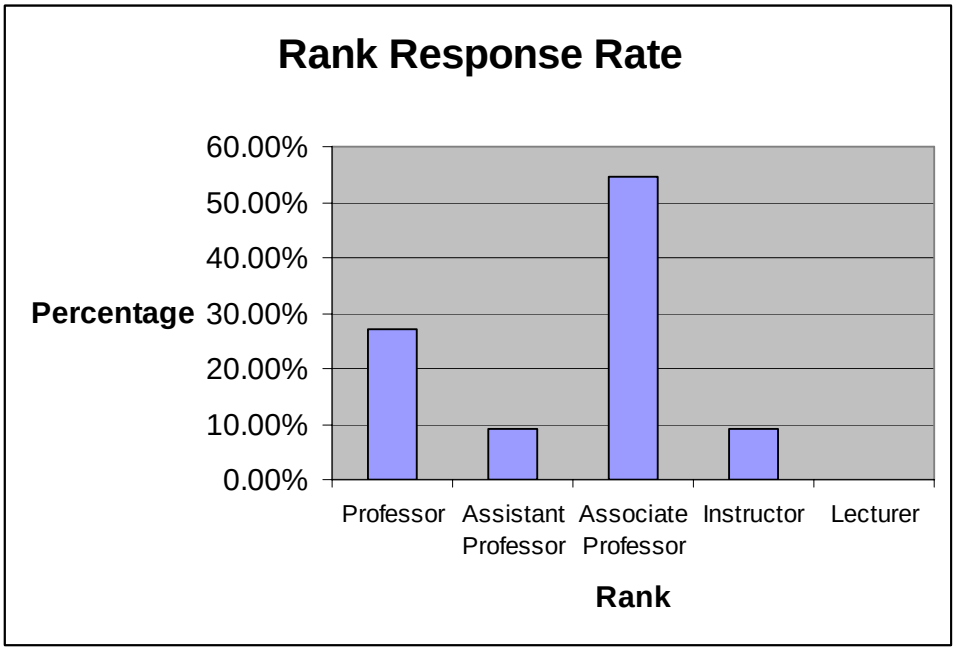
respondents were professors, associate professors, and assistant professors, it can be assumed that they are involved in performing the main academic teaching tasks. The largest group of those who responded to the questionnaire was associate professors, 54.54 %, while the smallest group were instructors and assistant professors, 9.09 % for each. See table (4).

Table (4) . Percentage of Information and Library Sciences faculty responding by rank: University of North Carolina 2005.

Rank	Respondents	Percentage
Professor	3	27.27 %
Assistant Professor	1	9.09 %
Associate Professor	6	54.54 %
Instructor	1	9.09 %
Lecturer	0	0 %
Total	11	100 %

Source: Survey of Information and Library Sciences faculty (n=11)

Figure (3) . Percentage of Information and Library Science faculty responding by rank: University of North Carolina 2005.



Source: Survey of Library and Information Science faculty (n=11)

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 and Library Science at the University of North Carolina. The faculty members' email addresses were obtained from the school' web sites. The questionnaire was sent on February and March of 2005. Out of 23 faculty surveyed, 11 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.

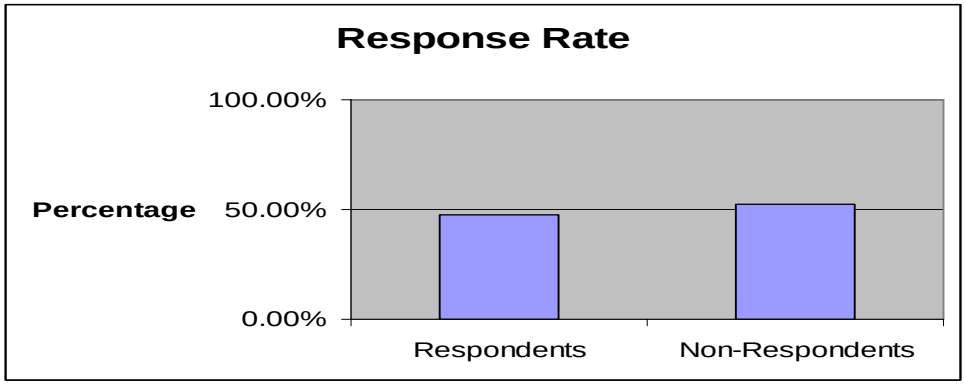
The study was performed at one school at the University of North Carolina, ranked # 1 in US world report in 2004. The response rate was about 47.82 % after sending five emails during the spring of 2005. See table (5).

Table (5). Response rate of Library Science faculty: University of North Carolina 2005.

Population	Number of responses	Response rate
Respondents	11	47.82 %
Non-Respondents	12	52.17 %
Total	23	100 %

Source: Survey of Library and Information Science faculty (n=23)

Figure (4) . Response rate of Library and Information Science faculty: University of North Carolina 2005.



Source: Survey of Library and Information Sciences faculty (n=23)

Teaching activities

The question was ***[Teaching courses ( ) Implementing & Performing Workshops ( ) Advising Undergraduate Students ( ) Supervising Graduate Students Other ( ) I do not teach ( )]***

The study found teaching courses is the main teaching activity that Information and Library Science faculty perform, followed by supervising graduate students. Few faculty members advise undergraduate students and very few perform other teaching activities.

Activities related to Teaching task

The activities Information and Library Science faculty members perform within the teaching task were analyzed. The number of hits for each activity was counted and divided by the total sample, 11, to present the percentage. It was found that **Teaching Courses was the most performed task** where All faculty members at the school, 100 %, are involved in. A high percentage of faculty, 72.72 % implement and perform workshops. However, **Advising Undergraduate Students** was performed by a low percentage of faculty, 27.27 %. **Supervising Graduate Students was also performed by** a high percentage of faculty, 81.81 %. **Other activities** was also performed by a low percentage of faculty members, 9.09 %.

This indicates that teaching courses is the main teaching activity that all Information and Library Science faculty perform, followed by Supervising Graduate Students, followed by Implementing & Performing Workshops, followed by Advising Undergraduate Students. and very few faculty members perform other teaching activities. See table ( ) for details.

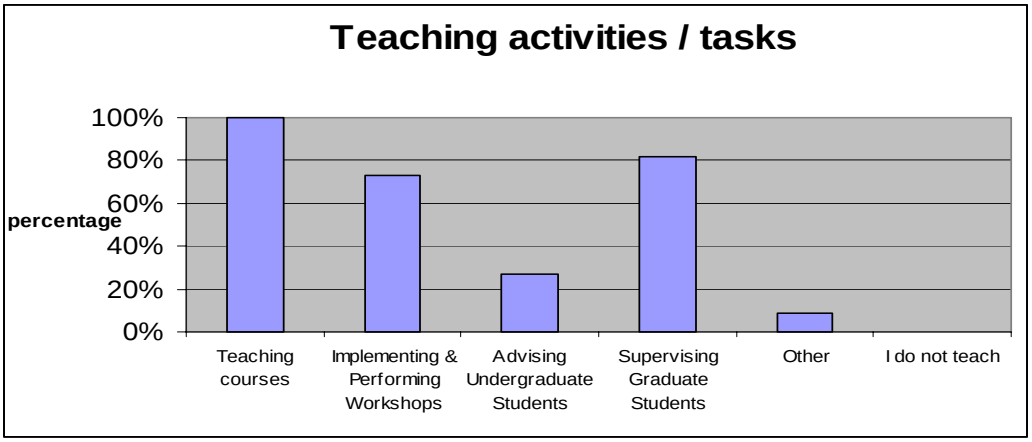
Based on this, the most commonly performed faculty activity is: Teaching courses. Results found in this study are similar to those found in other studies. In a review of previous studies of faculty tasks, **Cook, Wright, and Hollenshead (1996)** tried to understand how satisfied faculty members at the University of Michigan with their roles as teachers, in order to determine the factors and conditions that lead to career satisfaction. He examined faculty experiences and how they differ by rank in performing the tasks: teaching and advising students, scholarship, professional growth and creative work, clinical responsibilities, and service. They found that teaching was the most common task performed by all three ranks, assistant professors, associate professors, and full professors.

Table (6) Percentage of teaching tasks of Library and Information Science faculty

Teaching activities	Distribution	Percentage
Teaching courses	11	100 %
Implementing & Performing Workshops	8	72.72 %
Advising Undergraduate Students	3	27.27 %
Supervising Graduate Students	9	81.81 %
Other	1	9.09 %
I do not teach	0	0 %

Source: Survey of Information and Library Sciences faculty (n=11)

Figure (5) Percentage of teaching tasks of Library and Information Science faculty



Source: Survey of Information and Library Sciences faculty (n=11)

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 11 respondents; 3) Calculate the mean by dividing the sum of the results of each row by the number of respondents.

Hypothesis (1)

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.

[Over the last typical month how often did you access the following sources in teaching?]

Sources / usage	No Use	1-4	5-14	15-29	30-More
Emails					
News group and Listserv s					
Electronic Journals					
Index & Abstracts & Full Text Databases					
Scholarly Electronic Archives (ex. Research Index)					
Directories & Search Engines on the Internet (Yahoo, Aol, Ask jeeves, Google, Excite, etc)					

Part (1) Faculty Rank

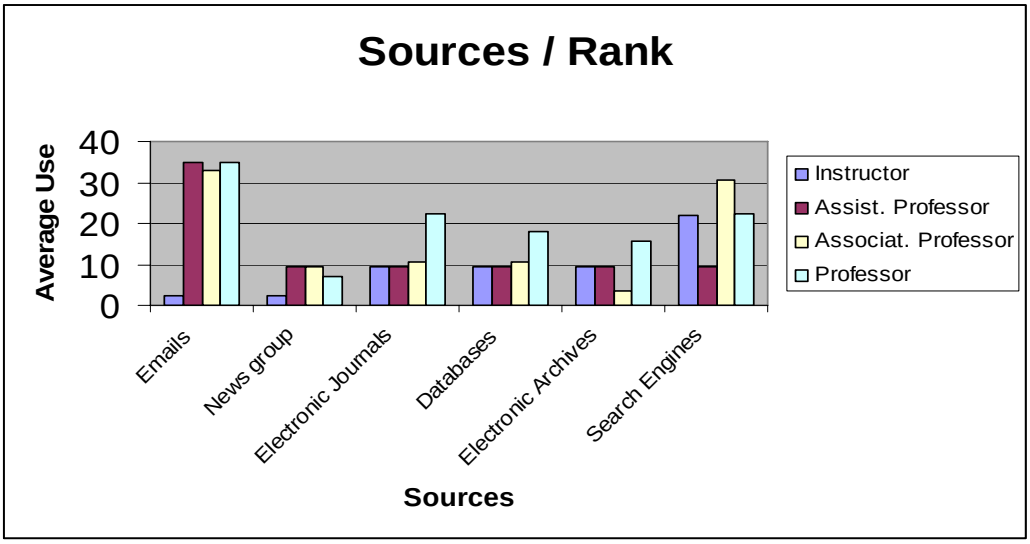
In order to test the hypothesis (1) and show the variance in using various information sources according to rank, a query was made using Microsoft Office Access to calculate the use of various information sources according to various ranks. The result of this query provided a report that presented the 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.

Table (7). Average use of networked information sources and services per Information and Library Sciences faculty member per typical month by rank: University of North Carolina 2005.

Sources	Instructor	Assist. Professor	Assoc. Professor	Professor
Emails	2.5	35	32.8	35
News group and Listserv s	2.5	9.5	9.5	7.2
Electronic Journals	9.5	9.5	10.4	22.2
Index & Abstracts & Full Text Databases	9.5	9.5	10.4	18
Scholarly Electronic Archives	9.5	9.5	3.6	15.6
Directories & Search Engines on the Internet	22	9.5	30.6	22.2
Total	55.5	82.5	97.3	120.2

Source: Survey of Information and Library Sciences faculty (n=11)

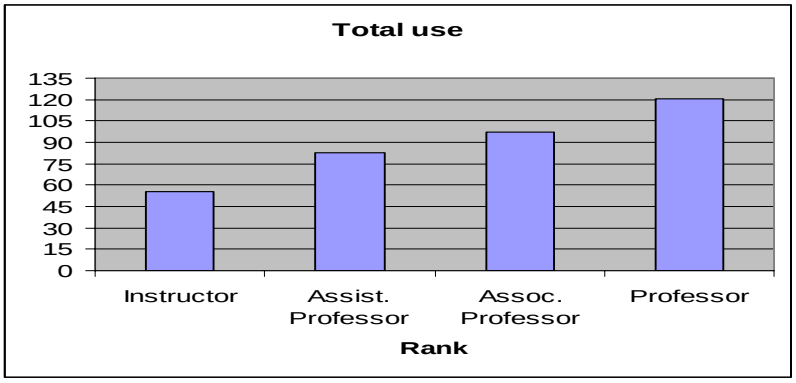
Figure (6) . Average use of networked information sources and services per Information Sciences faculty member per typical month by rank: University of North Carolina 2005.



Source: Survey of Information and Library Sciences faculty (n=11)

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 Assistant in second and third places. Instructors are at the end of the list. See table () for details.

Figure (7). Total average use of networked information sources and services per Information and Library Sciences faculty member per typical month by rank: University of North Carolina 2005.



Source: Survey of Information and Library Sciences faculty (n=11)

The following list shows how various faculty ranks use various information sources.

Professors: Professors focus on emails most and both electronic journals directories and search engines in the second place. They use electronic scholarly archives and news groups least.

Associate professors: Associate professors use emails most, and directories and search engines in second place. They use both news groups listserv s and scholarly electronic archives least.

Assistant professors: Assistant professors use emails most, while other sources and services come in a same rate.

Instructors: Instructors use directories and search engines most, and emails and news groups and listserv s least.

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.

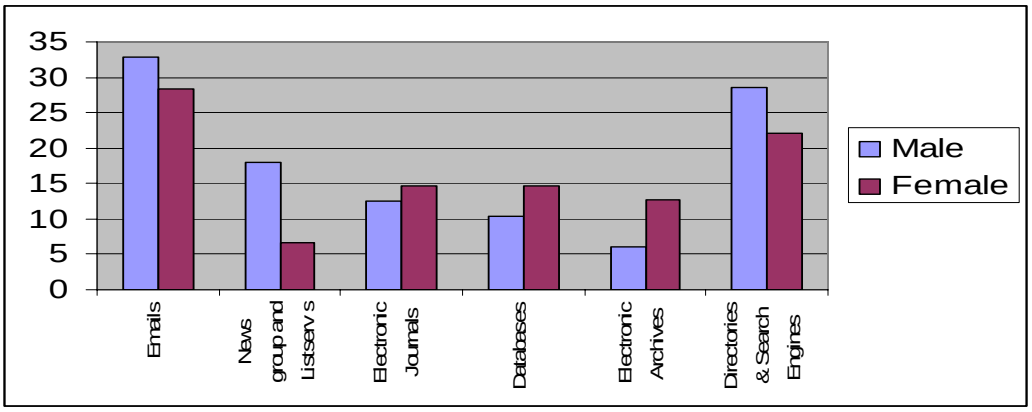
The study found the total use of males is higher than females. Emails and Directories and search engines were found to be used most by both genders, while scholarly electronic archives and newsgroups and listserv s were found to be the least used sources. It was also figured out that males use emails, newsgroups and directories and search engines more than females. One the other hand it can be figured that females use electronic journals, databases and scholarly electronic archives more than males. See table (8) for details.

Table (8) Average number of uses per faculty member per typical month by gender

Sources	Male	Female
Emails	32.83	28.4
News group and Listserv s	18	6.7
Electronic Journals	**12.5**	**14.6**
Index & Abstracts & Full Text Databases	**10.41**	**14.6**
Scholarly Electronic Archives (ex. Research Index)	**6**	**12.7**
Directories & Search Engines on the Internet (Yahoo, Aol, Ask jeeves, Google, Excite, etc)	28.58	22.1
Total	108.32	99.1

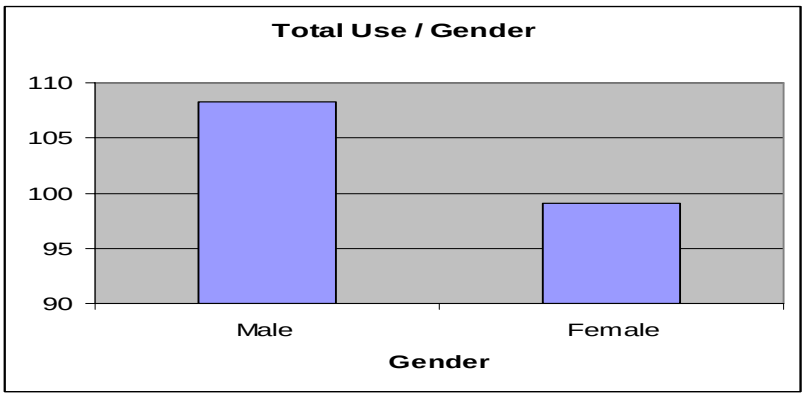
Source: Survey of Information and Library Sciences faculty (n=11)

Figure (8). Average use of information sources per Information and Library Science faculty member per typical month by gender: University of North Carolina 2005.



Source: Survey of Information and Library Science faculty (n=11)

Figure (9). Average use faculty member per typical month by gender: University of North Carolina 2005.



Source: Survey of Information and Library Science faculty (n=11)

Hypothesis (2)

The second hypothesis indicates that the degree to which faculty depend on Networked Information Sources electronic sources will differ across the teaching tasks/activities, as follows:

A) They will depend more on electronic mails for teaching tasks than News groups. (Approved)

B) They will depend more on electronic journals for teaching tasks than electronic archives. (Approved)

C) They will depend more on electronic databases for teaching tasks than Internet directories and Search Engines. (Disapproved)

This hypothesis was partially proved, in that it was found faculty member to depend more on electronic mails for teaching tasks than News groups (Part A).

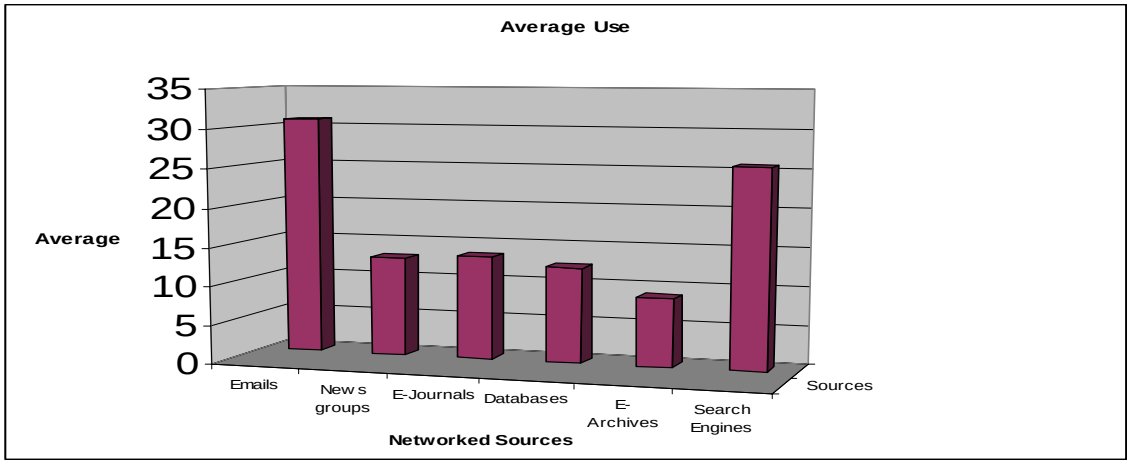
Part B was also approved in that it was found faculty member to depend more on electronic journals for teaching tasks than electronic archives. However part C was disapproved where it was found that faculty members do not depend more on electronic databases for teaching tasks than Internet directories and Search Engines.

Table (9) . The average typical use per typical month of various information sources for the teaching task per Information and Library Science faculty member: University of North Carolina 2005

Teaching / Sources	Emails	News groups	E-Journals	Databases	E-Archives	Search Engines
Average	30.86	12.86	13.45	12.31	8.81	25.63

Source: Survey of Information and Library Science faculty (n=11)

Figure (10). Average number of uses of Networked information sources per Information and Library Science faculty member per typical month: University of North Carolina 2005.



Source: Survey of Information and Library Sciences faculty (n=11)

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]***

Information Sources	Creditability* Accuracy** Reasonableness*** Support****		
	Low	Med	High
Emails			
News group and Listserv s			
Electronic Journals			
Index & Abstracts & Full Text Databases			
Scholarly Electronic Archives (ex. Research Index)			
Directories & Search Engines on the Internet (Yahoo, Aol, Ask jeeves, Google, Excite, etc)			

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 (10) for details.

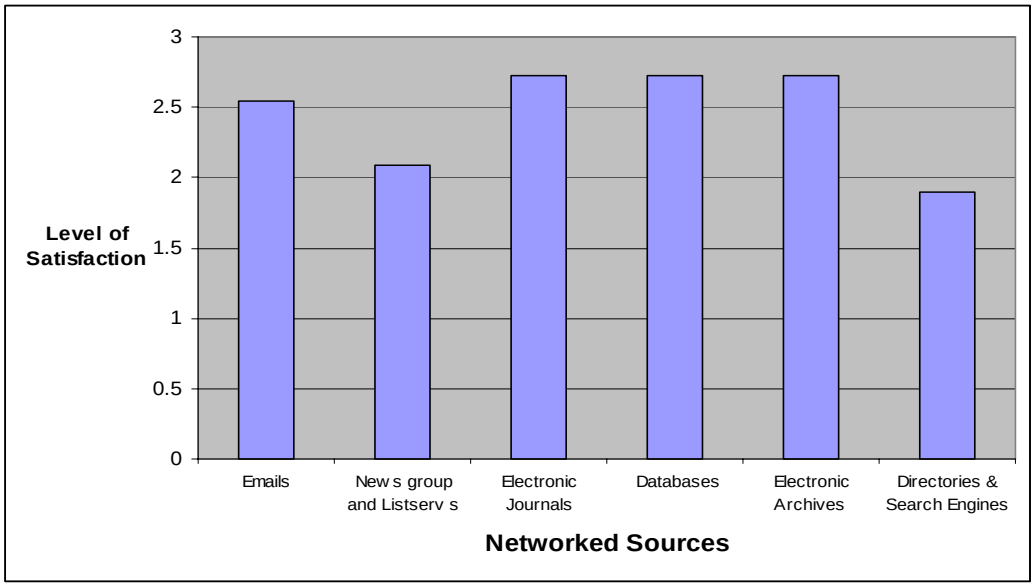
Table (10) Faculty evaluation of various electronic sources by CARS criteria of evaluation: University of North Carolina 2005.

Information Source	Level of Satisfaction
Emails	2.54
News group and Listserv s	2.09
Electronic Journals	2.72
Index & Abstracts & Full Text Databases	2.72
Scholarly Electronic Archives (ex. Research Index)	2.72
Directories & Search Engines on the Internet (Yahoo, Aol, Ask jeeves, Google, Excite, etc)	1.90

Source: Survey of Information and Library Sciences faculty (n=11)

* Creditability was defined in the questionnaire to be known or respected authority.
** Accuracy was defined in the questionnaire to be correct, up to date and comprehensive.
*** Reasonableness was defined in the questionnaire to be fair, balanced, objective and reasoned.
**** Support was defined in the questionnaire to have listed sources and contact information

Figure (11). Faculty evaluation of various electronic sources by CARS criteria of evaluation: University of North Carolina 2005.



Source: Survey of Information and Library Sciences faculty (n=11)

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 ***[-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: *accessibility (3 respondents) , ease of access (2 respondents), quick easy accurate, ease of distribution, availability, ease of use, efficiency, and Convenience(1 respondents for each).*

Other reasons for not using electronic sources

The question was ***[-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, 9 faculty members chose to comment. Examination of their

comments suggests that they can be categorized in seven areas: 1-format and lack of integration, 2-University Subscriptions and cost, 3- Coverage (incomplete sources and lack of full text), 4-lack of comments, 5-time, 6-impersonality, 7-access.

The difficulty of reading from a screen and problems with portability and printability were basic reasons behind not using electronic sources. In identifying Access as a factor in using electronic sources, respondents referred to the lack of accessibility of these materials out side the campus. In identifying Coverage and University Subscriptions, few respondents identified “incomplete sources”

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 sources, 3 faculty members chose to comment. Examination of their comments suggests that they can be categorized in three areas that are better indexing, creating powerful search engines more cross listings references.

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

Helwan University
Faculty of Arts
Department of Library and Information Science

Use of Networked Information Sources and Services by Information and Library Science Faculty in Teaching: A case study performed at The School of Information and Library Science at The University of North Carolina / By Dr. Hossam Eldin Mohamed Refaat. 2005.

I am a lecturer at the department of Library and Information Sciences at Helwan University, Cairo, Egypt. I am performing a study on Use of Networked Information Sources and Services by Library and Information Sciences Faculty in Teaching. I appreciate your participation, as it will assist in understanding faculty trends in getting information through various electronic sources for teaching. This questionnaire will take less than 5 minutes from each participant to complete it.

http://www.eun.eg/helwan_poll/teaching.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:

Dr. Hossam Refaat
E Mail: hossam@helwan.edu.eg

Thank you.

The activities you perform in teaching are:

Teaching courses ( ) Implementing & Performing Workshops ( )

Advising Undergraduate Students ( ) Supervising Graduate Students Other ( )

I do not teach ( )

Over the last typical month how often did you access the following sources in teaching?

Sources / usage	No Use	1-4	5-14	15-29	30-More
Emails					
News group and Listserv s					
Electronic Journals					
Index & Abstracts & Full Text Databases					
Scholarly Electronic Archives (ex. Research Index)					
Directories & Search Engines on the Internet (Yahoo, Aol, Ask jeeves, Google, Excite, etc)					

Please evaluate each of the following sources 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:

Information Sources	Low	Med	High
Email			
News group and Listserv s			
Electronic Journals			
Index & Abstracts & Full Text Databases			
Scholarly Electronic Archives			
Directories & Search Engines			

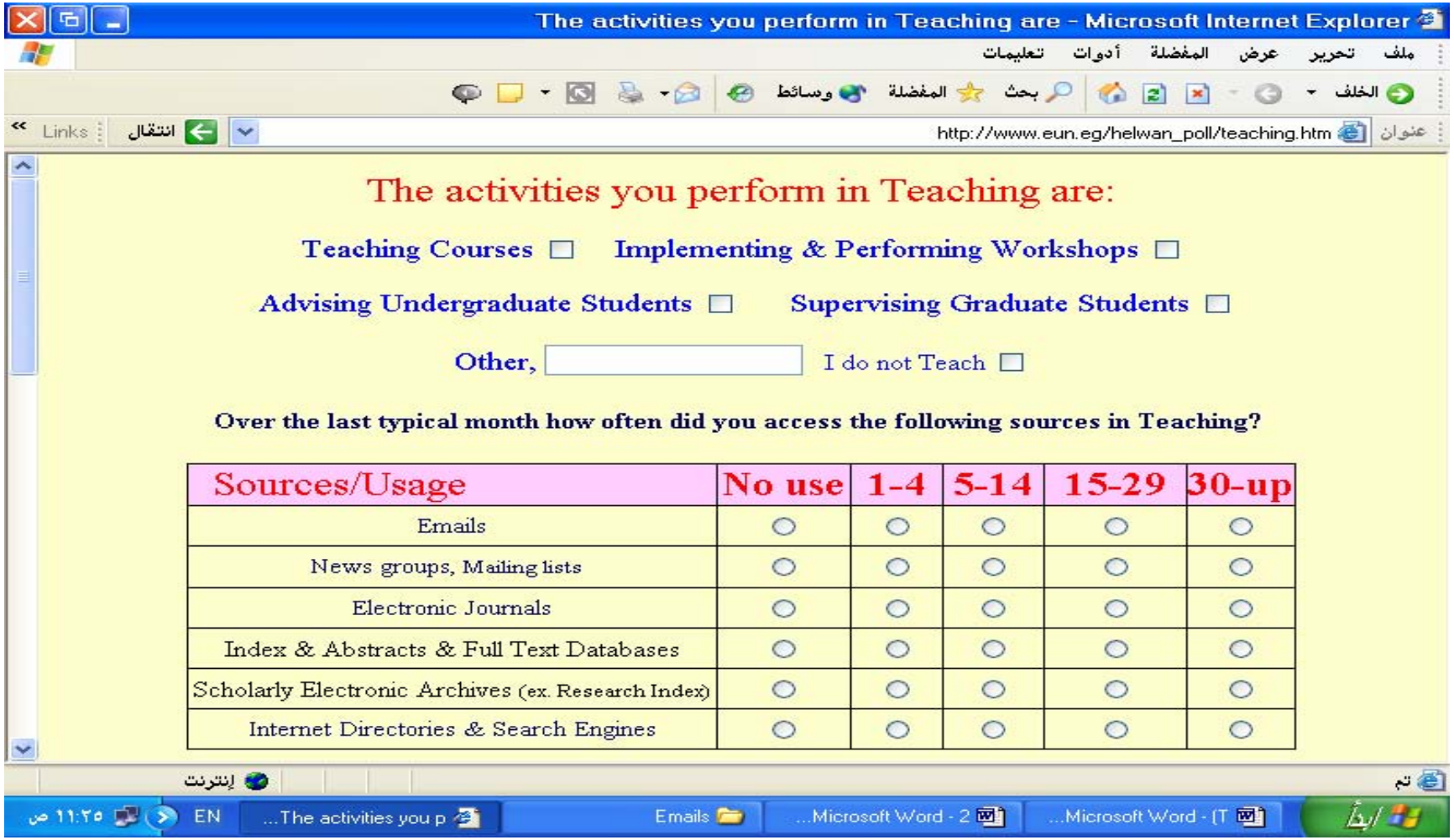
In additions to factors (**Credibility**; **Accuracy**; **Reasonableness**; **Support**) what other reasons do you have for using electronic sources

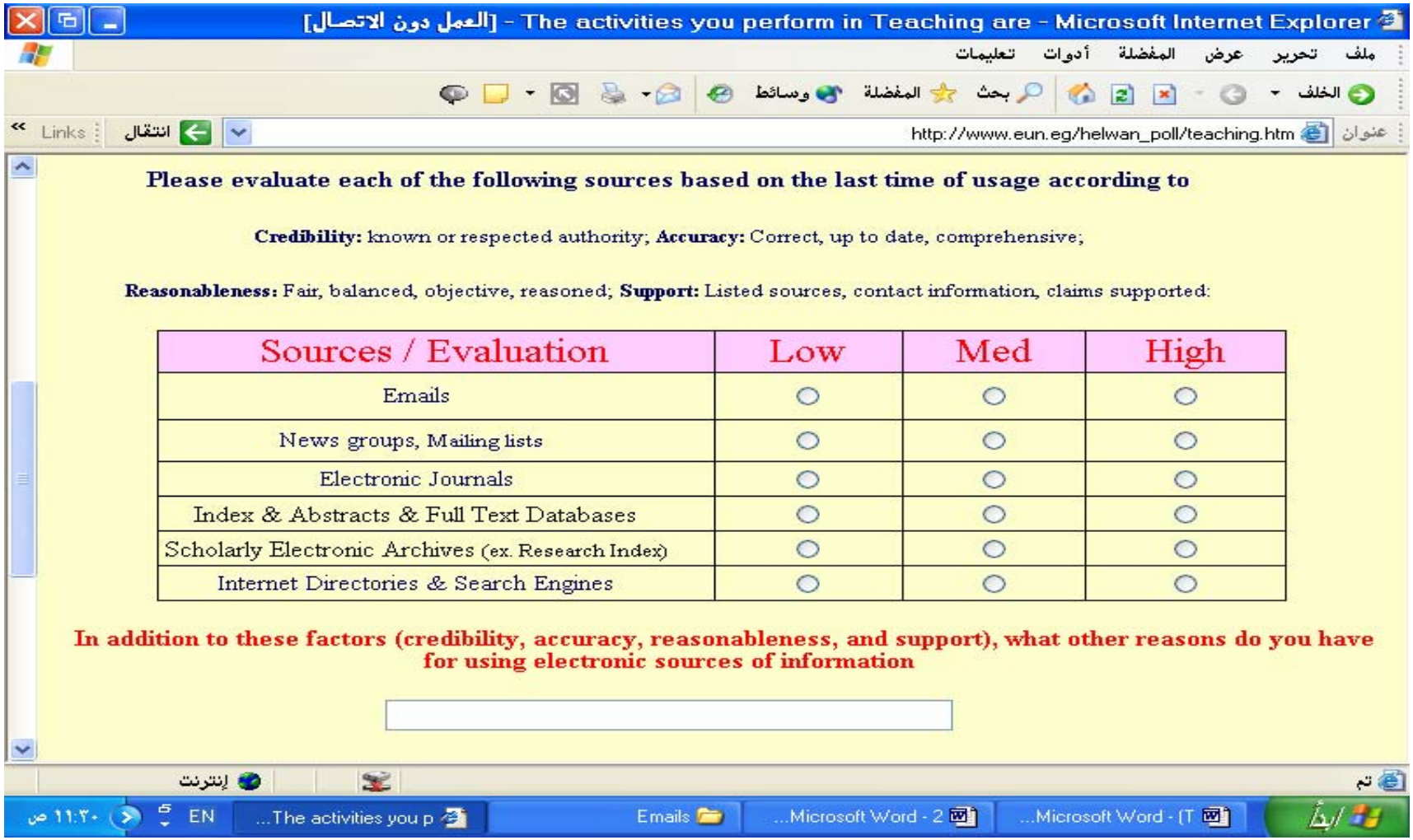
-What characteristics of electronic sources limit your use of them?

-Please use the space below for any suggestions comments, and recommendation for improving use of electronic sources

-Gender: Male ( ) Female ( )

-Rank: Instructor ( ) Lecturer ( ) Assistant professor ( ) Associate professor ( ) Professor ( ) Other---------- ( )


The activities you perform in Teaching are - Microsoft Internet Explorer
http://www.eun.eg/helwan_poll/teaching.htm
The activities you perform in Teaching are:
Teaching Courses
Implementing & Performing Workshops
Advising Undergraduate Students
Supervising Graduate Students
Other,
I do not Teach
Over the last typical month how often did you access the following sources in Teaching?
Sources/Usage
No use
1-4
5-14
15-29
30-up
Emails
News groups, Mailing lists
Electronic Journals
Index & Abstracts & Full Text Databases
Scholarly Electronic Archives (ex. Research Index)
Internet Directories & Search Engines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الخلف بحث المفضلة وسائط
Links انتقال
عنوان http://www.eun.eg/helwan_poll/teaching.htm
Please evaluate each of the following sources 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:
Sources / Evaluation
Low
Med
High
Emails
News groups, Mailing lists
Electronic Journals
Index & Abstracts & Full Text Databases
Scholarly Electronic Archives (ex. Research Index)
Internet Directories & Search Engines
In addition to these factors (credibility, accuracy, reasonableness, and support), what other reasons do you have for using electronic sources of information
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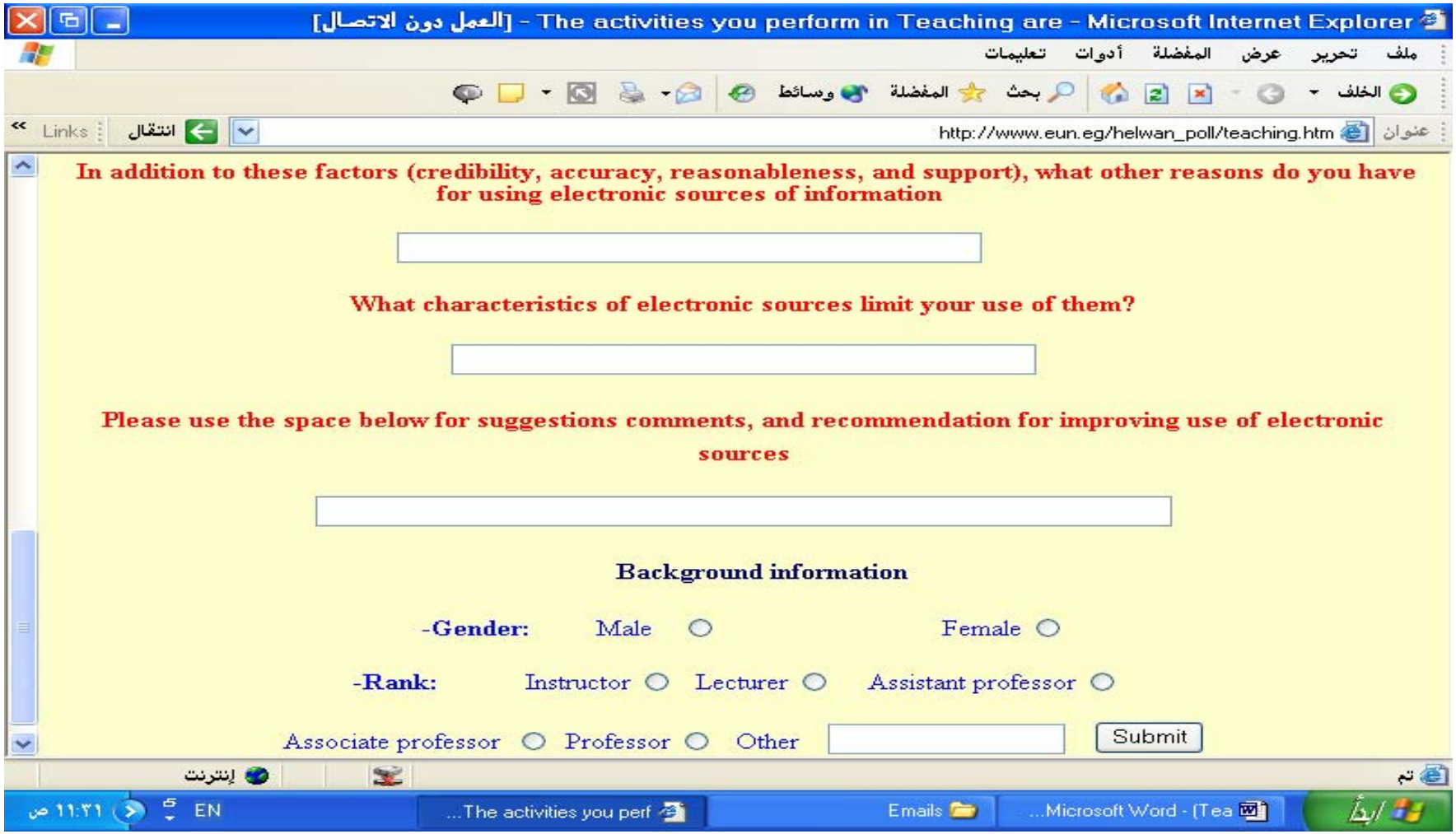
[العمل دون الاتصال] - The activities you perform in Teaching are - Microsoft Internet Explorer
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الخلف بحث المفضلة وسائط
عنوان http://www.eun.eg/helwan_poll/teaching.htm
انتقال Links
In addition to these factors (credibility, accuracy, reasonableness, and support), what other reasons do you have for using electronic sources of information
What characteristics of electronic sources limit your use of them?
Please use the space below for suggestions comments, and recommendation for improving use of electronic sources
Background information
-Gender: Male Female
-Rank: Instructor Lecturer Assistant professor
Associate professor Professor Other
Submit
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...Microsoft Word - (Tea

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