Use of Information Technology (IT) by Faculty Members of Library and Information Science (LISc) Departments in Universities of Iran

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ABSTRACT

The growth and developments of Information Technology (IT) is one of the most significant achievements of the present century and university departments are no exception to these changes. Educators are increasingly aware of the need, and concomitant demand to have skills to access the information to enable them to continue learning through their careers. The present survey attempts to study and interpret the use of Information Technology by faculty members of departments of Library and Information Science (LISc) in universities of Iran. Descriptive–analytical (survey method) method was used as the research method. Questionnaire was employed as the main tool for the data collection. The population of the study comprises 180 full time LISc faculty members in universities of Iran. The response rate of study was 120 (66.60%). The data was analyzed statistically using descriptive (frequency and percentage) and inferential statistic (Chi- Square Test) including in the Statistical Package for Social Science (SPSS). Findings showed that 95% of LISc faculty members used IT in Iran. Statistical Chi-Square test showed a significant relationship between faculty member's use of IT and their English levels. Data showed that faculty members used IT mostly for classroom lectures (38.3%). In research activities majority (43%) of faculty members used IT for writing book/paper, conference presentations and doing research works. Findings indicated that 94% of respondents used computer followed by 94% the Internet, 45% intranet, 79.9% online data banks, 87% on disc databanks, 80.8% CD & DVD technologies, 62.5% multimedia, 19% expert systems, 32% data projectors, 10.8% e-boards, 23.3% digital cameras. In case of the Internet services 91% of faculty members used web followed by 95% e-mail, 64.2% FTP (File Transfer Protocol), 9.9% videoconference, 43.3% discussion groups, 53.3% newsgroups. It showed that only 18% of faculty members had academic papers on the Internet. It has been recommended that IT facilities should be provided in each and every academic department in Iran. Data access speed communication (data routes and band width) should be increased. Faculty members should be encouraged to access IT and appropriate information services, in the form of awards, incentives, etc. from time to time. Faculty members should use IT frequently, not only for classroom lectures but also for writing paper, doing research works, and workshop presentations. Use of various audio-visual aids: Overhead and opaque projectors, data projectors, e-boards and digital cameras by academic members is recommended. Faculty members should be trained about the basics of globally available and widely used softwares.

Keywords: Information Technology use; IT use; Library and Information Science (LISc) Faculty Members; Universities of Iran; Educational Technologies

INTRODUCTION

The present age is called as *era of* Information Technology. IT represents a significant factor in the rapidly changing relationship between the user and information as well as in a librarian's ability to manage the digital knowledge (1). The growth and developments of the Information Technology (IT) is one of the most significant achievements of the present century (2) and the university departments are no exception to these changes. No area has experienced a more rapid growth than that of IT (3). The role of IT in university departments is also shifting dramatically from traditional chalkboard, classroom, i.e. chalk, walk and talk to an instructional aid i.e., Computer-Assisted Instruction (CAI) to help students and faculty teachers to learn different subjects. IT plays an important role in information handling, i.e. reduction in computing time, capabilities of resource sharing, economic storage capabilities of the files on digital discs, telecommunication and satellite communication, facilities for networking, etc (4). However, in some countries, IT is now at the centre of education reform efforts that involve its use in coordination with changes in curriculum, teacher training, pedagogy and assessment (5). Educators are increasingly aware of the need, and concomitant demand to have skills to access the information to enable them to continue learning through their careers (6).

THE NEED AND SIGNIFICANCE OF THE STUDY

Despite the increasingly widespread use of IT by faculty members, relatively few research works are available, either based on personal experiences and/or theoretical in nature. However, some related studies are available at international level but not directly related to the present study. Among the issues related to the academics use of networks, McClure (7) raises these questions: How can the use of electronic networks facilitate the tasks and goal of particular communities of users within this academic setting? What problems do particular academic groups of users face in attempting to exploit networks for the accomplishment of those tasks and goals? On the other hand new trends in teaching have happened. There is an indisputable need to maintain continuity, change and growth. The rapid development of using IT in the libraries and information centres has made a need to study technology tools, e-resources, and the services. A large amount of universities budget is spent for purchase IT facilities and equipment in Iran. Authorities and decision makers should know whether IT facilities are used properly or not and for which purposes the academic members use them. They should know whether they use these facilities for academic purposes or not. Consequently, there is a need to address these problems and other questions to find out the use of IT services among the LISc faculty members in the universities of Iran.

OBJECTIVES AND QUESTIONS OF THE STUDY

The objectives are: To study the status of IT utilization among faculty members of departments of Library and Information Science in universities of Iran; To identify users and non-users of IT and IT services among faculty members of departments of LISc in universities of Iran; To find out purposes of IT use among LISc faculty members in Iran; To explore the possibilities which help and motivate faculty members to increase use of IT; To suggest/recommend ways and means to overcome problems faced by faculty members. In connection with the objectives of the study, the following research questions will be addressed:

1. Do Iranian LISc faculty members IT?
2. How is the status of IT utilization among Iranian LISc faculty members?
3. Who are the users of IT among LISc faculty members? Who are not? and why?
4. Why do LISc faculty members use IT? What are their purposes?
5. Which IT tools and services are used by LISc faculty teachers?
6. What factors help and motivate faculty members to increase use of IT?

METHODOLOGY, POPULATION AND SAMPLE OF THE STUDY

Descriptive–analytical (survey method) method was used as the research method. Questionnaire was employed as the main tool for the data collection. However, indirect studies of records were adopted for collection and analysis of the relevant data to supplement the data collected through questionnaires to enhance and strengthen its reliability and to gather, some additional information on specific aspects of IT utilization by Iranian LISc faculty teachers. The population of this study comprises all of the full time faculty members of departments of Library and Information Science in universities of Iran, so the total population of the present research is: full time faculty members-180 (Lecturers, Assistant Professors, Associate Professors and Professors. As the total population of faculty members were 180 and it was a small population so all the 180 faculty members were selected as the research samples. Finally 120 respondents replied and completed the questionnaires and the response rate was 120 (66.60%).

MAJOR FINDINGS OF THE STUDY

General Information of Respondents

Faculty members were asked to mention their gender. The details of responses have been shown in figure 1.

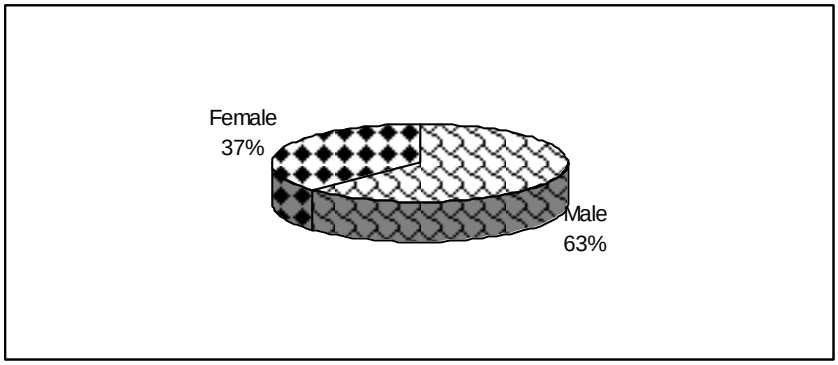

Figure 1: Faculty Members' Gender Wise Groups

Figure 1 shows that 63% of faculty members of LISc departments in Iran were male and 37% female.

Faculty members were asked to mention their age. The details of responses have been shown in Figure 2.

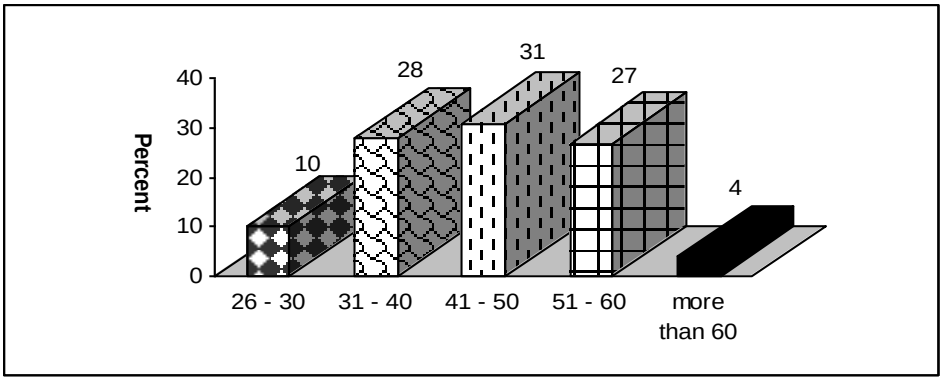

Figure 2: Faculty Members' Age Wise Groups

Figure 2 indicates that 31% of respondents were in the age group of 41-50 followed by 28% in age group 31-40, 27% in age group 51-60, 10% in age group 26-30 and the minimum (4%) in age group 61 and more.

Faculty members were asked to mention their academic degree. Figure 3 shows responses to this question.

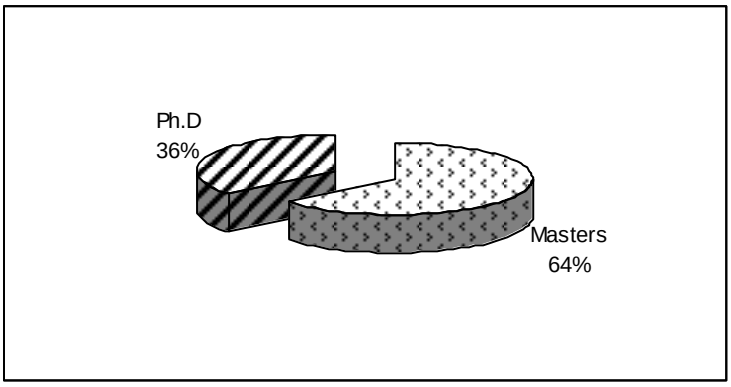

Figure 3: Faculty Members' Degree Wise Groups

Figure 3 represents that 64% of faculty members of LISc departments in Iran had Master degree and 36% Ph.D.

Faculty members were asked to mention their academic ranks. The details of responses have been shown in Figure 4.

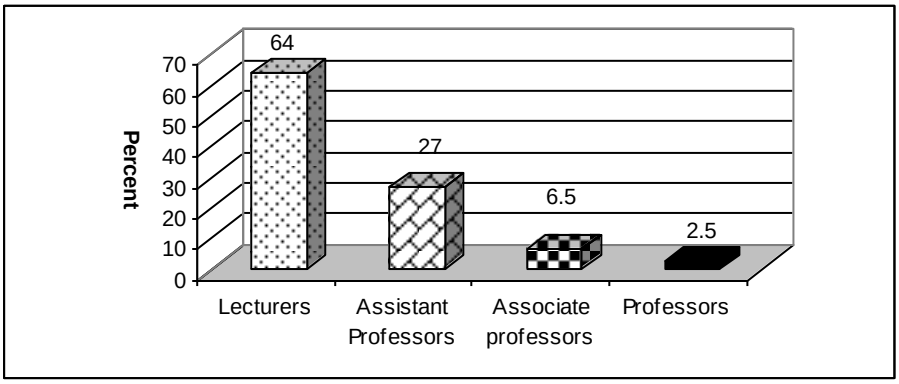

Figure 4: Faculty Members' Academic Rank Wise Groups

Figure 4 displays that 64% of respondents were Lecturers followed by 27% Assistant Professors, 6.5% Associate Professors and 2.5% (minimum) Professors.

Awareness and Use of IT

Faculty members were asked to mention about their use of IT. The details of responses have been shown in Figure 5

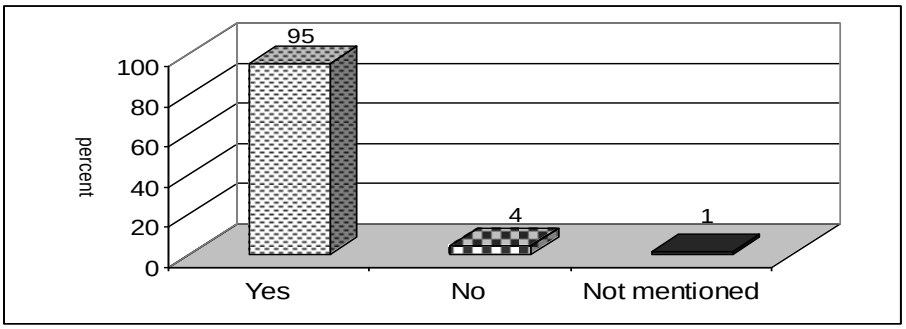

Figure 5: Faculty Members' Use of IT

Figure 5 shows that 95% of the under study academic members used Information Technology. Statistical Chi-Square test showed a significant relationship between faculty member's use of IT and their English language levels.

Reasons for not Using IT

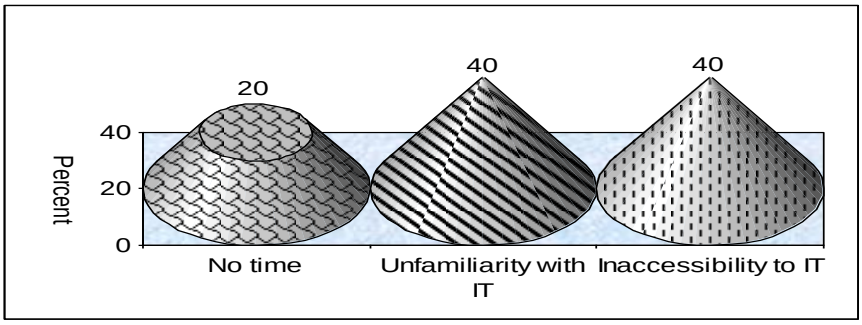

Figure 6: Faculty Member's Reasons for Not Using IT

Figure 6 shows that 40% of the IT non-users among faculty teachers, has not accessed to IT followed by 40% were not familiar with IT and 20% had not time. It can be concluded that unfamiliarity and inaccessibility were the top two reasons for not using IT by respondents.

Purposes of Using IT

The collected data indicated that 38.3% of faculty members used IT mostly for classroom lectures followed by 22.5% for both classroom lectures and workshop presentations, 18.3% for workshop presentation only and 21% did not specify any purposes. In research activities 43% (majority) of faculty teachers used IT for writing book/paper, conference presentations and doing research works.

Use of Different Types of IT Tools and Services

Table 1: Use of IT Tools and Services

Use Status	Not Known		Not Used		Used		Not Mentioned		Total	
Type of IT	No.	%	No.	%	No.	%	No.	%	No.	%
Computer	-	-	-	-	113	94	7	6	120	100
The Internet	-	-	-	-	113	94	7	6	120	100
Intranet	2	1.7	29	24	54	45	35	29.2	120	100
On Disc Databanks	-	-	-	-	105	87	15	13	120	100
Online Databanks	-	-	5	4.2	96	45.8	19	15.8	120	100
Multimedia	-	-	13	10.8	75	62.5	32	26.7	120	100
CD & DVD	-	-	2	1.7	97	80.8	21	17.5	120	100
Soft wares	-	-	-	-	105	87	15	13	120	100
Data Projectors	-	-	44	37	39	32	37	30.8	120	100
Digital Cameras	2	1.7	51	42.5	28	23.3	39	32.5	120	100
E - boards	2	1.7	63	52.2	13	10.8	42	35	120	100
Expert Systems	10	90	42	35	22	19	45	37	120	100

Table 1 shows that 94% of respondents used computer followed by 94% the Internet, 45% intranet, 87% on disc databanks, 45.8% online databanks, 62.5% multimedia, 80.8% CD & DVD

technologies, 32% data projectors, 23.3% digital cameras, 10.8% e-boards, 19% expert systems. It shows that among the Information Technology components, computer and the Internet are the most popular IT tools and services and expert system is the least used services being utilized by the mentioned faculty members.

Use of the Internet Services

Table 2: Faculty Members' Use of the Internet Services

Use Status / Type of Internet Services	Not used		Used		Not mentioned		Total	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Web	2	1.7	109	90.8	9	7.5	120	100
E- mail	-	-	113	95	7	5	120	100
FTP	19	15.8	77	64.2	24	20	120	100
Videoconference	64	53.3	12	9.9	44	36.7	120	100
Discussion groups	36	30	52	43.3	32	26.7	120	100
Newsgroups	26	21.7	64	53.3	30	25	120	100

Table 2 indicates that 90.8% of faculty members used web followed by 95% E-mail, 64.2% FTP, 9.9% videoconference, 43.3% discussion groups and 53.3% newsgroups. It indicates that among the Internet services, web and e-mail are the two top services being utilized by faculty members, while video-conference has been the least used services**.**

Faculty Members' Academic Paper on the Internet

Faculty members were requested to point out that they had academic articles/papers on the Internet or not. The details have been given in Figure 7.

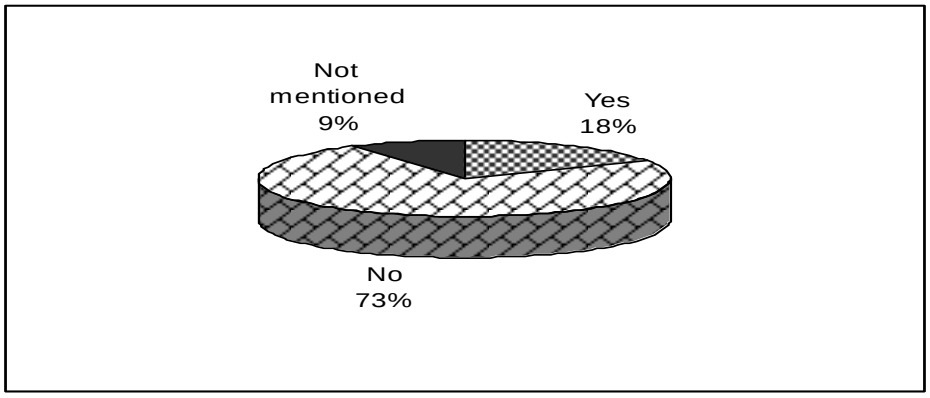

Figure 7: Faculty Members' Academic Paper on the Internet

Figure 7 reveals that 18% of the under study faculty members had academic articles/papers on the Internet, 73% had not had any paper on the Internet and 9% did not specify anything.

Faculty Members' Personal Home Page on the Internet

Respondents were requested to mention that they have personal homepage on the Internet or not. Responses have been shown in figure 8.

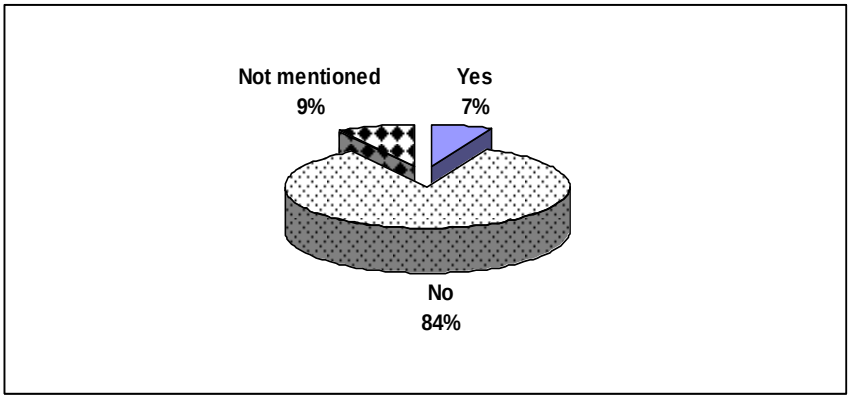

Figure 8: Faculty Members' Personal Homepage on the Internet

Figure 8 indicates that 7% of the under study faculty members had personal homepage on the Internet, 84% had not had any personal homepage and 9% did not specify anything.

Factors Motivate Use of IT

Faculty members were requested to mention the factors which help and motivate them to use IT. Responses have been shown in figure 9.

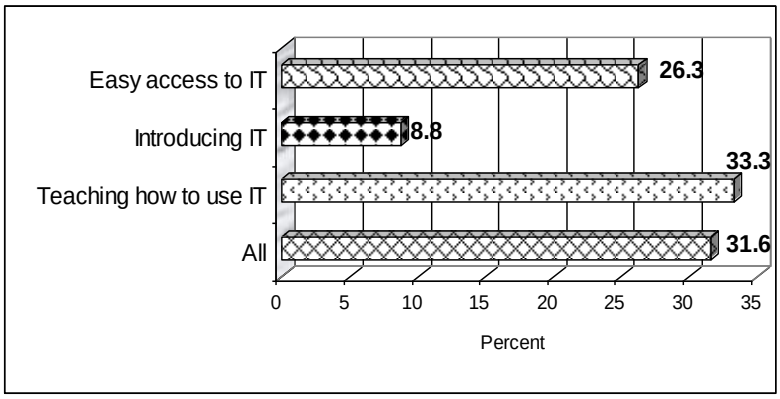

Figure 9: Factors Motivate Faculty Members to Use IT

Figure 9 depicts that 33.3% of faculty members stated "teaching how to use IT" motivates and helps them to use IT followed by 26.3% "easy access to IT", 8.8% "introducing IT" and 31.6% all the mentioned factors.

Faculty Members' Problems Faced While Using IT

The important problems mentioned by faculty members are: They reported that computers, printers, software tools, supplies and full text databanks were inadequate to perform their academic jobs. They also stated that speed of the Internet was low. They mentioned that IT training courses and experiences for faculty members have not been offered regularly. Funding and budget for purchasing IT facilities were inadequate. They declared that some classrooms were not equipped with the projection systems and audio visual aids.

SUGGESTIONS AND RECOMMENDATIONS

1. Government should have enough budgetary provision to develop IT based services, especially for academic faculty members.
2. Government should support IT as a strategic one and also by providing incentives for its developments in form of tax exemptions, consultancy, research and trainings, etc.
3. IT facilities should be provided in each and every academic department in Iran.
4. Data access speed communication (data routes and band width) should be increased.
5. Classrooms of the LISc departments should be equipped with advance audio-visual aids facilities.
6. It is suggested to have IT facilities for faculty members at the desirable extent with the latest hard wares and soft wares.
7. Faculty members should be encouraged to access IT and appropriate information services, in the form of awards, incentives, etc. from time to time.
8. Upgrade and maintenance of various hardwares and softwares are recommended.
9. It should be mandatory for all faculty members to be awarded and subsequently use the various IT based services during their academic careers. It also expected that younger generation should take more initiatives to cope with their IT based services for various academic purposes. Faculty members should use IT frequently, not only for classroom lectures but also for writing paper, doing research works, and workshop presentations.
10. Use of various audio-visual aids: Overhead and opaque projectors, data projectors, e-boards and digital cameras is recommended.
11. Faculty members should be trained about the basics of globally available and widely used softwares.
12. Faculty members should be encouraged to publish paper in the journal available/accessible on the Internet.

IMPLICATIONS: FURTHER STUDIES

1. The study is restricted to IT utilization in LISc departments and does not cover other academic departments. Hence, it is suggested to investigate IT utilization in other academic departments in universities of Iran.
2. It is also suggested to have a depth research on “The impact of IT on teaching and learning in LISc departments in Iran”.
3. It is recommended to include IT in LISc curriculums in the universities of Iran and detailed depth study to be carried out, before implementation.
4. Furthermore, depth study need to carry out to develop standard related to IT and its applications in LISc academic departments in universities of Iran.

CONCLUSIONS

The findings and observations in the present study underscore the need to offer more learning opportunities for faculty members to demonstrate, how IT and instructional technology can be applied in their works in academic LISc departments in Iran. Academic LISc departments need to ensure teaching staffs, support and effective classroom capacity for the use of new technologies specially IT. It will not only affect the relationship among the LISc professionals but also budget and curriculum development. Consequently, higher education system must also be modified to suit the next generation of faculty members in regard to professional demands and expectations of students. LISc professionals must be more than custodian of knowledge/information and have to play an important role as information/knowledge manager/consultant. There are intellectual practical problems of social significance and complexity. New IT constitutes new means new challenges, better opportunities not new ends. Consequently, we can and should re-think and redesign everything, as technology changes. Hence, we should consider all the components, while planning and organizing new IT based services and/or redesigning and upgrading the existing facilities. The futuristic view of IT, faculty members must be considered.

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