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User Education on the Use of Reference
Resources: An Iranian Experience

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Students' Perception of the Impact of User Education on the Use of Reference Resources: An Iranian Experience

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Introduction

The 21st century is the age of science. Scientific knowledge is created and communicated largely through teaching and research. University libraries are an integral part of teaching and research. Teaching and research depend upon the library, and achievements in teaching and research are not possible without the library. Expenses for library resources are considerable, and users should therefore be familiar with library materials and their applications. User education is a vital part of this process. Instruction in using reference works is an important and effective aspect of user education. Studies show that about 60% of students could not make use of reference works and that about 90% considered user education vital (Prorak, 1994: 69). Librarians can train users better and more carefully than other experts. Library user education provides a collection of skills that have a close relationship to other educational goals.

Problem Statement

The volume of scholarly and scientific publications is very large, with about 1,000 new books and 9,600 periodical titles published daily in the United States alone. The amount of available information is too large for anyone to access all materials and resources. Users must be able to discriminate and select. Selection is not possible without sufficient knowledge. User education is necessary for the best use of information resources. Information literacy is a major subject in the field of library user education programs. The American Library Association (ALA) defines information literacy:

"To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information" (Webber and Johnston, 2003).

Research on user needs and abilities can strengthen information literacy efforts. This study is a survey of students' familiarity with reference resources and their applications.

Hypotheses

The study has three hypotheses:

- Most students do not know different approaches to information-seeking through reference resources.
- There is a significant difference between trained students (those who have passed courses "Familiarity with library and librarianship" and "Bibliology" by library and information professors) and untrained students (those who have not had any education in library and information science)
- Teaching a course entitled "Familiarity with library and its materials" is the most effective form of user education.

Research Questions

In this survey, we try to answer the following questions:

- What is the level of students' familiarity and proficiency in using reference works?
- Do students feel that user education is a necessity?
- What are the best methods of user education from the student point-of-view?
- Who can provide the best user education?

Methodology

This study is a descriptive survey. The population is all students at Qom Islamic Azad University (QIAU), which has about 6,800 students (Diploma, Bachelor, and Master of Science, and Ph.D). About 350 students were selected using the Krejcie and Morgan formula. Information was gathered using a questionnaire of 22 questions (20 short-answer and 2 open -ended). Data analysis includes descriptive statistics, mean, standard deviation, charts, and student T-test.

Related Studies

User education in libraries evolved at the end of the nineteenth century (Salony, 1995). Vogel (1972, quoted in Atarodi, 1996) performed the first user education study. He found that, "there is always a barrier between librarians and university users (students). The library building and its different parts are barriers ... between patrons and the library."

Whitaker (1976) asks two basic questions: why do some people use libraries more than others, and why is using some libraries easier than others? He indicates that the main factor affecting library use is familiarity with how the library, as a whole, can be optimally used. Users who are more familiar with library and its facilities can use them more easily. Phipps and Dickstein (1977) studied methods of user education in a library among new students and found no significant difference between the lecture method and programmed user education.

Some studies have concluded that library education can have a positive impact on the quality of students' education. For example, Breviks (1982; quoted in Tiefel, 1995) demonstrated that there is a significant relationship between library user education and student grades. Moreover, Prorak (1994) looks at user education for music students, and found a significant relationship between user education and student grades.

Parirokh (1997) looks at the role of university libraries as contributors to independent learning. The findings show a lack of awareness by both librarians and instructors of theories and teaching methods that promote independent learning skills as well as educational environments that do not stimulate independent learning.

Clarke (1999) reviews the development of user education within the context of arguments for and against it. Library orientation tours and different approaches to them are described, as well as the development of undergraduate and postgraduate programs of user education.

Yu (2003) explored how Taiwanese college and technical institution libraries familiarize users with library facilities and information resources. The most common programs a basic introduction to library services, OPAC instruction, searching tools, Internet instruction, CD-ROMs, databases and electronic journals, and audio and video materials.

According to Alimohammadi and Sajjadi (2006), the most common skills or activities in library instruction are:

- Library tour.
- Instruction in subject headings and classification
- Searching both manual/computerized catalogues
- Use of reference materials
- CD-ROM databases
- Using microform equipment
- Assignments: Instruction should finish with a theoretical/practical test.

Data analysis

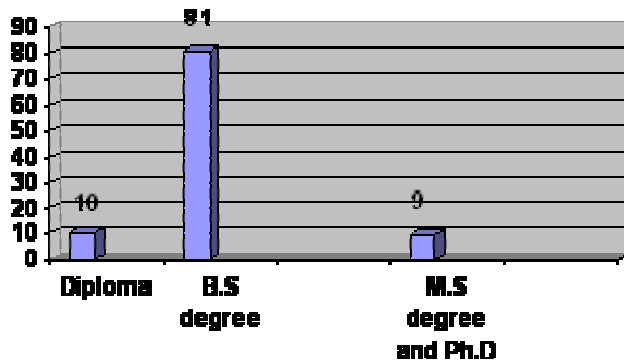
In this research, 351 questionnaires were distributed among students but 307 (87.46%) questionnaires were returned. Respondents were 60% female and 40% male (table 1).

Table 1: Gender

Gender	Number	Percent
F	184	60
M	123	40
Total	307	100

About 10% of students are engaged to education in Diploma, 81% in Bachelor of Science, and 9% in M.S. and Ph.D. degrees. The limited numbers of Diploma, M.S., and Ph.D. courses resulted in a concentration of answers from Bachelor's students.

Figure 1. Frequency distribution of students according to their degree of education



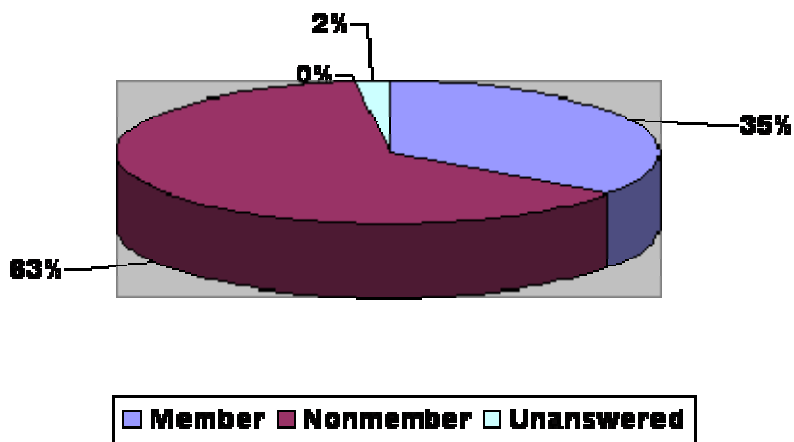
The mean years of education is about three years.

Table 2. Frequency distribution of students according to college years

Year Freq	1st	2nd	3rd	4th	5th	6th	Unanswered	Total
Number	17	90	106	79	5	2	8	307
Present	5.6	29.3	34.6	25.8	1.7	.7	2.6	100

More than 63% (194 students) were members of the library.

Figure 2: Frequency of library membership



Because students completed units on "Familiarity with library and librarianship", "Bibliology", and "Research methods," the statistical population consists of 49 students from those courses and 251 from others. We compared skills and abilities between groups (Table 3).

Table 3: Frequency distribution of trained and untrained students

Answer Question	Yes	No	Unanswered	Total
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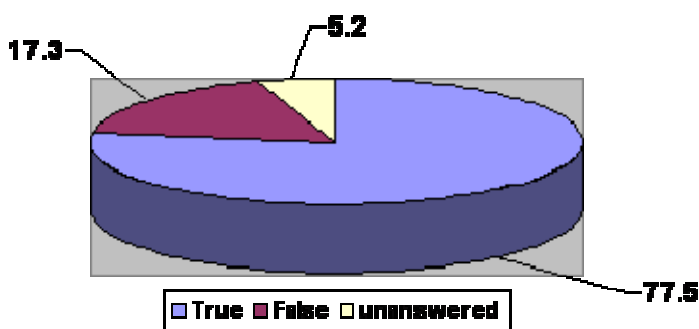
	Freq	%	Freq	%	Freq	%	Freq	%
Did you pass courses "familiarity with library and librarianships, bibliology research method in Persian Literature"?	49	16	251	81.7	7	2.3	307	100

Some questions evaluate students' familiarity with the reference department and their proficiency in using reference resources. There is a significant relationship between familiarity and proficiency in the reference department. Answers were analyzed based on the following questions:

1- What is the reference department?

More than three-quarters of respondents answered this question correctly (Figure 3).

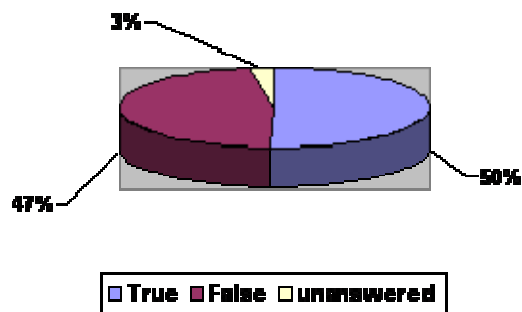
Figure 3: Frequency distribution of students' familiarity with the reference department



2- What is the primary characteristic ("non-circulating") of reference books?

A little more than half of respondents answered correctly .

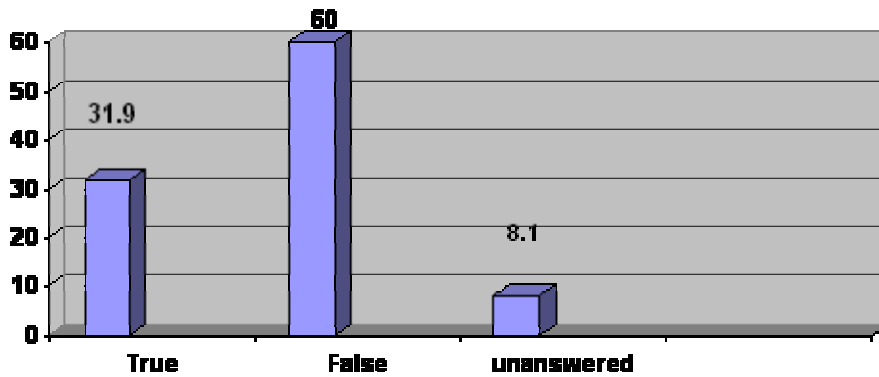
Figure 4: Frequency distribution of student's familiarity with non-circulating feature of reference books



3- What kinds of resources are appropriate to get information about newly-published books?

Only 31.9 % (98) of students answered it correctly (Figure 5).

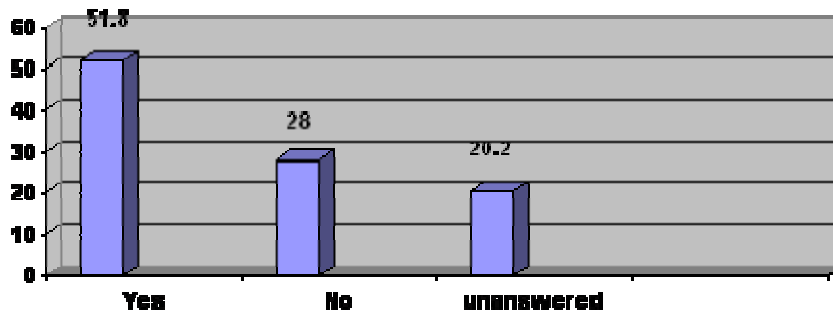
Figure 5: Frequency distribution of students' familiarity with bibliographies



4-Do you know *Week Book* journal?

Every researcher should be aware of sources of the latest information about published books in his/her field. In Iran the journal *Week Book* undertakes this responsibility. Findings show that slightly more than half were familiar with it (figure 6).

Figure 6: The rate of students' familiarity with *Week Book*



5-Do you know *Namaye* journal?

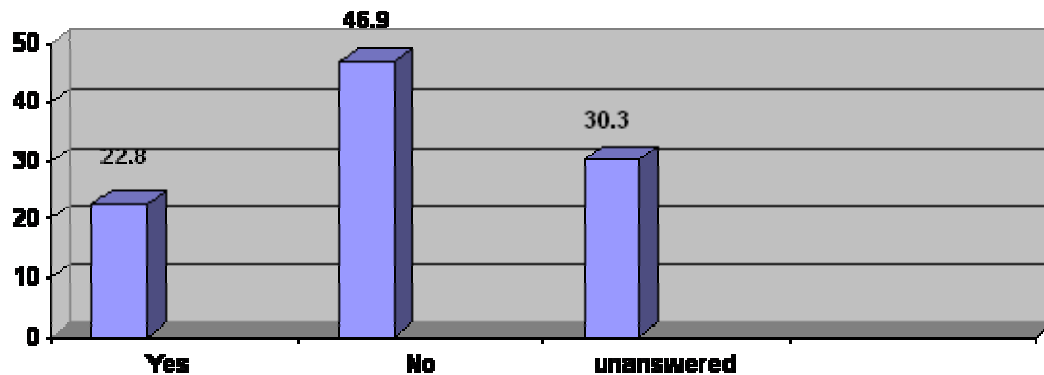


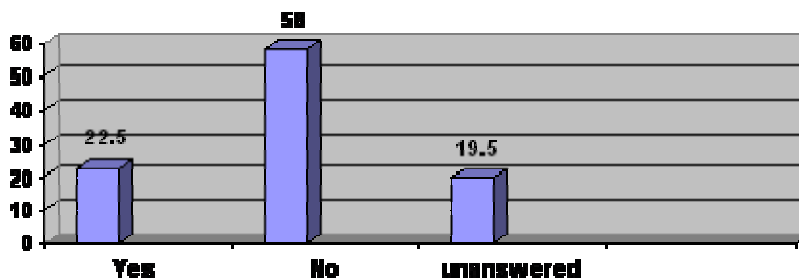
Figure 7: The rate of students' familiarity with *Namaye* journal

Namaye is a resource that can familiarize scholars with recently-published articles in Iran. Only about one-fifth of students are familiar with it (figure 7).

6-Are you familiar with indexes in reference works?

Only about 20 percent of students are familiar with reference indexes (Figure 8).

Figure 8: Rate of students' familiarity with indexes in reference books



7-Do you know the concept "See" in reference works?

The term "See" is one of the most frequently used concepts in reference works. More than half of students surveyed were not familiar with it.

Figure 9: Students' familiarity with concept "See"

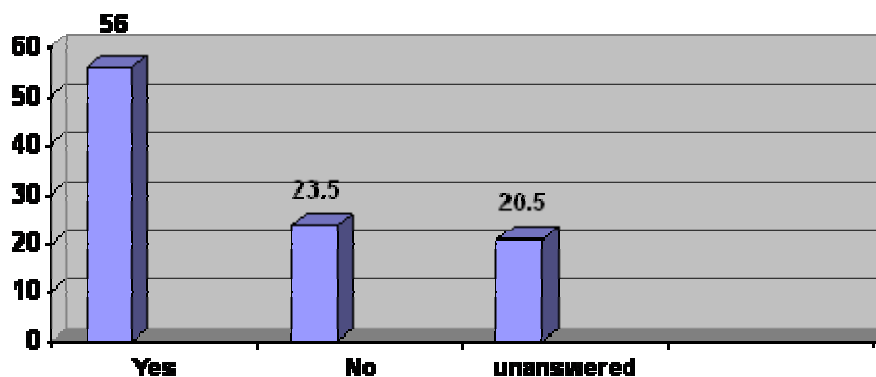


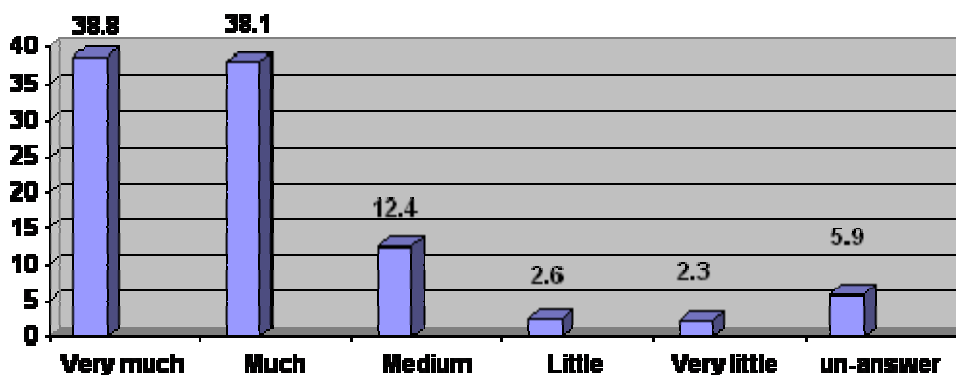
Table 4: Rate of students' familiarity with the reference department and its resources

Row	Title (questions)	True (Yes)		False (No)		Unanswered		Total	
		Freq	%	Freq	%	Freq	%	Freq	%
1	Familiarity with reference department	238	77.5	53	17.3	16	5.2	307	100
2	Familiarity with non-circulatory feature of reference books	155	50.5	143	46.6	9	2.9	307	100
3	Familiarity with bibliographies	98	31.9	184	60	25	8.1	307	100
4	Familiarity with <i>Week Book</i>	159	51.8	86	28	62	20.2	307	100
5	Familiarity with <i>Namaye</i>	70	22.8	144	46.9	93	30.3	307	100
6	Familiarity with indexes in reference books	69	22.5	178	58	60	19.5	307	100
7	Familiarity with the concept "See"	172	56	72	23.5	63	20.5	307	100
8	Total	961	313.1	860	280.3	328	106.8	2149	700
9	Mean	137	44.7	123	40	47	15.3	307	100

A Chi-Square test at level of significance $P > 0.05\%$ ($\alpha = 95\%$) and based on mean of collected data, shows a significant relationship, and relative familiarity with the reference department, but these data do not confirm the research hypothesis but accept the null hypothesis.

There were also some questions about getting information from reference books. In answering the question "how essential is it to offer user education on reference resources?" nearly 80 percent gave it "much" or "very much" importance (figure 10).

Figure 10: The importance of user education on reference works



According to figure 10, more than three quarters of the students thought that user education on reference works was important. Chi-Square with a level of significance $p > 0.01$ ($\alpha = 99\%$), calculated Chi-Square (14.828) is higher than Chi-Square of table (9.21) with (DF=2), which indicates a significant relationship.

Table 6: The best person for offering user education to make use of reference resources

Row	Title	Freq	%
1	Professor in special courses	108	40.6

2	Professor in library and information science	104	39.1
3	Librarian	52	19.5
4	Unanswered	43	14.1
5	Total	307	100

Students thought that a professor in the special courses was the most appropriate, followed by library and information science professors, and then librarians. Chi-Square at a level of significance $p > 0.05$ ($\alpha = 95\%$) shows a significant difference based on the frequency distribution of students' answers (52, 108, 104). Students' clear preference (priority) is a professor in their special courses.

Table 7: The best ways for offering education in using reference resources

Title	Level						Total
	Very much	Much	Medium	Little	Very little	Unanswered	
Providing leaflets or pamphlets							
Frequency	113	114	43	10	7	20	307
%	36.8	37.1	14	3.3	2.3	6.5	100
Providing Video tapes							
Frequency	78	70	86	38	14	21	307
%	25.4	22.8	28	12.4	4.6	6.8	100
Holding workshops or educational seminars							
Frequency	85	83	63	29	12	35	307
%	27.7	27	20.5	9.4	3.9	11.4	100
Using professional librarian in the reference department							
Frequency	168	82	22	6	3	26	307
%	54.7	26.7	7.2	2	1	8.5	100
Offering a lesson (2 units) "familiarity with library and librarianship".							
Frequency	68	80	64	27	45	23	307
%	22.1	26.1	20.8	8.8	14.7	7.5	100

Table 7 shows that about 74 percent of students felt that providing leaflets or pamphlets was the best method of user education. Nearly half the students found video to have an impact on user education, and slightly more than half regarded workshops or educational seminars that way. An equal number saw an expert librarian in reference department as having a great impact.

A comparison using a Chi-Square test in the level of significance $P > 0.01$ ($\alpha = 99\%$), confirms the order of the top five factors named by students. Classroom education placed lowest, and so the third hypothesis is rejected.

Table 8: Comparison between trained and untrained students' answers

Title	Trained students						Untrained students					
	True		False		Total		True		False		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Familiarity with reference department	44	89.8	5	10.2	49	100	194	80.2	48	19.8	242	100
Familiarity with non-circulatory feature of reference books	35	71.4	14	28.6	49	100	120	48.2	129	51.8	249	100
Familiarity whit bibliographies	41	87.2	6	12.8	47	100	57	24.3	178	75.8	235	100
Familiarity with "Week Book"	31	64.6	17	35.4	48	100	128	65	69	35	197	100
Familiarity with "Namaye"	12	30.8	27	69.2	39	100	58	33.1	117	66.9	175	100
Familiarity with indexes in reference works	27	62.8	16	37.2	43	100	42	20.6	162	79.4	204	100
Familiarity with the concept "See"	32	78	9	22	41	100	140	69	63	31	203	100
Total	222	484.6	94	2.5	316	100	739	340.4	766	359.6	1505	700
Mean	32	69.2	13	30.8	45	100	106	48.6	109	51.4	215	100

According to table 8, 69.2% (32 students) of 45 trained students and 48.6% (106 students) of 222 untrained students answered correctly, while 30.8% (13 students) of 45 trained students and 51.4% (109 students) of 222 untrained students answered incorrectly.

- Trained students' proficiency and ability in using reference resources were 69.2%, while untrained students' were 48.6%.
- The rate of errors in answering questions among trained and untrained students was 51.4% and 30.8%, respectively.

Analysis of data based on T-test in level of significance $P > 0.01$ ($\alpha = 99\%$) led to the following results:

1. There is a significant difference between the mean of correct answers of trained and untrained students in replying to the seven questions. The rate of calculated T (3.480) is higher than table's T (2.681) in level of significance 0.01 and DF=12.

Thus, there is a significant relationship between correct answers in two groups, which confirms the research hypothesis and rejects the null hypothesis. It can be concluded that rate of trained students' familiarity and proficiency is higher than that of untrained students'.

2. There is a significant difference between the mean of total false answers of the two groups in replying to the seven questions. Calculated T (4.946) is higher than table's T (2.68) at level of significance $p > 0.01$ and DF=12. As a result, there is a significant difference between errors in the two groups.

Findings

In regard to the third hypothesis, 81.4% of students have suggested the importance of an expert librarian in the reference department, 73.9% providing leaflets, and pamphlets, 54.7% holding workshops or educational seminars, 48.2% providing videotapes, 48.2% offering a lesson in two units. Therefore, the third hypothesis was not confirmed and the null hypothesis was confirmed.

In answering the following questions:

Who is the best person to offer user education on using reference resources based on the view of students? Findings show that 40.6% of students believed that it should be performed by one of the professors in their special courses, while 39.1% of them believed in one of the professors in Librarianship department, and finally 19.5% believed that it should be done by a librarian.

Do students feel any requirement for offering user education on using reference resources? Data show that about 76.9% of students described it much and very much, 12.4% medium, and only 4.9% little and very little.

According to Chi-Square at level of significance > 0.01 ($\alpha = 99\%$), there is a significant difference among gathered data and it indicates that students count user education as a requirement. It is apparent that rate of students' familiarity and proficiency to acquire information from reference works is in 21.6% much and very much, in 43% medium, in 30% little and very little.

Descriptive analysis of data demonstrated that students' belief in familiarity with reference resources as well as proficiency (mastery) in getting information from reference resources is in medium level.

Recommendations

For library services to keep pace with the needs of student needs, libraries should employ expert and skillful librarians who can provide user education.

Librarians should offer user education to faculty, and provide them with instructional material to present to students.

Feedback from students indicates that leaflets or guidebooks may be a better means of user education than classroom instruction.

Student feedback also indicates that major changes should be made to user education programs, and that instruction in the library's "public services" should be obligatory.

Acknowledgements

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