INFORMATION-SEEKING BEHAVIOUR ON INTERNET:
A comparison between
Arts and Science Undergraduate Students in Iran

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ABSTRACT

The demand of responsibilities among teachers has evolved not only in classroom management but also to the extent of promoting communication and interpersonal skills. Social media is integrated in schools and higher learning institutions for communication and reflection of learning which enhance teachers' performance in leadership quality and effective teaching. This study was designed in a qualitative approach mainly to explore the extent of interest and enjoyment students experienced during an intensive ICT course. Blog was used as a medium for reflection during the class where students posted their creations of videos, posters and other ICT materials. The three needs investigated were namely autonomy, competence, and relatedness support. The researcher further examined on students' awareness of the usefulness of the ICT skill they learned and how much they can use the blog for teaching and learning. Based on the Basic Psychological Needs Theory framework (BPNT), this study has adopted the direct observation, journal entry, and interviews as a triangulation approach.

Keywords: Information seeking behavior, Internet , Arts , science , faculty

Introduction

Internet has increasingly influenced the information seeking behavior of students in higher education over the past few decades. The mass availability of information on the web has seen significant changes in the electronic information needs information retrieval and communication patterns (information seeking behavior) of university students. The easy-to-use internet promotes more information seeking while constantly attracting more new users, and achieves this immeasurably faster than traditional repositories. This has catapulted the Internet to the top of the pile of current information resources (Nkomo , 2009). It is assumed that in this new age, which is characterized by the extensive use of internet, students' needs have evolved into something considerably less familiar. The rise of diverse search engines such as Google, Yahoo, Altavista, and networking sites has also affected the information seeking behaviors of Academic researchers (Ge, 2010). Jansen and Pooch (2001) claim that a completely new pattern of information seeking behavior has emerged. In the emerging electronic environment, knowledge about the information seeking behavior of students on the web is crucial for those wishing to help them effectively meet their information needs online (Nkomo , 2009).

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According to Cutrell and Guan (2007), "Understanding how users search for information on the Web has enormous practical implications for academic endeavors. Many studies on internet based students' information seeking behavior or skills/literacy have been conducted over the last decade involving both undergraduates and postgraduates. Numerous studies identified that university students prefer to use the Internet for their information need more than traditional print sources due to being quickly and easily valuable resource (Upton, 2006 , smart & cappel , 2006 , Gay et al , 2006 , Hickman & Cooner , 2008 , Svirko & mellanby , 2oo8 , Buzzetto , 2008 , Yaghoubi , et al , 2008 , Neo & Neo , 2008 , Ostland , 2008 , AlDOUB , et al , 2008 , Palmer & Holt m 2009 , Theyben & Hahn-Allee , 2009 , Alobiedat and Saraierh , 2010 ; Omidian , 2011). Nevertheless , others concern regarding to the information seeking behavior of students in higher education as quickly and easily accessible internet or highly availability of information on the web has led to competency learned by rote , the unthinking, unevaluated, over-usage of web resources by students (Graham and Metaxas, 2003, Head and Eisenberg , 2009 ; Nicholas and Huntington , 2009).

And, more generally, as researchers and practitioners wonder whether students' internet based knowledge for searching is adequate. A CIBER log studies conducted during 2003 to 2007, found undergraduate students didn't used PDFs format in their research works functions because of cutting and pasting them easier to do in HTML format. In addition, they didn't sign up for the profile of papers, articles and etc.

Indeed, a 2008 study found similarly stating that undergraduate students were less likely to penetrate a website deeply and proved to be the biggest viewers of abstracts. Mehra and bilal (2007) also found that international Asian undergraduate students mentioned difficulty in using digital interfaces mainly due to their inadequate level of English language skills.

Searching, browsing the hierarchical structure of web directories . Martin (2008) found undergraduate at the University of Central Florida's College of Education didn't use Google Scholar due to being unaware not only of the differences between academic and non-academic sources, but also the appropriateness of using those sources.

However, some have argued that with high Internet self-efficacy had better information searching strategies and learned better than those with low Internet self-efficacy in a Web-based learning task (Tsai & Tsai 2003; Hong, 2006). Weiler (2005) goes on the note that the process of finding information is subjective and influenced by previous experiences, knowledge, and opinions, Nkomo's study (2009) concludes undergraduate students focused on a few channels, particularly search engines, email and general websites while Those with more web experience showed a greater appreciation for other information channels such as online databases and electronic document delivery services.

According to Ellis & Allaire (1999) students studying information systems and computer sciences will possess the highest levels of computer competency due to their experience with technology and their interest in using technology. Sam, Othman & Nordin (2005) revealed that Undergraduates from the Faculty of Computer Science and Information Technology (FCSIT) had significantly better computer self-efficacy than undergraduates from Faculty of Applied and Creative Arts (FACA).

A 2010 study Pradeepkumar & Panchanatham) found that the Arts and Science College students didn't concentrate more in using e-journals and e-books when comparing to the Engineering College students.

The higher ratio of e-mail users belonged Engineering students comparing to Arts and Science college stOmidian's (2010) research identified a lowering of overall computer self-efficacy and high computer anxiety for those students from faculty Arts and education than students who belonged to science faculty. In a study of Information literacy of incoming undergraduate Arts students, King (2007) noted that students didn't know names of different search engines and Boolean operators.

They also didn't not use e-mail and the WWW as an information resource. Given the potential importance of disciplinary differences, it is essential that researchers fully understand the different patterns of undergraduate students' information seeking behavior relating to internet use.

It would be most beneficial to compare information seeking behavior of students considered to be of the Arts education departments and students that belonged to science and engineering faculties in order to isolate and compare differences between these groups.

Although Numerous legally approved universities in Iran offer various courses associated with Arts and science at undergraduate level, no comparative study conducted on the information needs and information-seeking behavior of arts, humanities, Education , science and engineering students.

Accordingly, this paper aims to compare Information-Seeking Behavior on Internet between Arts and science undergraduate students in one of major universities in Iran.

METHOD

Designing the Instrument

A scale with 43 questions in 5-point Likert format was developed by investigators. The reliability of the scale was calculated through internal consistency method. Cronbach's alpha reliability Score was, 0.79 which is considered very well (Hair et al. 1998) .

Sample design

250 Arts and science undergraduate students at Islamic Azad University of dezful were selected using stratified sampling technique. The average of ages for arts and science students were 24.11 and 23.34 respectively. Approximately 43 % of respondents were male and 57 % were female.

Results

Research Question: 1

Is there any significant difference between the arts and science students ' familiarity concerning the use of e-mail?

Table: 1
The percentages of levels of Arts and Science students'
familiarity about the use of e-mail

Science			Arts			Groups
Rank	Percent	Frequency	Rank	Percent	Frequency	statistical indicators / Options
5	1.6	3	4	12.3	8	Very Low
4	2.3	4	4	12.3	8	Low
3	22.2	41	1	33.8	22	Somewhat
1	46.5	86	2	24.6	16	High
2	27.6	51	3	16.9	11	Very much
	100	185		100	65	Total

Table: 1 revealed that 24.6 percent of Arts students were familiarity with using email, while 46.5 percent of science students indicated that they were familiar with how to use email. The difference was found to be significant at 0. 001 level of significance when the Chi-square value was computed as 33.24 percent. It was therefore found that science students were significantly more familiar with using email as compared to arts students.

Research Question: 2
Is there any difference between the arts and science students 'ability to create blog?

Table 2:
The comparison of Arts and Science students' ability to create blog

Science			Arts			Groups
Rank	Percent	Frequency	Rank	percent	Frequency	statistical indicators / Options
2	61.8	114	1	50.8	33	Yes
1	38.2	71	2	49.2	32	No
	100	185		100	65	Total

As Table 2 shows, about 61.8 percent science students and 50.8 percent Arts students had the ability to set up a weblog. Chi-square test results ($\chi 2 = 3.04$, $p = 0.081$) indicated that there was no significant difference between two groups.

Research Question: 3

Is there any significant difference between the arts and science students 'familiarity with internet addresses?

Table: 3
The comparison of Arts and Science students' knowledge about internet addresses

Science			Arts			Groups
Rank	Percent	Frequency	Rank	Percent	Frequency	Satistical indicators / Options
3	43.8	81	3	35.4	23	Com
6	26.5	49	4	21.5	14	Co
2	44.3	82	1	58.5	38	Edu
5	28.6	53	5	20	13	Gv
1	55.7	103	2	41.5	27	Org
4	31.9	59	5	20	13	Net
7	19.5	36	4	21.5	14	Mil

As shown in table 3, URL and edu with (58.5 percent), org (41.5 percent), com (35.2 percent), co and mil (21.5), gv and net (20 percent) are the most familiar internet addresses among the arts students. The science students mentioned org (55.7 percent), edu (44.3 percent), com (43.8percent), net (31.9 percent), gv (28.6 percent) as the most familiar internet addresses. Results of chi-square test ($\chi 2 = 12.37$, $p = 0.089$) was not found to be significant even at the 0.05 level of confidence. This suggests that there is no significant difference between the arts and science students concerning their familiarity with internet addresses.

Research Question: 4

Is there any difference between the arts and science students' success of data retrieval?

Table: 4
The comparison of success of data retrieval between Arts and Science students

Science			Arts			Groups
Rank	Percent	Frequency	Rank	Percent	Frequency	Statistical indicators / Options
6	0.5	1	4	4.6	3	Unsuccessful Strongly
4	4.3	8	3	6.2	4	Unsuccessful
1	49.7	92	1	53.8	35	relatively Successful
2	35.7	66	2	32.3	21	Successful
5	3.2	6	0	0	0	Strongly successful
3	6.5	12	5	3.1	2	Undecided
	100	185		100	65	Total

As Table 4 displays, although 10.8 percent of Arts students were very unsuccessful in data retrieval, 53. 8 and 32. 3 percent of them assessed themselves relatively Successful and successful respectively.

Similarly, in the science faculty, 4.8 percent of the respondents failed in data recovering, while 49. 7 and 35.7 percent of them were relatively Successful and successful respectively.

Results of chi-square test ($\chi2$ =8. 75, p= 0.11 9) also was not found significantly different between the two faculties with regard to data retrieval.

Research Question: 5
Is there any significant difference between the arts and science students ' preference towards search engines?

Table: 5
The comparison of search services used between Arts and science students

Science			Arts			Groups
Rank	Percent	Frequency	Rank	percent	frequency	statistical indicators / Options
1	88.6	164	2	70.8	46	Google
2	60	111	1	72.3	74	Yahoo
3	3.2	6	4	4.6	3	Altavista
3	7.6	14	4	4.6	3	MSN

As shown in Table 5, All respondents use search engines , especially Google (88.6 percent arts students, 70.8 percent science students) followed by Yahoo(72.3 percent arts students, 60 percent science students), Alta Vista (4.6 percent arts students , 3.2 percent science students and MSN (4.6 percent arts students, 7.6 percent science students. Significant difference ($\chi2$ =15. 32, p= 0.009) was also found between arts and science students ' familiarity with using Internet search engines.

The findings showed that the science students value Google over other search engine as compared to arts students. In contrast, students belonging to arts faculty preferred to utilize Yahoo.

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Research Question: 6

Is there any significant difference between arts and science students ' strategies of using Internet search engines?

Table: 6
The comparison of usage of search engine strategies between arts and science students

Science			Arts			Groups
Rank	Percent	Frequency	Rank	Percent	frequency	statistical indicators / Options
1	36.8	68	2	24.6	16	Simple search words Writing
3	23.2	43	4	18.5	12	The use of long sentences
4	7.6	14	5	7.7	5	Attention to large and small letters of words
2	27.6	51	1	29.2	19	Use of long words
5	4.9	9	3	20	13	Undecided
	100	185		100	65	Total

As shown in Table 6, the main strategies of using Internet search engines by Arts Students were using long words (29.2 percent) followed by writing simple search word (24.6 percent), long sentences (18.5 percent) and large and small letters of words (7.7 percent). On the other hand, science students mainly seek information through search engines by the methods of writing simple search words (36. 8 percent) followed by using long words (27.6 percent), the use of long sentences (23.2 percent) and writing small and large letters of words (7.6 percent). The difference was found to be significant even at 0.01 level of significance when the Chi-square value ($\chi2=15.18$, $p=0.004$) was computed. The results revealed that there was significant difference in the method of simply searching through search engines with science students avoiding it more than their counterparts from Arts faculty.

Research Question: 7

Is there any difference between the arts and science students concerning how to be familiarity with Internet ?

Table: 7
The comparison of methods of familiarity with internet between arts and science students

Science			Arts			Groups
Rank	percent	Frequency	Rank	percent	frequency	statistical indicators / Options
1	54.1	100	1	49.2	32	Colleagues and friend
2	46.5	86	4	32.3	21	Study books
4	25.4	47	2	36.9	24	Formal training
3	43.8	81	3	35.4	23	Trail and error

Table: 7 indicates 49.2 % arts student's ranked colleagues and friends first as the most method of familiarity with internet. Formal training was the second as revealed by 36.2 of the respondents, followed by trial and error method which is ranked as third by 35.4 percent and finally study books (32/3 percent) was in the last rank.

Similarly, 54.1 percent of science students considered colleagues and friends the best way to be familiar with internet. However, 46.5 percent science students recognized internet through Study books, followed by trial and error (35.4 percent) and formal education (36.2 percent).

The difference between two faculties concerning methods of familiarity with internet was found not to be significant even at 0.05 level of significance when the Chi-square value ($\chi 2$ =8.50, p= 0.075) was computed.

Research Question: 8
Is there any significant difference between arts and science students in terms of how to find internet resources?

Table: 8
The comparison of methods of finding internet resources between Arts and science students

Science			Arts			Groups
Rank	Percent	Frequency	Rank	Percent	Frequency	statistical indicators / Options
6	13	24	3	12.3	8	printed sources
3	21.6	40	2	23.1	15	Electronic Reference
8	5.9	11	3	12.3	8	Internet address (URL)
1	48.1	89	1	26.2	17	Search engine
5	15.1	28	4	7.7	5	Email
4	21.1	39	3	12.3	8	Magazines
7	8.1	15	5	3.1	2	Seminars

Table 8 illustrates that students from both faculties strongly found Internet resources (48.1 percent science students, 26.2 percent Arts students) through the search meta engines followed by electronic sources (23.1 percent Arts students, 21.6 percent science students) .

Not so with seminars, email and magazine: only 3.1%, 7.7% and 12.3 % of arts students found internet resources. However, science students employed seminars (8.1%), email(15.1%) and magazine(21.1%) to come across internet resources . It was found no significant different between the two groups when computed Chi-square value ($\chi 2$ =39.7, p=0.193) was obtained.

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CONCLUSION

The purpose of this study was the comparison of Information-Seeking Behaviour with using Internet between Arts and science undergraduate students. Results indicated that science students had a higher proficiency of using the strategies of internet search-engines than students who belonged to arts faculty.

Similarly, they were familiar with using email more than those students from faculty science. This study's findings support the conclusions by (Ellis & Allaire 1999; Sam, Othman & Nordin , 2005; King, 2007; Pradeepkumar &Padeepkumar & 2010, Nkomo, 2009; Omidian, 2010) who found science , engineering and computer students had highest levels of computer competency due to their experience with technology and their interest in using technology . On the other hand , no significant difference was found between the two groups concerning the ability of setup a weblog, familiarity with internet addresses and the success in data retrieving and familiarity with internet resources . However , majority of undergraduate students didn't possess necessary skills and knowledge to use the internet resources effectively . Morever, the findings indicated that Google and yahoo were the best known and most widely used search engines among the students   . It might be due to easy and convenient access to the Google and Yahoo . Overall , this study suggests the need for improvements in internet-related curricula used for undergraduate students . A need assessment should also be conducted in order to determine required revising the curriculum related to internet for faculty Arts.

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