Online Information Searching Skills of Business Students

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This study investigates the perceived level and sources of learning Online Information Searching (OIS) skills of the students of business studies. The study also explores the differences in the students' searching skill level of information resources, based on their selected personal and academic variables including gender, age, type of university, level of degree and major academic subjects.

A cross-sectional survey research method was used to collect data on a self-reporting questionnaire. Business students of undergraduate, graduate and postgraduate levels from 24 public and private sector universities of Lahore, Pakistan were selected through convenient sampling technique. Total population of this study was 114,500. With the margin error of 5% and confidence level of 97%, the sample of this study was 470 students.

The study found a satisfactory level of students' searching skills. There was no significant difference in the skills based on various variables like gender, age, type of university and level of degree. However, short courses and training workshops had a positive impact on the level of skills.

There is a lack of research on the topic and this paper will fill the gap in existing literature. This study will be helpful for Library Information Service (LIS) academicians, librarians, professional associations and LIS trainers to design and implement training programs for university students in the area of OIS. This study will also be helpful for Higher Education Commission (HEC) national digital library for selection of appropriate databases for business students.

Keywords: Information searching; Online searching- business; Information literacy skills; Lifelong learning; Teaching/learning strategies.

INTRODUCTION

The emergence of the internet has significantly influenced almost every field of life. This development opens new ways to deal with the business and work routine. As in the other fields, internet has also brought new but positive changes in LIS field and enhanced the quality of work. To access online information resources, a typical/ conventional expertise is required which sometimes emerge as a hurdle/menace/nuisance to access and use the digital resources (Kinley, Tjondronegoro & Partridge, 2010). To cater this issue, the information seekers should know about the searching techniques to get their required data on the web. (Sutcliffe, Ennis & Watkinson, 2000).The students studying in different academic levels had different searching skills and had significant positive impact on their use of online library resources for their research and academic activities (Joo & Choi, 2015).

The role of information and knowledge economy is very important in the development of Pakistan. The information and knowledge resources provide support for economic development of the country (Ahmed & OlDonoghue, 2010). The business education in Pakistan also provides human resources to play their role in enhancing the business activities in Pakistan. The business students who have searching skills can play a positive role in knowledge and economy. The skilled business students can access, use and manage their resources without any delay and can save their time and money (Ranaweera, 2008). In the economy of developing country like Pakistan, the business students have significant role and if business students have good searching skills than this role can be emerged as a positive segment.

The HEC of Pakistan provides full text access to peer reviewed and 53 quality database for e-books and journals / magazines, on different subjects. The HEC has given access to these databases to all the universities of Pakistan. Intended for maximum utilization of the HEC electronic resources, some institutions also provide full text access of electronic books and journals to their faculty and students at their homes through Virtual Private Network (VPN). Skills to access online information resources can be acquired through self-education (trial and error), formal academic degree programs information literacy programs , short courses, workshops, and through friends or social network sites.

This paper is an attempt to explore the level and sources of acquiring OIS skills of business students of Lahore, the second largest city of Pakistan. This city has 33 universities/degree awarding institutes in public and private sector and accredited by HEC related to all disciplines including engineering, medical, management sciences, fine arts and social sciences.

LITERATURE REVIEW

A selection from the available literature on the students' information searching skill level and the role of various personal and academic variables to increase or decrease this level has been reviewed here. A few but important information searching skills models were also discussed to explore the phenomenon in detail.

In his study, Wilson (1999) defined the "information behavior, information-seeking behavior and information search behavior" as inter-related phenomenon. In the nested field (figure 1), it can be observed that information behavior has relationship with information search behavior, as the figure below shows that information seeking behavior is the sub-set of information behavior and information search behavior is also the subset of information-seeking behavior. So, information search behavior is indirectly related to the information behavior.
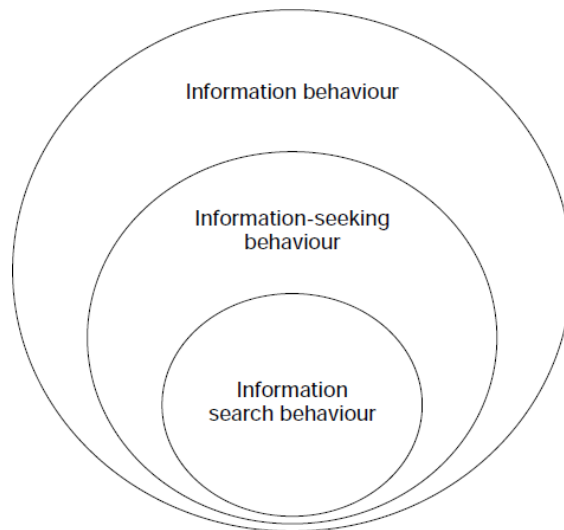

Figure 1. Wilson's Model of information Seeking Areas

Level of OIS Skills among Business Students

The literature on this topic reveals that the business students can get more advantage if they have searching skills; even the students of all disciplines can also get more benefits if they are expert in using searching filters. Through literature, it is also revealed that the age factor also plays an important role to learn or use the searching techniques while accessing the required information and knowledge on the web. Dresang (1999) explored that the students studying in college and universities had good searching skills as compared to the students studying in schools. On the other hand, Deursen and Dijik (2009) claimed that the students who had some digital skills could be good searchers but the age factor had negative impact on some searching skills. Dinet, Favart and Passerault (2004) explored that students who used searching operators could easily access electronic resources as compared to those students who did not use searching filters while accessing digital information. Callinan (2005) recommended that students should be literate about the searching techniques and the use of operators.

Inadequate literature is available on information searching skills of the students of business studies. Varga-Atkins and Ashcroft (2004) found that the undergraduate business students of two British universities had poor information searching skills. Although the students overrated themselves on a self-rating scale but only one-fourth of them performed well in the "test" part. Korobili and Tilikidou (2005) surveyed the students of marketing department in Greece. The students perceived their skills in online information searching as satisfactory.

Mehrad and Rahimi (2012) conducted a study on "searching skills of management science students of Sheraz University". They selected the "seven most frequently used online searching techniques, i.e., Boolean Searching, Phrase Searching, Proximity Searching, Field Searching, Truncation, Time Limitation and Synonyms, and suitable keywords to conduct the survey". The study explored that the students of M.Phil and PhD level had equal searching expertise but the authors recommended that they should learn advance searching skills to access their required information without delay.

Information Skills Differences Based on Individual and Academic Variables

Simpson-Scott (2009) reviewed literature on the role of gender in perceived information searching skills. The author also found that females were less confident than their male counterparts in online searching. Li and Kirkup (2007) found that as compared to female students, the male students had good skills for searching

online data, both in China and the UK. Gömleksiz and Erten (2013) found higher confidence regarding Web-based searching skills in the male students in a Turkish university. On the other hand, Kwon and Song (2011) claimed, through their study, that female students had good searching skills as compared to male students. A survey of students in a Pakistani university found no significant difference in perceived information skills of males and females (Mahmood, 2013).

Some studies reveal that a difference in subjects creates an impact on searching skills. Chu, Van Alast, Hing, May and Yan (2007) in their longitudinal study, derived that education students had better skills over the engineering students. Bronander, Goodman, Inman and Veach (2004) described in their study that medical students usually did not use searching operators while searching their required information on the internet but with proper learning and education they could enhance their skills. Callinan (2005) organized a study to find out the information seeking behavior of undergraduate biology students of the University College Dublin. The results presented that the students who were studying in final semester had good searching skills as compared to students who were studying in first or second semester.

Sources of Information Searching

The literature shows that students use different information sources at different academic levels to fulfill their information needs. As compared to other studies, Chu and Law (2007) negated this claim that the students at higher level had good searching skills. He explored that many students at PhD level did not have sufficient searching skills to get their information sources. George et al., (2006) found out that mostly graduate students contacted library staff to get the right information and hence they were dependent on libraries or academic staff to fulfill their knowledge needs. Sasireka, Balamurugan, Ganasekaran and Copalarkishnan (2011) explored that students preferred to access and use the digital resources as compared to print resources. This preference might be due to the extra advantages of the digital resources like multi-format, easy and 24/7 access. This study also explored that "bibliographic information, physical layout of the library, information about electronic resources and skills to use such resources" attracted the undergraduate students to use them.

Chang and Perng (2001) investigated the searching habits of graduate students at Tatung University and found that majority of the students depended on

the library staff to get their information and a few students contacted their class mates or friends to access their required material.

O'Hanlon (2002) described that most of the students had poor searching skills to access the digital contents to fulfill their academic needs. They faced trouble in using the techniques to filter their search on the internet. He also recommended that the library staff should arrange information literacy programs for all, and particularly for the newly admitted students to enhance their searching skills and for lifelong learning. A study using survey method (Kamarudin, 2001) explored that many significant relationships could be shown within gender, semester and academic year. The students who had attended training session or got any formal or informal classes had/showed good searching skills as compared to those students who did not get any proper training. Ajiboye, Oyedipe and Alawiye (2013) found that there was a positive impact of searching skills on successful academic life of students.

Training improves students' searching skills. Ren (2000) explored in his research study that the students who availed some training programs or were involved in any such activity had better searching skills than the students who did not attend information literacy training programs. Through experimental research study, Monoi, O'Hanlon and Diaz (2005) found out the impacts of the training on "online searching self-efficacy" and conducted pre and post-training tests. The results showed that the "self-efficacy was significantly higher at the end of the course".

Searching Skills Practices in Different Countries

Shoeb (2011) conducted an information literacy skills test in a private university of Bangladesh. He found that the undergraduate business students were very weak in their information searching skills. Majid, Hayat, Patel and Vijayaraghavan (2012) surveyed master level business students in Singapore. They found that the students had limited knowledge of a wide array of functions provided by many business databases (p. 32). Bøyum and Aabø (2015) found that the PhD students of business in Norway perceived that they had mastered the search techniques. The authors found this result unexpected as it was contrary to the previous studies on PhD students. Booker, Detlor and Serenko (2012) conducted a web-based survey on the adoption of online library resources by undergraduate business students of a North American university. They found a direct impact of online searching "self-efficacy on students' ease of use".

Ellis (1989) developed the model of seeking behavior (fig. 2) which described that there could be three major aspects which had significant role in seeking of knowledge; the environment, social and personal attributes. And these attributes can also be the hurdles to get the required information from any source. This model has some drawbacks like the model does not describe the motivational and internal interest of an individual to get the information.
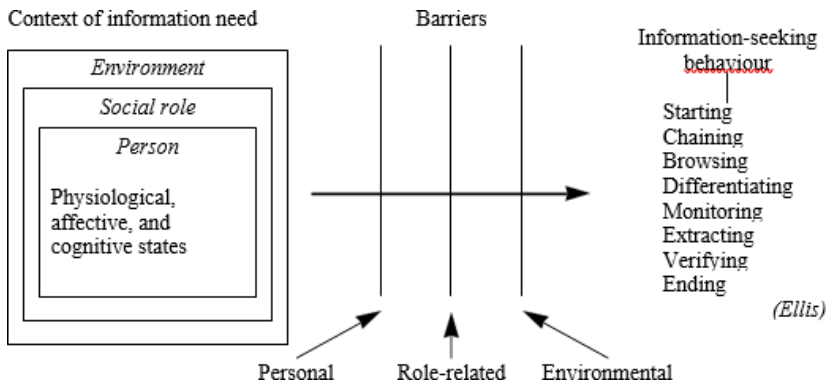

Figure 2. Ellis model of Information Seeking Behavior (1989)

Searching Skills Status in Pakistan

The status in Pakistan regarding searching skills of business students is almost similar with the students studying in different areas of the world. Khan and Qutab (2016) conducted a study in recent years to know the use of electronic books by students who belonged to different disciplines of different universities of Pakistan and found that the students accessed and used electronic books for their academic as well as research purposes. The young students were good users of electronic resources as compared to students who had age of more than 40 years. Having the similar results, Nosheen and Ameen (2010) concluded that the young library professionals were very much familiar with the new searching techniques and they were very much satisfied with the access of electronic journals/databases as compared to databases containing electronic books. Same findings can also be seen in the study of Khan and Ahmad (2013) entitled "The impact of digital library resources on scholarly communication: challenges and opportunities for university libraries in Pakistan". Naveed and Ameen (2016), explored that postgraduate students of university of the Punjab had low anxiety in the information seeking process. This study could not find any substantial relation on the bases of gender,

age and faculty but the results found that program of study, level of study and computer efficiency have significant relationship in anxiety scores. As the afore mentioned narrative, Tahir, Mahmood and Shafiq (2010) acknowledged the findings of previous studies on the topic and found out that the student of humanities were using printed books but they were also interested in the access and use of electronic books too. The students belonged to humanities subject areas were willing to use and adopt new ICTs technologies.

Summary of Literature Review

It is evident from the literature that searching skills can be improved through formal training; students can get their required information without any delay. The literature has discussed the searching techniques used by students in different disciplines in various countries. Through the reviewed literature, it is evident that no study has been conducted on this topic in Pakistan particularly involving business students. This study is very important to fill this gap and to strengthen the available literature on the topic.

Research Objectives

Following objectives were formulated to achieve the research goals of this study:

1. To find out the level of OIS skills among business students.

2. To know the differences in the students' level of OIS skills based on selected personal and academic variables, i.e., gender, age, type of university, level of degree, and major subjects.

3. To explore the sources from which the business students may acquire searching skills.

Hypotheses

To achieve the objectives, following null hypotheses were formulated for conducting statistical tests:

Ho1: There is no statistically significant difference in OIS skills of business students based on their gender.

Ho2: There is no statistically significant difference in OIS skills of business students based on their age.

Ho3: There is no statistically significant difference in OIS skills of business students based on their type of university.

Ho4: There is no statistically significant difference in OIS skills of business students based on their level of degree.

Ho5: There is no statistically significant difference in OIS skills of business students based on their major subjects.

Ho6: There is no statistically significant difference in OIS skills of business students based on their usage and non-usage of formal education as a source of learning.

Ho7: There is no statistically significant difference in OIS skills of business students based on their usage and non-usage of short courses / training workshops as a source of learning.

Ho8: There is no statistically significant difference in OIS skills of business students based on their usage and non-usage of family as a source of learning.

Ho9: There is no statistically significant difference in OIS skills of business students based on their usage and non-usage of friends / other students as a source of learning.

Ho10: There is no statistically significant difference in OIS skills of business students based on their usage and non-usage of library instruction programs as a source of learning.

Ho11: There is no statistically significant difference in OIS skills of business students based on their usage and non-usage of trial and error as a source of learning.

RESEARCH DESIGN

The current study opted quantitative research design because a few previous studies (Crossman, 2014; Dillman, Smyth, & Christian, 2009) adopted the same research design for their researches. As the study dealt with business students studying in any public and private sector university of Lahore and at any academic level i.e. undergraduate, graduate and post graduate students of both genders were considered as the population. Students from various business related departments like Business Administration, Economics, Human Resource Management, Finance, Marketing, and Project Management were target participants of this research project.

The convenience sampling technique was used, as a list of the students studying in different universities was not available for random sampling. The researchers communicated with different university officials to gather the list of students for random sampling. But in spite of all the efforts, the researchers could not get the list of desired students. Therefore, the researchers had no other option but to choose the convenient sampling. To increase the generalization ratio of this

study, the authors tried to represent the balance sample in the study in shape of gender, discipline and nature of university. Among 33 universities and degree awarding institutions of Lahore district, 24 were offering business related degree programs. The researchers could not get the exact figure of the enrolled students but through personal contacts and through library professionals, the total population of this study was 114500. This figure included all the students registered/enrolled in any business study in 24 universities located in Lahore. With the help of online sample size calculator, and with the margin error of 5%, confidence level of 97%, the sample of 470 students was determined. A cross-sectional survey was conducted to meet the objectives. Based on the literature review, a structured questionnaire was developed. The contents of data collection instrument were validated by a panel of experts/ academicians/researchers in the field of information science. A pilot test was also conducted on 15 undergraduate, eight graduate and six post-graduate students of the "Department of Management, COMSATS Institute of Information Technology". On the basis of the pilot testing, researchers revised the questionnaire. The suggestion and error mentioned by the experts were also incorporated in the final form of data collection tool. The Cronbach Alpha statistics was used to establish the reliability of scale. The Cronbach Alpha was 8.2 which was more than recommended value of 0.7 (Nunnally, 1978). The researchers sought help from librarians and faculty at various universities to collect data from students. The first author of this paper personally visited to each university to collect the data. For the purpose, the author arranged workshop on searching skills for business students and at the end of the each workshop, the author got filled questionnaire of the study. The effort resulted in finding 321 usable questionnaires (68% of the sample).

RESULTS

The survey data were analyzed with the help of Statistics Package for Social Sciences (SPSS version-21), as it was considered a good tool for analyzing quantitative data.

Personal and Academic Profile of Participants

Among 321 participants, 58 percent were male students. The age group between 20 and 25 years emerged as the largest group of participants (56%). The respondents from private sector universities participated in large group (45%). The largest group of participant students belonged to the graduate level degree

programs (62%). The major subject area of the larger group was Finance (35%). For details please see Table 1.

Table 1

Personal and academic profile of participants

Variable	Percent
Gender	
Female	42%
Male	58%
Age	
Less than 20 years	23%
20-25 years	56%
26-30 years	15%
More than 30 years	6%
Type of university	
Public	39%
Private	45%
Semi government	16%
Level of degree	
Undergraduate (e.g., BBA, BS)	29%
Graduate (e.g., MBA, MA)	62%
Postgraduate (e.g., PhD)	9%
Major subject	
Finance	35%
Human resource management	11%
Economics	26%
Marketing	16%
Other	12%

Students' Level of OIS Skills

The students were asked to mention their perceived level of online information searching skills on a 4-point rating scale (1 = Don't have searching skills, 2 = Have satisfactory searching skills, 3 = Have good searching skills, 4 = Have expert searching skills). The selection of this scale was on the basis of its suitability to the objective. The Mean score (2.02) shows a satisfactory level of searching skills. Only 22 (about 7%) students opted for good or expert level of skills while 36 (about 11%) students opined that they had no searching skills at all (see table 1).

Difference of Searching Skills Based on Personal and Academic Variables

The differences in the perceived online information searching skills of business students based on their selected personal and academic variables were

explored by using inferential statistics. The results of the null hypotheses are given in Table 2.

Skills and Gender

The independent samples t-test value of 0.949, with level of 0.344, was lower than the criterion. It implies that there is no substantial difference in the level of information searching skills between male and female students. Thus, the null hypothesis Ho1 was accepted. This result is in conformity with some previous studies (Boker, Detlor & Sereko, 2012; Fatima & Ameen, 2010) and contrary to some others (George et al. 2006; Joe & Choi, 2015). No consistent results have been found in previous researches in this area. Some previous studies (Khan & Qutab, 2016) could not find any gender-based difference in information skills. Studies which found gender-based difference were of two types. Some found male students and others found female students better than their counterparts.

Table 2

Difference in perceived OIS skills of students based on selected personal and academic variables

Variables	Mean	Statistics	Sig.
Gender		t = 0.949	0.344
Female	1.98		
Male	2.04		
Age		F = 1.623	0.184
Less than 20 years	1.97		
20-25 years	2.06		
26-30 years	1.90		
More than 30 years	2.22		
Type of university		F = 1.653	0.193
Public	2.07		
Private	2.03		
Semi government	1.88		
Level of degree		F = 0.390	0.677
Undergraduate	1.99		
Graduate	2.03		
Postgraduate	2.12		
Major subject		F = 1.974	0.098
Finance	1.94		
Human resource management	1.97		
Economics	2.11		
Marketing	1.96		
Other	2.21		

Scale: 1 = Don't have searching skills, 2 = Have satisfactory searching skills, 3 = Have good searching skills, 4 = Have expert searching skills

Skills and Age

The results of one-way ANOVA test (F value of 1.623 with significance level of .184) show that there is no significant difference in searching skills based on age of the students. Thus, the null hypothesis Ho2 was accepted. This result again does not strengthen or weaken the existing claims. We can find studies (Khan & Qutab, 2016; Kwon & Song, 2011) showing both positive and negative relationships between the variables of information skills and age. The researchers have not reached to a consistent finding in this area.

Skills and University Type

The results of one-way ANOVA test (F value of 1.653 with significance level of 0.193) show that there is no significant difference in searching skills based on type of university of the students. Thus, the null hypothesis Ho3 was accepted. For comparison, no previous studies were found which sought the relationship between these two variables.

Skills and Degree Level

The results of one-way ANOVA test (F value of 0.390 with significance level of 0.677) show that there is no significant difference in searching skills based on the degree level of the students. Thus, the null hypothesis Ho4 was accepted. However, although not statistically proved, the difference in Mean scores indicates a gradual increase in searching skills with an increase in the level of degree programs. This trend is contrary to the results of Mahmood (2013) who found the undergraduates better than the graduates in their information skills.

Skills and Major Subject

The results of one-way ANOVA test (F value of 1.974 with significance level of .098) show that there is no significant difference in searching skills based on major subjects the students had opted in their degree programs. Thus, the null hypothesis Ho5 was accepted. Although various studies have been conducted to see a difference in information skills of students from different subject disciplines but no study is found which sought difference in majors within business studies. However, Mean score for the "other" group (2.21) might be due to the students of MIS who are better than others in their computing skills.

Sources of Acquiring Searching Skills

In a part of the questionnaire, the students were asked to select from a list of the sources from which they learnt OIS skills. A larger group (128, 40%) mentioned that they did not get any training and learnt such skills with trial and error. It indicates the absence of formal training facilities in information searching for university students. Only 71 (22%) students learnt these skills in their formal education or degree programs. The number of students who gave a credit of their learning to library instruction programs and short courses or training workshops was small (14% and 9% respectively). It shows the non-availability of such facilities for business students in Pakistani institutions of higher education (Table 3).

To see the variance in students' searching skills based on the usage and non-usage of the particular sources of acquiring such skills as the Mean scores of the levels of skills were compared by using independent samples t test. The results are presented in Table 3. The null hypotheses 6, 8, 9, 10 and 11 were accepted as no substantial difference was found in the skill levels. Only the null hypothesis Ho7 was rejected as a highly significant difference was found (t value of -3.017, with significance level of .003) between the skills of students who attended short courses or training workshops and those who did not attend such workshops. Mean score of the attendees of such workshops (2.36) was the highest among all groups of the students. The data shown in Table 3 indicates another important finding of this study; the largest group of students (128), who developed their searching skills by themselves through trial and error, got the lowest skill level (1.98) among all groups. This finding strengthens the results of previous studies that training always plays an important role in developing OIS skills.

Table 3

Sources of Acquiring OIS Skills

Sources	Yes (N)	No (Mean)	Yes (Mean)	t	Sig.
Formal education (degree programs)	71	2.02	2.04	-0.304	0.761
Short courses / training workshops	28	1.99	2.36	-3.017	0.003*
Family (home)	51	2.00	2.14	-1.438	0.151
Friends / other students	64	1.99	2.14	-1.707	0.089
Library instruction programs	44	2.02	2.02	-0.003	0.997
Trial and error (self)	128	2.04	1.98	0.949	0.343

* Significant at p < .01

CONCLUSION AND DISCUSSION

The present research study was conducted to find out the level and sources of acquiring OIS skills of business students in 24 universities of Lahore, the second largest city of Pakistan. Moreover, the objectives were included to see important variances in the students' skill level based on their selected personal and academic variables and their usage and non-usage of the particular sources of learning search skills. The data, collected from 321 students of different genders, degree levels and university types, were analyzed by using descriptive statistics. Independent samples t test and one-way ANOVA were used to test 11 hypotheses set for this study.

The study found that the participants rated themselves as having satisfied level of searching skills on a 4-point self-rating scale. Only a negligible number of students rated their skills at good or expert level. Ten of 11 null hypotheses could not be rejected. It means that there was no statistically significant difference in students' skill level based on their selected personal and academic variables and their usage and non-usage of the particular sources of learning. Only one rejected null hypothesis was related to the usage of short courses and training workshops for learning searching skills. This finding strengthens the already proven fact that training always enhances the level of searching skills in the university students (Mehrad & Rahimi, 2012). An alarming finding is the usage of trial and error as a source of learning for such skills by a larger group of business students. An encouraging finding is the growth of searching skills with the increase in degree level.

Discussion of Results

Students have satisfactory level of searching skills and this result is contrary to the previous study (Varga-Atkins & Ashcroft, 2004). In most of the perception based studies, the students have overrated themselves in their OIS skills. The modest opinion found in this study might be due to the problems the students faced in searching online academic resources.

In a part of the questionnaire, the students were asked to select from a list of the sources from which they learnt OIS skills. A larger group mentioned that they did not get any training and learnt searching skills by trial and error. It indicates the absence of formal training facilities in OIS for university students. A few students

learnt these skills in their formal education or degree programs. This result is aligned with a few previous studies (Callinan 2005; Dinet, Favart & Passerault, 2004).

The result of this study could not find any difference among business students on the basis of their gender. The result of this study has been in harmony with some preceding research (Simpson-Scott, 2009; Varga & Ashcroft, 2004) and conflicting with a few others (Li & Kirkup, 2007; Monoi O'Hanlon & Diaz, 2005). No consistent results have been found in previous researches in this area. Some previous studies could find gender-based difference in information skills. Studies which found a gender-based difference are of two types. Some found male students and others found female students better than their counterparts. Gömleksiz and Erten (2013) found higher confidence regarding Web-based searching skills in male students in a Turkish university. On the other hand, Kwon and Song (2011) found female students in Malaysia "ahead of male students in their perceived information skills". This research also could not find any difference of searching skills among business students based on their age categories. This result again does not strengthen or weaken the existing claims. We can find studies (Dresang, 1999, Deursen and Dijik, 2009) showing both positive and negative relationships between the variables of information skills and age. The researchers have not reached to a consistent finding in this area. Although not statistically proved, the difference in Mean scores indicates a gradual increase in searching skills with an increase in the level of degree programs. This trend is contrary to the results of Mahmood (2013) who found undergraduates better than the graduates in their information skills. Although various studies have been conducted to see a difference in information searching skills of students from different subject disciplines but only a few studies (Chu, Van Alast, Hing, May & Yan, 2007) are found which sought difference in majors within business studies. However, a larger Mean score for the "other" group (2.21) might be due to the students of MIS who are better than others in their computing skills.

Limitations and Future Research Directions

This study also has the few limitations. In research design, the convenience sampling technique can be the limitation of this study. Despite the reasonable sample size, this sample size may not be representative of the population. This study is also limited to the generic online / internet searching skills by business students. Specific searching for any particular databases were not the scope of this

study. These limitations should be kept in mind while reading the research article. Future research should be conducted on information searching skills by using qualitative research methods in order to cross- validate our findings. In-depth research is needed to learn information searching skills of Pakistani business students and what skills they further need and how we can develop these skills. We also recommend further research on this topic with the students of other subject areas like engineering, medical sciences, pure sciences, humanities and social sciences and in other geographical areas of the developing world and compare the findings with that of the current study. Other methods for students' assessment should also be tested to see the difference in perceived and actual skill levels. The authors also recommend the replica of this study with different methodology, change in geographical areas, with large scale, and different skills level and may be at micro level.

Significance and Implication

Keeping in view the importance of information resources available in abundance through the Internet (surface and deep) in business profession and business education, we can claim that this study is a valuable contribution to the available knowledge. It has provided the data which has strengthen or weaken the exiting claims on the topic. This study has added in the literature on students' searching skills particularly in the area of business studies in the developing countries. The present study has implications for policy and practice. The findings warrant a change in the policy on training and instruction for students to enhance their online searching skills. More funding should be provided for this important activity. All stake holders, i.e., government, university administration, curriculum designers, independent trainers, teachers, librarians, parents and students are needed to pay attention to this important training requirement.

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