

A Case Study Usage of Electronic Journals by Research Scholars

Sham Sul Kamal Wan Fakeh, Mohd Sazili Shahibi, Adnan Jamaludin, Norhayati Hussin, Juwahir Ali, Wiramanja @ A.Rahman A. Hanafiah, Azryena Azmi

Abstract — Electronic journal also known as E-Journal become one of the main resources available via the electronic devices. Information Agencies play an important role in order to fulfill client requirements. Librarian is the person who is responsibilities to contribute and support the services in the library to achieve the library goals and objectives and support the clients with the quality and effective services. This study is to determine the level of depth in use by the research scholars in using electronic journals provided by the library. Which are includes the awareness, frequency, purposes, contents, difficulties, and preferences of e-journals that have positive impact to the usage of e-journals among research scholars in Faculty Business Management, UiTM. The findings and the results will be used to indicate the recommendations and suggestion to library and the research scholars itself.

Keyword: Electronic Journal, information agencies, usage, awareness, frequency, purposes, content, difficulties, impact.

I. INTRODUCTION

Nowadays, electronic journals or also known as e-journals become one of the main resources available via the electronic devices. Regarding to the information age and society of today, information and communication technology (ICT) become as an enabling tool that manage information and the processes involved makes libraries have moved to an electronic environment.

Therefore, a library plays an importance role in support the growing of knowledge and skill among students in order to develop them self in appropriate way. Basically there are five types of libraries which are National libraries, Academic libraries, Public libraries, Special libraries and School libraries. The libraries are proposed

to provide information to users by obtaining; organizing, making available and reserving printed and none printed material required meeting user need. With that attention, the quantity of e-journals is growing larger and larger although no exact number is available. In recent years, more journal's content have been digitized, a necessary process for turning a paper journal into an electronic sources. Research from ACRL Research Planning and Review Committee 2012, about top ten trends in academic libraries: A review of the trends and issues affecting academic libraries in higher education. The result shows that, information technology may include helping students develop digital media literacy skills and creating appropriate metrics for evaluating new scholarly forms of authoring, publishing, and researching.

II. LITERATURE REVIEW

A number of surveys on the use of electronic resources in academic libraries have been carried out during the last ten years. University libraries are no longer focus on printed journals but providing information in electronic mediums such as online databases. Indeed, it has been pointed out that electronic information sources and more particularly internet resources have become an increasingly substantial component of academic library collections over the last decade (Blecic et al., 2007). Mary Case(2004) has reported that "between 1994/1995 and 2001/2002, expenditures on electronic resources for the typical university research library have grown almost 400 per cent to almost \$1.4M, while the overall library materials expenditures have grown only 61 per cent. A study carried out by Bancroft et al., who examined the use of library services at the Washington State University Libraries in 1996. The findings shown that, nearly 50% gave high appreciation to the ability to download full-text articles in the future. It seems that already in 1996 academics realized the value of e-journals even without actually using them. In 2001 a large-scale online survey was administered to the whole faculty and a sample of graduate students at the University of Maryland. The large majority (70%) wanted core journals to be available in both formats, while for non-core journals, 70% preferred electronic access only. The main concerns about moving to electronic only were image quality and access to the full content of the journal. A survey of electronic journal usage at Ohio State University carries out by Rogers (2001) noted the increased use of e-journals and

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decreased use of printed journals by the faculty and the graduate students during 1998 to 2000. This study revealed that forty one percent of the faculty and twenty five percent of graduate students found round the clock availability and easy access as the major advantages of e-journals. Both the faculty and the graduate students noted that switching to e-journals would save space in the library and it would also be easier to incorporate e-journals into electronic presentations. Flecker (2001) is of opinion that e-journals have become the largest and the fastest growing segment of the digital collections for most of the libraries in the past 2 or 3 years and in many ways, archiving and preserving e-journals will be dramatically different from what has been done for paper based journals. He stressed that the process must be funded by the governments through the national libraries or similar bodies, particularly for materials subject to copyright deposit. In the study on readiness of researchers on the electronic only journal collection, Dillon and Hahn (2002) investigated the frequency of using scholarly journals (both print and electronic), and other electronic format used for accessing information at the University of Maryland. The study revealed increased level of adoption of e-journals among faculty, giving support to multiple formats for core disciplinary journals, and the differing perceptions of various constituencies among the respondents. The study suggested that the faculty is more interested in retaining print access to core literature as compared to the graduate students. The results provide collection managers with a better understanding of which journals make good candidates for initial adaptation to electronic only if archiving concerns can be addressed.

A. Electronic Journal

The concept of e-journal does not refer to one homogeneous object. According to the typology developed by Kling and Callahan, e-journals can be divided into four basic categories according to their distribution type: pure electronic journals, electronic-printed journals, printed-electronic journals, and printed + electronic journals.

B. Library

A place of information agencies that provide a various collections includes books, journals, newspaper, pamphlets, magazines, CDs, and especially electronic databases.

C. Academic Library

According to “*Academic Libraries 2000* by E.D.Tabs, 2003, academic library is an organized collection of printed or other materials, or a combination thereof. A staff trained to provide and interpret such materials as required to meet the informational, cultural, recreational, or educational needs of users. Academic library also refer to the physical facilities necessary to support such a collection, services, staff, and schedule.

III. RESEARCH FRAMEWORK

First of all, the people called “users” are hunting out the information for search engines and etc. Usage of

electronic journal in the academic environment is rapidly changes times to times. Because of that, most of the researchers want to publish their academic research, paper interest, research project in electronic mediums. In 2004, half a million people used the site during a single month and viewed nearly 5 million journal items (Nicholas et al., 2005). In the library environment, there are the several substitutes that are focusing on how to narrow down the increasing of academic writing. Bar-Ilan and Fink (2005) reported the results of a survey on the use of printed and electronic journals in a science library. He found that the users had already been exposed to electronic journals for a number of years; most of the scientific journals were accessible in electronic format while the print format was still available. Tenopir 1 (2003) in a major survey of the literature on the subject analyzed the results of over 200 studies of the use of electronic resources in libraries published between 1995 and 2003.

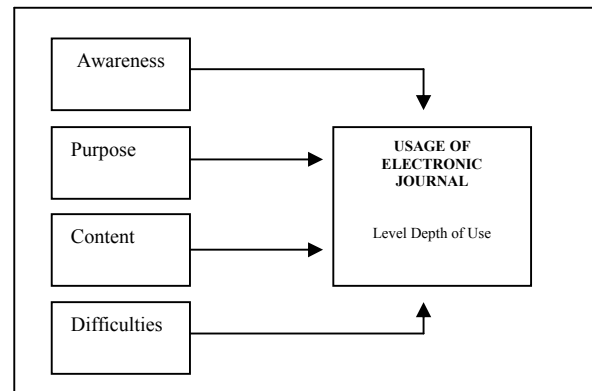


Fig 1: The Conceptual Framework Usage of Electronic Journal by Research Schools

A. Usage of Electronic Journal

First of all, the people called “users” are hunting out the information for search engines and etc. Usage of electronic journal in the academic environment is rapidly changes times to times. Because of that, most of the researchers want to publish their academic research, paper interest, research project in electronic mediums. In 2004, half a million people used the site during a single month and viewed nearly 5 million journal items (Nicholas et al., 2005). In the library environment, there are the several substitutes that are focusing on how to narrow down the increasing of academic writing. Bar-Ilan and Fink (2005) reported the results of a survey on the use of printed and electronic journals in a science library. He found that the users had already been exposed to electronic journals for a number of years; most of the scientific journals were accessible in electronic format while the print format was still available. Tenopir 1 (2003) in a major survey of the literature on the subject analyzed the results of over 200 studies of the use of electronic resources in libraries published between 1995 and 2003.

B. Level Depth of Use

Level depth of use of electronic journals provided by the

libraries in University Technology MARA. E-journals provide by the library UiTM is wide-range. In part, this study is to investigate the level depth of use of the electronic journals by the research scholars of Business Management at UiTM. This study is investigating the level depth of use of electronic journals by the research scholars, whether there are have high level or low level of use in using electronic journals in their information needs. In the recent years, there has been a phenomenal growth of electronic journals.

C. Awareness (E-Journal Existence)

The major finding work by Bar-Ilan and Fink (2005), when time passes many users access the electronic format more frequently. In part of that, the use of a journal is not necessarily an indication of the preference of users. There may be an increase in the acceptance and frequency of use of the electronic format merely because the traditional print format is no longer easily available. Previous study on awareness of the faculty and administrators toward electronic resources was studied at the University of Utah. The concern of the authors of this paper was that since electronic databases and journals are not displayed on the libraries' shelves, it may be the case that the faculty members and administrators are not aware of the existence of these services. Indeed, the findings showed greater need for "publicity" and "training". One of the largest projects to date was the Stanford E-journal study (eJUS), a two-year project which begun in Fall 2000, funded by the Mellon Foundation and carried out by the Stanford University Libraries.

D. Purpose (Intention of Used)

E-journal is being used for various purposes. That means the intention why they used e-journals. The purposes of e-journals includes; as a guidelines to their studies for the students and lecturers. And also their intention to publish their article in the online database such as Emerald, ScienceDirect, Ebscohost, and so on. Research scholars were familiar with their research works and also seminars and conferences. E-journal can help them to find relevant information in the area of their specialization. However, e-journals can help them to improve their knowledge in the area of interest.

E. Content (Fullfill Requirements)

Refers to the hypothesis, H3: "The level of fulfill requirement have positive impact of usage of e-journal, it means that the contents of e-journals itself can be impact to the usage of e-journals. This study investigating whether the requirements contents of the e-journals provide by UiTM Library can give impact on the level of usage of e-journals for them. E-journals have now been recognized as a major link in scholarly communication. In order to understand the curiosity of the research scholars in their use of e-resources as well as to know, whether they are getting adequate information for their work or not, this study will ask the some question relate to content of the e-journal itself, which meet the users information needs or not.

F. Difficulties (Complexity)

Electronic databases are very handy for searching vast amounts of data within a shortest possible time. There are a good number of databases available on the Internet today which can be accessed free of charge. However, not everyone accepts that all of this medium is actually used. There is a good deal of wastage and that the availability of such huge digital resources to the user inevitably means that a good deal of these titles, and many of their articles, go unused, or are little used. A good number of scholars only use abstracts, partly because of a shortage of time, partly as a result of being offered so much material to choose from (it's a good method of skipping through the material) and partly because that is all some users can access. Does this constitute "reading"? For students this does appear to be the case (Nicholas *et al.*, 2005). It shows that, the complexity in term of the content of the journals itself can give the positive impact to the usage of the e-journals. The students did not interest to read the full of the journal, and just read the abstract and the title to get the information that relate to their topics. Again, in 2004, half a million people used the site during a single month and viewed nearly 5 million journal items. In part of that, there are having few complexity during to access the electronic journal whether in library hours or after library hours. During library hours the students can visit to the library to access e-journal in the library itself and usually it is faster rather than after library hours because of some of the students maybe did not have the internet access to log into the library website.

IV. RESEARCH METHODOLOGY

This research covers on the positivism or quantitative research paradigm. The process begins with identification and define the research problems and go through with research theory, hypothesis, research design, data collection, data analysis and end with findings.

A. Research Paradigm

Quantitative method has been choosing for this study. This study was using hypothesis testing and follows the research process below. The data type obtained from this research in mainly numbers to testing the measurement of hypotheses.

B. Population and Sampling

Population refers to the focus groups of people that interest to researchers to investigate. For this study, sampling design applied is probability which the population have some known, non-zero chance. However, for the sampling technique used that will be applied is a stratified random technique. A total of number 150 questionnaire was distributed to the research scholars with population of 200.

C. Research Instrument

Questionnaire Method was used as the tool for the study for collecting data. Researcher visited Faculty of

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Business Management and approached the research scholars to collect the necessary data. Questionnaires were distributed to the research scholars and filled questionnaires were collected either on the spot or after two or three days. Questionnaires are usually a type of quantitative research that is used for reaching large amounts of people. They usually consist of closed questions. Advantages of questionnaires are that they can gain large quantities of data if sent out by post. They also can reach widely dispersed groups as particular samples can easily be worked out. Self-completion questionnaires are also less time consuming for researchers as they do not have to meet people in face to face and conduct interviews. Questionnaires are also quick and cheap as once the questions are written, the questionnaires only have to be printed and handed/posted out to the correct people. The content of questionnaire is will be designed by using Likert Scale on a five-point scale, which to examine how strongly and disagree with the statement given by the investigator.

D. Data Analysis

The data collected through questionnaires were organized and interpreted by using simple statistical method. Once the data have been collected, the process of data entry will be using the statistical software Statistical Package for Social Science (SPSS) Data Editor. Which the data can be transforming, measuring and analyzing will be done to test the hypothesis. The descriptive analysis displays summary statistics for several variables in a single table and calculates standardized values. Variables can be measured by the size of their frequencies, percentage of means and others. Multiple regressions: provides a means of objectively assessing the degree and the character of the relationship between independent and dependent variables.

E. Reliability and Validity

To measuring the reliability and trustworthiness of this research finding, Cronbach's alpha will be used whether the reliability coefficient that will indicated with the each items. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. Factor analysis will be conducted to construct the validity of the results. In part, the reliability and the validity of each finding will related to the hypotheses of this study.

V. ANALYSIS

Findings and analysis of the study. Analyze using the Statistical Package for Social Science (SPSS) software. The analysis and result findings will start with the responses rate by demographic profile, reliability analysis, descriptive analysis, correlation analysis and hypotheses testing on the variables. The hypotheses testing used the Pearson correlation analysis. All the results will be shown in the table and figure.

A. Response Rate

In the demographic analysis, the table shown that, there 44 respondents are female and 48 respondents are male. And the table by age shown that there are 5 categories of age of the respondents that have been participate to this

study. The results from the age of 21-25 years are 39 respondents. Followed by from the 26-30 years are 23 respondents, 31-40 years are 12 respondents, and 41-50 years are 11 respondents and 51 years and above are 7 respondents. There are two types of respondents that have been contribute for this study, which are they are the research scholars from the 57 respondents from postgraduate students and also 37 respondents from lecturers.

Demographic Profile

TABLE 1: Responses rate by 'Gender'

Gender				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	44	47.8	47.8	47.8
Female	48	52.2	52.2	100.0
Total	92	100.0	100.0	

TABLE 2: Responses rate by 'Age'

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 20 - 25	39	42.4	42.4	42.4
26 - 30	23	25.0	25.0	67.4
31 - 40	12	13.0	13.0	80.4
41 - 50	11	12.0	12.0	92.4
51 and above	7	7.6	7.6	100.0
Total	92	100.0	100.0	

TABLE 3: Responses rate by 'Profession'

Profession				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Student	57	62.0	62.0	62.0
Lecture	35	38.0	38.0	100.0
Total	92	100.0	100.0	

B. Awareness of e-journal

Results of awareness e-journal among research scholars shown that, the mean score of the awareness of using e-journals variable is above the mid value of 3 and this implies that most of research scholars in this study had the aware about e-journals. Based on Table 4, among the five item statement, the item number five scored the highest mean value, suggesting that most of research scholar aware about e-journal from their friends, lectures. The result is (85.8%) give the scale of "Strongly Agree" and Agree" for that item. The respondents also showed high agreement on

the statement “ I know the existence of the e-journal from library promotion and online resources. (79.4%) and “ I” am aware that the e-journal is one of the services in the library” (73.9%)

TABLE 4: Item Analysis of Awareness of e-journals

Variable	Item Statement	Frequency and Percentage					Me an	Ov era ll Me an
		Strongl y disagree	Disagr ee	Neutr al	Agree	Stron gly Agree		
Awareness of e-journal	B1 I know what is e-journal	-	9 9.8%	27 29.3%	49 53.3%	7 7.6%	3.5 9	4.0 0
	B2 I am aware that the e-journal is one of the services in the library	-	6 6.5%	18 19.6%	61 66.3%	7 7.6%	3.7 5	
	B3 I know the existence of the e-journal from magazines and newspaper	-	5 5.4%	27 29.3%	50 54.3%	10 10.9%	3.7 1	
	B4 I know the existence of the e-journal from library promotion - and online resources	-	-	19 20.7%	65 70.7%	8 8.7%	3.8 8	
	B5 I know existence of the e-journal from my friends, lectures.	-	-	13 14.1%	66 71.1%	13 14.1%	4.0 0	

C. Purpose of e-journal

E-journals are being used for a variety of purposes by all users, as shown in Table. The mean score of the purposes of using e- journals variables is above the mid value of 3 and this implies that most of research scholars in this study had the purposes in using e-journals. This study result for purposes in using e- journals, most of the research scholars choose to “I am usually use the E-Journal to find relevant information in the area of specialization” with 79.3% respondents. “I am usually use the E- Journal for my research works” with 72.4%. According to the findings of previous study of “Use of e-journal among research scholars at Central Science Library, University New Delhi, 47.50% of respondents use online journals and databases for their research work, 45.63% use it for course- related studying, 41.25% use online journals for updating subject knowledge, and 26.25% use online journals and databases for teaching.

TABLE 5: Item Analysis of Purpose of e-journal

Variable	Item Statement	Frequency and Percentage					Me an	Ov era ll Me an
		Strongl y disagree	Disagr ee	Neutr al	Agree	Stron gly Agree		
Purpose of e-journal	D1 I am normally use the e-journal for my studies	-	14 15.2%	26 28.3%	50 54.3%	2 2.2%	3.4 3	4.0 2
	D2 I am only use the e-journal for publishing articles	-	9 9.8%	17 18.5%	63 68.5%	3 3.3%	3.6 5	
	D3 I am usually use the e-journal for my research	1 1.1%	5 5.4%	31 33.7%	25 27.2%	30 32.6%	3.8 5	

		works						
D4	I am usually use the e-journal to find relevant info. In the area of specialization	-	3 3.3%	16 17.4%	52 56.5%	21 22.8%	3.9 9	
D5	I know existence of the e-journal from my friends, lectures.	-	5 5.4%	22 23.9%	55 59.8%	10 10.9%	3.7 6	

D. Content of e-journal

The advances in digital technologies and the recent proliferation of e-publishing across the world have brought in a revolution in e-resources publication, subscription, and access and delivery mechanism. Presently e-resources have become the largest and fastest growing areas of digital collections for most of our libraries and it has many benefits. The finding shows that the research scholars using the e-journal depending on the contents of e-journal itself. There is 70.6% respondents use e-journal because of their research works. “I am usually use the E-Journal because the information is more related and useful to my research works”. 64% respondents agree with “E-Journals always give me accurate information rather than using search engines”. 55 (84.62 per cent) respondents of NDRI can access the various e-resources easily. Similarly Sharma (2009) reported that 42 (80.77 per cent) teachers and 26 (86.67 per cent) research scholars are able to access the e-resources very easily. Results show that e-resources are much familiar among every individual. Ease of accessibility of information causes the users to use electronic resources more frequently (Naidu et al., 2009). Easy access is the potential advantage of e-books (Ashcroft and Watts, 2004).

TABLE 6: Item Analysis of Content of e-journal

Variable	Item Statement	Frequency and Percentage					Me an	Ov era ll Me an
		Strongl y disagree	Disagr ee	Neutr al	Agree	Stron gly Agree		
Content of e-journal	E1 e-journal always give me relevant information	2 2.2%	11 12.0%	34 37.0%	40 43.5%	5 5.4%	3.3 8	3.85
	E2 I am usually use e-journal in the library because the e-journal always give me current information	-	7 7.6%	34 37.0%	45 48.9%	6 6.5%	3.5 4	
	E3 I am usually use the e-journal because of the interface of e-journal itself	50 54.3%	13 14.1%	19 20.7%	1 1.1%	9 9.8%	3.5 8	
	E4 I am usually use the e-journal because the information is more related and useful to my research works	-	8 8.7%	19 20.7%	58 63.0%	7 7.6%	3.7 0	
	E5 e-journal always give me accurate information rather than using search engines	-	6 6.5%	26 28.3%	54 58.7%	6 6.5%	3.6 5	

E. Difficulties of e-journal

In the previous study of "Use of electronic sources by research scholars at Kurukshetra University by Margam Madhusudhan", The result shows that 88% of the respondents feel that in comparison to conventional documents, e-resources are time saving, 78% said that e-resources are easy to use. It is also line with the study of "Use of e-journals among research scholars at Central Science Library, University of Delhi by P.M. Naushad Al and Faizul Nisha", the result shows that the difficulties of low internet speed (56%) and problem in networking (25%). The problem of lack of desired content, has been faced by ten (15.38%) and 12 (19.35%) respondents of NDRI and NBAGR respectively. Haridasan and Khan (2009) indicated that 55.55% faculty members and 55.81% research scholars were facing technical problem whereas 77.78% faculty members and 76.74% research scholars faced problems related to internet access. 33 per cent of respondents indicated inadequate PCs, 28% indicated lack of information about how to use electronic resources (Dadzie, 2005). Thapa and Sahoo (2004) found that there is a problem of slow internet connectivity and irregular power supply. In this study, research scholars were having difficulties they experienced in using e-journals most of the research scholar having problem with "The Internet Connection is very low to access the E-Journals" (81.5%), and e-journal slow downloading (66.3%), others such as lack of training, they did not know how to use E-Journal, there are limited number of computer in the library that make me difficult to access E- Journal, the Internet connection is very low to access the E-Journals.

TABLE 7: Item of Analysis of Difficulties of e-journal

Variable	Item Statement	Frequency and Percentage					Mean	Overall Mean
		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree		
Difficulties in using e-journal	F1 e-journal is easy to use	-	4 4.3%	36 39.1%	41 44.6%	11 12.0%	3.6 4	4.00
	F2 e-journal is time saving	-	4 4.3%	24 26.1%	47 51.1%	17 18.5%	3.8 4	
	F3 Lack of training	-	3 3.3%	29 31.5%	51 55.4%	9 9.8%	3.7 2	
	F4 I did not know how to use e-journal	-	53 56.6%	25 27.2%	1 1.1%	13 14.1%	3.8 5	
	F5 Limited number of computer in the library that make me difficult to access e-journal	1 1.1%	3 3.3%	17 18.5%	62 67.4%	9 9.8%	3.8 2	

VI. RECOMMENDATIONS

Thus, there is a need to motivate the users to make maximum use of such services. The information about their required journals must be provided. Most of the research scholars prefer to use both print and electronic format. Thus, the library should continue to provide e-resources along with printed journals also. The users are accessing electronic information on internet and intranet made available at various places in the institute. The usage of these resources can be increased if users are motivated to use these services in the library by providing them help in searching and downloading the

information. The library has good collection of e-resources as per the courses run by the institute. The impact on collection development and usage indicates that every year there is an increase in the collection and thus its usage. The usage of Science Direct, ABI/Inform and Capitalize has increased but usage of ASCE, EBSCO and Emerald has decreased. The librarians must check out the reasons for this decrease in usage and find out the users who use them, so that they can be guided for using such e-resources. It has been noted that in the technical institutes e-resources related to non-technical subjects are less in use and there has been a wide variation in their usage. There is a need to organize orientation classes and training programs in accessing, searching and downloading of e-resources effectively at regular intervals and awareness among the research scholars should be created to use e-resources to obtain current information. The staff of the library computer labs and university computer centers must be skilled to assist the researchers when they face any problem in accessing e- journals. Users are not satisfied with the IT infrastructure and internet connectivity available at the library. In order to enhance the use of e-journals the library should conduct user training, provide reliable connectivity, increase the number of terminals and maintain the system regularly. The Library should teach its users about advanced search strategies and organize orientation sessions regularly. The library should conduct feedback/user surveys to determine the needs of users from time to time. The number of journals available through consortia should be increased in order to access more journals in their respective fields.

VII. CONCLUSION

The main users of library e-resources are postgraduates, research scholars and faculty. The maximum numbers of users prefer to use both the formats of the documents, i.e. print as well as electronic for seeking information. The e-journals are generally used regularly used 2/3 times a week by those who responded to the survey. Thus, the number of users coming to the library has decreased. There is constant increase in the collection and usages of these e-resources. The usage of these resources is not more than 65% as compare to the awareness which is 80%. Therefore, the situation demands that necessary steps should be taken by the library authorities to increase the usage of present library e-resources. PDF is the preferred online format for reading e-journals. The Library should increase its number of work stations and maintain its systems regularly. Bandwidth should be increased by the Library so as to provide faster access, which will save users time and become a source of motivation to use e-journals. From the previous discussion it is very clear that the use of e-information sources is expected to increase in future. The research scholars who participated in this survey were aware of e-resources and majority of them used these resources in support of their research and they are adept at using these sources. This shows that e-information sources will continue to be necessary components of the academic community. Many research scholars learnt about the e-resources by the advice of

their teachers/friends/colleagues. So, it is necessary that the library professionals should be proactive in working with research scholars to develop virtual training program aimed at enabling them to use e-resources more effectively.

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