

THE USAGE OF E-JOURNAL AMONGST LECTURERS AT A PUBLIC UNIVERSITY IN MALAYSIA

Arzmi Bin Abu Bakar

Department of Media Studies, University of Malaya

arzmi182@gmail.com

Mohd Yahya Mohamed Ariffin, PhD

Faculty of Leadership and Management, Islamic Science University of Malaysia

mohdyma@usim.edu.my

ABSTRACT

With the development of electronic publishing, e-journal is readily and widely available to academicians. This study was carried out to assess the usage of e-journal amongst education lecturers at a public university in Malaysia. A total of 55 education lecturers participated in the study by completing a self-developed questionnaire to answer the following questions; (1) how often do education lecturers use e-journal as a tool for academic purposes? and (2) What are their preferential characteristics of e-journal which factors in its usage for academic purposes? The major findings of the study revealed a positive indication on the usage of e-journal where 83.6% preferred to use e-journal for academic purposes compared to printed journals. Responses to the usage of e-journal for academic purposes also revealed a positive result with all the six academic activities rated as “often”. Responses to the preference for using e-journal also produced a positive result where respondents rated as “agree” to the 10 statements. Based on the findings of the study, e-journal is widely used by education lecturers and has the potential to be diffused in teaching and learning as proposed by the Diffusion Theory (Rogers 1995).

Keywords: electronic publishing, education lecturers, e-journal, teaching and learning

INTRODUCTION

Electronic publishing has been widely used for scholarly communication and has seen an increase in its demand since the past decade (Phil 2010). In a survey done by Kling (2003), it indicated that scholars highly value e-journal access and most of the scholars preferred e-journal over print. Hence, this study aims to assess the usage of e-journal amongst education lecturers particularly from a public university in Malaysia. The participants for this study were chosen from a local public university; Universiti Teknologi MARA (UiTM), specifically lecturers from the Faculty of Education. These participants were chosen due to specific attributes which are most likely to provide a strong assessment and are able to act as a foundation for further studies in this area.

With the ease of accessibility of the Internet, lecturers and students are able to easily use e-journal for their academic purposes and should also integrate this technological advancement into all of their scholarly works. In any practice of education, a piece of scholarly work is considered to be more exquisite in terms of its content, validity and professionalism if a good amount of journals related to its field is used as one of its data and referential tool. Journals therefore play a major part in any academicians’ scholarly work and are also one of the most preferential tools of the trade apart from books. A survey done by Kling (2003) indicated that 85% of scholars preferred e-journal over print and additionally other research shows how this preference is transformed into reading patterns (Tenopir, King 2003). Although it is suggested and proved that lecturers and scholars are avid users of e-journal, a study needs to be done to discover and assess their usage and preferential characteristics of an e-journal which factors in its usage.

The evolution of electronic journal had begun as early as in the 1960s (Lancaster 1995) and today it has managed to proclaim itself as one of various academic tools available on the Internet. However, how far has this technological advancement of e-journal been assimilated and incorporated amongst academic members or lecturers in institutions of higher learning in Malaysia has to be studied and assessed. As a developed country which is able to boast on many amazing ICT initiatives and structures, the major question to ask is academic staffs really using, if not for another word, reaping the various benefits which electronic journals provide?

In the survey done by Kling (2003), scholars highly value electronic journal access and most of the scholars preferred electronic journals over print mostly for the following reasons: e-journals saves time, makes work easier, result in better quality research, and enables the scholar to find more materials. One of the main key point in Kling’s study (2003) is that the ease of accessibility and the wide range of e-journal on the internet; literally being able to access a plethora range of journals from as many field as possible, highly promotes the usage of e-journal amongst scholars. Apart from these preferential, this study aims to uncover other aspects of characteristics which may or may not factor in the usage of e-journal. Certain preferences which would directly be in question relates to the possible constraints faced during the search and usage of e-journal online which

would determine if any constraints might exist, and if it does would it discourage the usage of e-journal amongst students.

OBJECTIVES AND SIGNIFICANCE OF STUDY

The objectives of this study are to assess how often does education lecturers use e-journal as a tool for academic purposes and to identify what are the education lecturers' preferential characteristics of e-journal which factors in its usage for academic purposes. In order to achieve these research objectives these following research questions were developed for this study:

1. How often do education lecturers use electronic journals as a tool for academic purposes?
2. What are their preferential characteristics of electronic journals which factors in its usage for academic purposes?

This study involves respondents who are academic members or lecturers from the Faculty of Education, UiTM, which is one of the largest public universities in Malaysia. The selected participants in this study will be assessed by gauging their usage and preference of using e-journal for academic purposes and their usage of e-journal in their instruction. Through assessing the compiled data, it would represent the best model of influential power as by principle; it is the medium with the highest probability in spreading the influence as their main profession and perfection is in molding and developing future teachers.

This study hopes to further propagate the usage of e-journal for academic purposes especially amongst lecturers in institutions of higher learning, specifically amongst the students. Equipped with one of the best and modern educational tool, not to mention usually free and easily accessible, lecturers would be able to disseminate all types of information from various sources with only the use of a single computer for all their academic purposes. This would undoubtedly improve not only their works but also their students' learning experiences to better prepare them for the world after university.

With a better understanding of the preferential characteristics of e-journal and its foreseeable constraints which factors in its usage amongst lecturers, this study would be able to provide information and feedback which could then be applied to further improve both the quality and usage of e-journal amongst higher institution students. Together with the exposure of existing e-journal and also selected ones; collection guided by preferential and constraints, universities as well as policy makers could then have a general perspective on how to develop and sustain academic e-journal for the use of academicians, the nation and its people. Any initiative taken by government in assuring that e-journal maintains to be one of the widely used education tool amongst its future generation could only bear positive results in the pursuit of academic excellence and the nation's growth into a highly educated developed country.

Another significant result this study would hope to achieve is the advancement of higher education institutions in Malaysia in order to be the center of educational excellence as aspired by the government and also as one of the best in the world. Practicing an education system which highly emphasizes the use of journals; both printed and electronic, would result in high quality academic works amongst its lectures and students, thus not only perpetuating that the level of education system is higher but also better than other universities which does not encourage the usage of journals.

METHODOLOGY

As the main purpose of this study focuses on an assessment of the usage of electronic journals amongst education lecturers, a mixed method combining both quantitative and qualitative research design was employed in order to get both quantitative and qualitative data. As stated by Creswell (2005), mixed methods research is a good research design as it allows the researcher to assess both outcomes of the study (quantitative) as well as the process (qualitative). Creswell further stated that the combination of research design provides a rich and comprehensive picture of any social phenomena. There are three types of mixed method research designs presented by Creswell (2005) which are the triangulation design, explanatory design and exploratory design. For the purpose of this study, the exploratory design was used as it permitted the researcher to simultaneously collect both quantitative and qualitative data, merge the data compiled and use the results to understand a research problem. A survey method using a questionnaire specially designed for this study was utilized to gather both quantitative and qualitative data.

The research population will consist of 70 lecturers from the Faculty of Education, UiTM, comprising of lecturers, senior lecturers, associate professors and professors. A minimum of 50 samples represents more than

70% of the total academic members of the faculty thus is adequate to provide a valid and reliable research data for the study. The total sample of this study is 55 lecturers from the faculty.

THEORETICAL FRAMEWORK

This study uses the diffusion theory as proposed by Rogers (1995) as reference. Specifically this study will refer to the diffusion theory to the use of ICT as an innovation in instructional technology especially the use of e-journal in instruction or teaching and learning process by lecturers at the Faculty of Education (UiTM) who are identified as the respondents for this study. Based on the four major theories that deal with the diffusion of innovations as proposed by Rogers (1995), two of the theories are relevant to this study. The two theories are the 'The Innovation-Decision Process Theory' and the 'The Theory of Perceived Attributes'.

The Innovation-Decision Process Theory suggests five stages. The first stage requires the potential adopters to learn and to have basic knowledge about the innovation. Secondly they should be persuaded as to the merits of the innovation. Thirdly, they must decide to adopt the innovation. Fourthly they must implement it, and finally, they must confirm that their decision to adopt the innovation was the appropriate decision. Diffusion will result once all of these five stages are achieved.

The Theory of Perceived Attributes on the other hand suggests that individuals will adopt an innovation if they perceive that the innovation has some relative advantages over an existing innovation; that the innovation must be compatible with existing values and practices; that the innovation should not be too 'complex'; that the innovation must have trialability, that is the innovation can be tested for a limited time without adoption, and finally, the innovation must offer observable results (Rogers, 1995).

Surry and Farquhar (1997) as cited in Yates (2001), suggests that educational technologist should study diffusion theory for three reasons. By studying diffusion theory, they may be able to explain, predict and account for facts that may influence or impede adoption and diffusion of innovation; understanding the best way to identify innovations for potential adoption is necessary as the materials used need to be introduced and diffused into the educational system, and finally, educated technologist may be able to develop a systematic model of adoption and diffusion. Surry and Farquhar (1997) conclude that such model has been useful in instructional development and it is wise to explore the factors that affect the diffusion and attempt to build an effective model of diffusion. Based on the foregoing discussion, and by referring to Rogers (1995) diffusion theory, the innovation in this study refers to the use of electronic journals for academic purposes especially in instruction at an institution of higher learning.

RESEARCH FINDINGS

Demographic data of respondents

The total number of respondents at the faculty during the period of study (February and March 2011) was 95. Of this number, only 70 were serving at the faculty at that moment and were identified as the population for the study. The remaining 25 lecturers were either on sabbatical leave, study leave, school attachment, on leave without pay or seconded to other departments at the university. The breakdown of the gathered data is as presented in Table 1.

Table 1: Lecturers at Faculty of Education

Details	No.
Currently serving during the period of study	70
Sabbatical leave	3
School attachment	1
Study leave	13
On leave without pay	3
Seconded to other departments at the university	5
Total	95

A total of 70 questionnaires were distributed and of that number, 55 were completed and returned and were used for the analysis of the study. The 55 respondents' current positions at the Faculty of Education and their gender are as presented in Table 2.

Of the 55 respondents, 26 (49.1%) were lecturers, comprising of 9 (17%) male and 18 (32.1%) female; 12 (22.6%) were senior lecturers, comprising of 1 (5%) male and 11 (7%) female; 12 (22.6%) were Associate Professors, comprising of 5 (9.4%) male and 7 (13.2%) female, and 3 (5.7%) Professors, comprising of 2 (3.8%) male and 1 (1.9%) female.

Table 2: Respondents' Position and Gender

Position	Male	Female	Total
Lecturer	9	17	26
	17.0%	32.1%	49.1%
Senior Lecturer	1	11	12
	5%	7%	22.6%
Associate Professor	5	7	12
	9.4%	13.2%	22.6%
Professor	2	1	3
	3.8%	1.9%	57%
Total	17	36	55

Table 3 presents the respondents' qualification. In line with the current requirements of UiTM and the Faculty of Education, the minimum qualifications of the respondents are the Master's Degree and Doctor of Philosophy.

Of the 55 respondents, 34 (61.8%) respondents have a Master's Degree and 21 (38.2%) respondents have attained a Doctor of Philosophy.

Table 3: Qualification

Qualification	Frequency (N=55)	Percentage (%)
Master's Degree	34	61.8%
Doctor of Philosophy	21	38.2%

Table 4 presents the respondents' teaching experience at the Faculty of Education, UiTM, ranging from a minimum of 1 year to more than 10 years.

Of the 55 respondents, 7 (12.7%) respondents has 1-3 years teaching experience, 7 (12.7%) respondents has 4-5 years teaching experience, 8 (14.5%) respondents has 6-10 years teaching experience, 33 (60.0%) respondents have more than 10 years of teaching experience.

Table 4: Teaching Experience

Experience	Frequency (N=55)	Percentage (%)
1-3 years	7	12.7%
4-5 years	7	12.7%
6-10	8	14.5%
More than 10 years	33	60.0%

The usage of e-journal as a tool for academic purposes

Table 5 presents the respondents' usage of e-journals for academic purposes. All the 6 items were listed; as "Often" in the following order of frequency of usage: (i) for research (mean=4.01), (ii) writing articles for presentation in seminars, etc. (mean=3.98), (iii) writing proposals for research (mean=3.93), (iv) writing articles for publication (mean=3.84), (v) preparation of teaching session (mean=3.80) and (vi) writing proposals for research grants (mean=3.60). Each item was given a 5-point value ranging from 1 "never" to 5 "Very often".

Table 5: Usage of E-journal for Academic Purposes

	Frequency and percentage					Mean	Std. Dev
	Never	Rarely	Sometimes	Often	Very Often		
For research	0	1	11	21	22	4.01	.811
	0.0%	1.8%	20.0%	38.2%	40.0%		
Writing articles for presentation in seminars, etc.	0	6	5	28	16	3.98	.913
	0.0%	10.9%	9.1%	50.9%	29.1%		
Writing proposals for research	1	3	14	18	19	3.93	.997
	1.8%	5.5%	25.5%	32.7%	34.5%		
Writing articles for publication	0	6	12	22	15	3.84	.958
	0.0%	10.9%	21.8%	40.0%	27.3%		
Preparation of teaching session	1	4	18	14	18	3.80	1.043
	1.8%	7.3%	32.7%	25.5%	32.7%		

Proposals for research grants	3	7	14	16	15	3.60	1.180
	5.5%	12.7%	25.5%	32.7%	34.5%		

Mean

1.00 – 1.49 = Never 2.50 – 3.49 = Sometimes

1.50 – 2.49 = Rarely 3.50 – 4.49 = Often

4.50 – 5.00 = Very Often

Of the 6 items, the highest mean of 4.01 or “Often” was achieved on the usage of e-journal for research; however 1 (1.8%) respondent rated “rarely” and 11 (20.0%) respondent rated “sometimes”. 21 (38.2%) respondents rated “often” and 22 (40.0%) respondents rated “very often”; giving a high percentage (78.2%) of usage of e-journal amongst education lecturers for research purposes..

This is followed by a mean of 3.98 or “Often” on the usage of e-journal for writing articles for presentation in seminars, etc.; while 6 (10.9%) respondents rated “rarely” and 5 (9.1%) respondents rated “sometimes”. 28 (50.9%) respondents rated “often” and 16 (34.5%) respondents rated “very often”; giving a high total of 85.4% respondents who uses e-journal as a preparation for writing articles for presentation in seminars, etc.

A mean of 3.93 or “Often” was achieved on the usage of e-journal for writing proposals for research; however 1 (1.8%) respondent rated “never”, 3 (5.5%) respondents rated “rarely” and 14 (25.5%) respondents rated “sometimes”. 18 (32.7%) respondents rated “often” and 19 (34.5%) respondents rated “very often”; giving a total percentage of 67.2% of respondents who often use e-journal for writing proposals for research.

A mean of 3.84 or “Often” was achieved on the usage of e-journal for writing articles for publication; while 6 (10.9%) respondents rated “rarely” and 12 (21.8%) respondents rated “sometimes”. 22 (40.0%) respondents rated “often” and 15 (27.3%) respondents rated “very often”; giving a total percentage of 67.3% who often uses e-journal for writing articles for publication.

A mean of 3.80 or “Often” was achieved on the usage of e-journal for preparation of teaching sessions; however 1 (1.8%) respondent rated “never”, 4 (7.3%) respondents rated “rarely” and 18 (32.7%) respondents rated “sometimes”. 14 (25.5%) respondents rated “often” and 18 (32.7%) respondents rated “very often”; giving a total of 58.2% of respondents who uses e-journal for preparation for teaching sessions.

A mean of 3.60 or “Often” was also achieved on the usage of e-journal for writing proposals for research grants; however 3 (5.5%) respondents rated “never”, 7 (12.7%) respondents rated “rarely” and 14 (25.5%) respondents rated “sometimes”. 16 (32.7%) respondents rated “often” and 15 (34.5%) respondents rated “very often”; giving a total of 67.2% of respondents who uses e-journal for writing proposals for research grants.

The preferential characteristics of e-journal

Table 6 presents the respondents’ preferential characteristics of e-journal and the 10 items were listed according to rank order as follows: (i) good source of information (mean=4.35), (ii) current and timely (mean=4.33), (iii) saves time (mean=4.31), (iv) ease of storage (mean=4.20), (v) ease of dissemination (mean=4.09), (vi) ease of access (mean=4.09), (vii) interactive (mean=4.02), (viii) results in better quality research (mean=3.84), (ix) mostly free (mean=3.78) and (x) paperless (mean=3.76). All the 10 items were rated as “Agree” which means the respondents agreed with all the 10 characteristics of e-journal and which factors in its usage amongst education lecturers.

Table 6: Preference for E-journals

Frequency and Percentage							
Preference for using e-journals	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev
Good source of information	2	0	1	26	26	4.35	.844
	3.6%	0.0%	9.1%	47.3%	40.0%		
Current and timely	2	0	0	29	24	4.33	.818
	3.6%	0.0%	0.0%	52.7%	43.6%		
Saves time	2	1	0	27	25	4.31	.879
	3.6%	1.8%	0.0%	49.1%	45.5%		
Ease of storage	2	0	5	26	22	4.20	.890
	3.6%	0.0%	9.1%	47.3%	4.3%		
Ease of dissemination	2	0	6	27	20	4.09	.867

	3.6%	0.0%	10.9%	49.1%	36.4%		
Ease of access	2	0	6	30	17	4.09	.867
	3.6%	0.0%	10.9%	54.5%	30.9%		
Interactive	2	1	7	29	16	4.02	.913
	3.6%	1.8%	12.7%	52.7%	29.1%		
Results in better quality research	2	3	10	27	13	3.84	.977
	3.6%	5.5%	18.2%	49.1%	23.6%		
Mostly free	4	4	8	23	16	3.78	1.166
	7.3%	7.3%	14.5%	41.8%	29.1%		
Paperless	5	6	4	22	18	3.76	1.276
	9.1%	10.9%	7.3%	40.0%	32.7%		

Mean

1.00 – 1.49 = Strongly Disagree

2.50 – 3.49 = Neutral

1.50 – 2.49 = Disagree

3.50 – 4.49 = Agree

4.50 – 5.00 = Strongly Agree

A mean of 4.35 or “Agree” was achieved on respondents agreeing that e-journal is a good source of information; while 2 (3.6%) respondents rated “strongly disagree” and 1 (9.1%) respondents rated “neutral”. 26 (47.3%) respondents rated “agree” and 26 (40.0%) respondents rated “strongly agree”; this suggests that 87.3% agreed that e-journal is a good source of information.

A mean of 4.33 or “Agree” was achieved on respondents agreeing that e-journal is current and timely; while 2 (3.6%) respondents rated “strongly disagree”. 29 (52.7%) respondents rated “agree” and 24 (43.6%) respondents rated “strongly agree”: the data suggests that 96.3% agreed that e-journal is current and timely.

A mean of 4.31 or “Agree” was achieved on respondents agreeing that e-journal saves time; however 2 (3.6%) respondents rated “strongly disagree” and 1 (1.8%) respondents rated “disagree”. 27 (49.1%) respondents rated “agree” and 25 (45.5%) respondents rated “strongly agree”; the data indicates that a very high percent, 94.6% of respondents agreed that e-journal saves time.

A mean of 4.20 or “Agree” was achieved on respondents agreeing that e-journal provides ease of storage; while 2 (3.6%) respondents rated “strongly disagree” and 5 (9.1%) respondents rated “neutral”. 26 (47.3%) respondents rated “agree” and 22 (40.3%) respondents rated “strongly agree”; this gives a combined percentage of 87.6% who agreed that e-journal provides ease of storage.

A mean of 4.09 or “Agree” was achieved on respondents agreeing that e-journal provides ease of dissemination; while 2 (3.6%) respondents rated “strongly disagree” and 6 (10.9%) respondents rated “neutral”. 27 (49.1%) respondents rated “agree” and 20 (36.4%) respondents rated “strongly agree”; giving a high total percentage of 85.5% who agreed that e-journal provides ease of dissemination.

A mean of 4.09 or “Agree” was achieved on respondents agreeing that e-journal provides ease of access; while 2 (3.6%) respondents rated “strongly disagree” and 6 (10.9%) respondents rated “neutral”. 30 (54.5%) respondents rated “agree” and 17 (30.9%) respondents rated “strongly agree”; giving a high percentage of 84.5% who agreed that e-journal provides ease of access.

A mean of 4.02 or “Agree” was achieved on respondents agreeing that e-journal is interactive; while 2 (3.6%) respondents rated “strongly disagree”, 1 (1.8%) respondent rated “disagree” and 7 (12.7%) respondents rated “neutral”. 29 (52.7%) respondents rated “agree” and 16 (29.1%) respondents rated “strongly agree”; the data suggests that 81.8% respondents agreed that e-journal is interactive.

A mean of 3.84 or “Agree” was achieved on respondents agreeing that using e-journal results in better quality research; while 2 (3.6%) respondents rated “strongly disagree”, 3 (5.5%) respondents rated “disagree” and 10 (18.2%) respondents rated “neutral”. 27 (49.1%) respondents rated “agree” and 13 (29.1%) respondents rated “strongly agree”; the data suggest that 78.2% respondents agreed that using e-journal results in better quality research.

A mean of 3.78 or “Agree” was achieved on respondents agreeing that one of the benefits e-journal is that e-journal is mostly free; however 4 (7.3%) respondents rated “strongly disagree”, 4 (7.3%) respondents rated “disagree” and 8 (14.5%) respondents rated “neutral”. 23 (41.8%) respondents rated “agree” and 16 (29.1%)

respondents rated “strongly agree”; the data suggests that 70.9% respondents agreed that one of the benefits of e-journal is that it is mostly free.

A mean of 3.76 or “Agree” was achieved on respondents agreeing that another benefit of e-journal is that e-journal is paperless; while 5 (9.1%) respondents rated “strongly disagree”, 6 (10.9%) respondents rated “disagree” and 4 (7.3%) respondents rated “neutral”. 22 (40.0%) respondents rated “agree” and 18 (32.7%) respondents rated “strongly agree”; the data suggests that 72.7% respondents agreed that one of the advantages of e-journal is that it is paperless.

Table 7 presents the respondents’ usage of either e-journal or printed journal for their academic purposes.

Of the 55 respondents, 46 (83.6%) respondents use e-journal more often for their academic purposes as compared to only 9 (16.4%) respondents who more often use printed journal for their academic purposes.

Table 7: Used More Often for Academic Purposes

Items	Frequency (N=55)	Percentage (%)
Electronic journals	46	83.6
Printed journals	9	16.4

The collected data of this study promises an encouraging assessment on the usage of e-journals amongst its participants. All the six items relating to the frequency of usage of e-journal for academic purposes were rated “Often”. References to the 10 statements relating to education lecturers’ preference on using e-journal for academic purposes also indicates a positive and promising usage of e-journal as the respondents “Agree” with all the 10 statements. Responses to the usage of e-journal in their teaching also produced a high percentage of an average of 80% amongst all participants. Encouraging results were followed through to other research questions where all collected data resulted in good and promising status.

DISCUSSION

All the six items relating to the frequency of usage of e-journal for academic purposes were rated “Often” (Mean of 3.50-4.49) in the following descending order: use of e-journal for research (Mean of 4.16), writing articles for presentations, seminars, etc. (Mean of 3.98), writing articles for proposals for research (Mean of 3.93), writing articles for publication (Mean of 3.84), preparation for teaching session (Mean of 3.80) and writing articles for proposals for research grants (Mean of 3.60).

The high mean ranging from mean of 4.16 to 3.60 for all the six statements indicated a positive and encouraging practice where education lecturers ‘often’ use e-journal for academic purposes. It can be concluded that they are utilizing and capitalizing on the availability of e-journal as well as recognizing the potential of e-journal as a source of reference by using it ‘often’ and ‘very often’ for academic purposes.

References to the 10 statements relating to education lecturers’ preference on using e-journal for academic purposes also indicates a positive and promising usage of e-journal as the respondents “Agree” (Mean 3.50 – 4.49) with all the 10 statements. The reasons for the respondents to ‘agree’ in their preference for using e-journal are presented in the following descending order: e-journal is a good source of information (Mean of 4.35), current and timely (Mean of 4.31), ease of storage (Mean of 4.15), ease of dissemination (Mean of 4.15), ease of access (Mean 4.09), interactive (Mean 4.02), results in better quality research (Mean of 3.84), mostly free (Mean of 3.78) and paperless (Mean of 3.76). An additional item asking respondents to indicate which medium; e-journal or printed journal, that they use more for academic purposes indicated that 83.6% (N=46) used e-journals more often compared to 16.4% (N=9) who used printed journals more often.

Responses to both the 5-point Likert-scale on the preference of using e-journal as well as the percentage of using e-journal which achieved a high Mean of between 3.76 to 4.35 indicating respondents who ‘agree’ on the 10 items relating to their preference of using e-journal as well as a high percentage of 83.6% who indicated preference in using e-journal compared to printed journal is a good indicator of both preference and also frequency of usage of e-journal amongst education lecturers.

CONCLUSION

This study examined how education lecturers often use e-journal for academic purposes. Usage of e-journal for research purposes achieved the highest percentage which suggests a high percentage of frequency of usage of e-journal for purposes of research amongst education lecturers. Two other items related to research also indicated a high combined percentage for both “Often” and “Very Often” for writing proposals for research and writing

proposals for research grants. These data further suggest that the usage of e-journal amongst education lecturers were frequent for research purposes. Overall, it can be concluded that the highest percentage of usage of e-journal amongst education lecturers were for activities related to research. Activities related to publication such as writing articles for presentation in seminars, etc. yielded a high percentage which suggest that the usage of e-journal amongst education lecturers for purposes of publication were often and frequent. The usage of e-journal amongst education lecturers for preparation of teaching suggest that the frequency of usage of e-journal for activities related to teaching at the moment is satisfactory. With more exposure, training and encouragement, the usage of e-journal amongst education lecturers for preparation for teaching may increase in the future.

REFERENCES

- Ackerman, L. V. and Simonaitis, A. 1997. RSNA Electronic Journal: Beyond Paper Images: Radiology on the Web. *The Journal of Electronic Publishing*, Vol. 3 No. 1.
- Bailey Jr, C. W. 2001. Evolution of an Electronic Book: The Scholarly Electronic Publishing Bibliography. *The Journal of Electronic Publishing*, Vol. 7, No. 2.
- Berners, L. T. 1989. Information Management: A Proposal. *CERN; The European Organization for Nuclear Research*.
- Bolter, J. D. 1991. *Writing Space: The Computer, Hypertext, and the History of Writing*. New Jersey, Lawrence Erlbaum Associates Publishers.
- Busha, C. H. and Harter, S. P. 1980. Research Methods in Librarianship: Techniques and Interpretation. *The Bible of Library Research*, Orlando. Academic Press Inc.
- Coulter, G. 2010. Launching (and Sustaining) a Scholarly Journal on the Internet: The International Journal of Baudrillard Studies. *The Journal of Electronic Publishing*, Vol. 13, No. 1.
- Creswell, J. W. 2003. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2ed)*. California, Sage Publications.
- Creswell, J. W. 2005. *Educational Research: Planning, conducting, and evaluating quantitative and qualitative research (2ed)*. California, Sage Publications.
- Davis, M. 1997. Fragmented by Technologies: A Community in Cyberspace Online. *Interpersonal Computing and Technology: An Electronic Journal for the 21st Century*: 7-18.
- Day, C. 1995. Economics of Electronic Publishing. *The Journal of Electronic Publishing*, Vol. 1, No. 2.
- Deibert, R. J. 1997. *Parchment, Printing, and Hypermedia*. New York, Columbia University Press.
- Dutton, G. 1998. Turning Electronic Pages. *Popular Science*, August: 33
- Ferris, S. P. 2002. Writing Electronically: The Effects of Computers on Traditional Writing. *The Journal of Electronic Publishing*, Vol. 8, No. 1.
- Fisher, J. H. 2008. Scholarly Publishing Re-invented: Real Costs and Real Freedoms. *The Journal of Electronic Publishing*, Vol. 11, No. 2.
- Gardiner, E. and Ronald, G.M. 2010. The Electronic Book. In: *The Oxford Companion to the Book*. Oxford, Oxford University Press.
- Getz, M. 1997. An Economic Perspective on E-Publishing in Academia. *The Journal of Electronic Publishing*, Vol. 3, No. 1.
- Harnad, S. 2003. Eprints: Electronic Preprints and Postprints. In: *Encyclopedia of Library and Information Science*. New York, Marcel Dekker.
- Holden, C. 1998. Electronic Books on the Horizon. *Science*, July: 335
- Immink, K. 1998. The CD Story. *Journal of the AES*. Vol. 46.
- Kiernan, V. 1999. Reprint: Why Do Some Electronic-Only Journals Struggle, While Others Flourish? *The Journal of Electronic Publishing*, Vol. 4, No. 4.
- Kling, R., Covi, L. 1999. What is Social Informatics and Why does it Matter? *D-Lib Magazine*, Vol. 5, No. 1.
- Kling, R. and E. Callahan. 2003. Electronic journals, the internet, and scholarly communication. *Annual Review of Information Science and Technology*. : 127-177.
- Kling, R. and McKim, G. 1999. Scholarly communications and the continuum of electronic publishing. *Journal of the American Society for Information Science*, Vol. 50, No. 10: 890-906.
- Lancaster, F. W. 1995. The Evolution of Electronic Publishing. *Library Trends*, Vol. 43, No.4.
- Lawrence, S., Giles, C.L. and Bollacker, K. 1999. *Digital libraries and Autonomous Citation Indexing*. New Jersey, Princeton.
- Luther, J. 2001. Reprint: White Paper on Electronic Journal Usage Statistics. *The Journal of Electronic Publishing*, Vol. 6, No. 3.
- Mahathir, M. 1991. Speech on: *Malaysia: The Way Forward*. Malaysian Business Council; Kuala Lumpur.
- Malcolm, G. 1999. Electronic Publishing in Academia: An Economic Perspective. *The Serials Librarian*, Vol. 36, No. 1.

- Maron, N. L. 2009. Current Models of Digital Scholarly Communication: Results of an Investigation Conducted by Ithaka Strategic Services for the Association of Research Libraries. *The Journal of Electronic Publishing*, Vol. 12, No. 1.
- Mohd Yahya, M.A. and Roosfa, H. 2011. The Impact of E-Journals on the Malaysian Scholarly Community. *Digital Publishing and mobile Technologies: 15th International Conference on Electronic Publishing*, June 22-24, Istanbul, Turkey, Proceedings.
- Myernik, M. 2007. The Prevalence of Additional Electronic Features in Pure E-Journals. *The Journal of Electronic Publishing*, Vol. 10, No.3.
- Neuman, W. L. 2003. *Social Research Methods: Qualitative and Quantitative Approaches* (5th ed.) Pearson Education Inc.
- Odlyzko, A. 1998. Reprint: The Economics of Electronic Journals. *The Journal of Electronic Publishing*, Vol. 4, No. 1.
- Partridge, C. 2008. *Technical Development of Internet Email. IEEE Annals of the History of Computing*. Vol. 30, No. 2.
- Phil, P. 2010. UP 2.0: Some Theses on the Future of Academic Publishing. *The Journal of Electronic Publishing*, Vol. 13, No. 1.
- Phil, P. 2008. Scholarly Publication at the Digital Tipping Point. *The Journal of Electronic Publishing*, Vol. 11 No. 2.
- Robert, M, G. 2009. *Survey Methodology* (2nd ed.) New Jersey, John Wiley & Sons Ltd.
- Robert, M, O. 1998. Web-Based Customer Decision Support Systems. *Communications of the ACM Magazine*. Vol. 41 No.3.
- Rohe, T. A. 1998. How Does Electronic Publishing Affect the Scholarly Communication Process? *The Journal of Electronic Publishing*, Vol. 3, No. 3.
- Rogers, E. M. 1995. *Edition: Diffusion of Innovations* (4th ed.) New York, Free Press.
- Sharmilla, P. F. 2002. Writing Electronically: The Effects of Computers on Traditional Writing. *The journal of Electronic Publishing*, Vol. 8 No. 1.
- Sharples, H. 1998. "Managing Content to Link Print, Web". *Graphics Arts Monthly*, April: 94-96.
- Swan, A. 2006. Overview of scholarly communication. In *Open Access: Key Strategic, Technical and Economic Aspects*, edited by Neil Jacobs. Oxford, Chandos Publishing.
- Sweeney, A. E. 2000. Tenure and Promotion: Should You Publish in Electronic Journals? *The Journal of Electronic Publishing*, Vol. 6, No. 2.
- Surry, D. W. and Farquhar, J .D. 1997. Diffusion Theory and Instructional Technology. *Journal of Instructional Science and Technology*, Vol.2, No.1.
- Tenopir, C. and King, D. W. 1998. Designing Electronic Journals With 30 Years of Lessons from Print. *The Journal of Electronic Publishing*, Vol. 4, No. 2.
- Trosby, F., Holley, K. and Harris, I. 2010. *Short Message Service: The Creation of Personal Global Text Messaging*. West Sussex, John Wiley & Sons Ltd.
- Varian, H. R. 1998. Reprint: The Future of Electronic Journals. *The Journal of Electronic Publishing*, Vol. 4, No. 1.
- Vinzant, C. 1998. Electronic Books Are Coming At Last!. *Fortune*, July: 119-124
- Yates B. L. 2001. Applying Diffusion Theory: Adoption of Media Literacy Programs in Schools. *Studies in Media & Information Literacy Education*, Vol. 4, No. 2.

Websites

- Malaysia Budget 2012 Highlights,
<http://www.asiaone.com/News/AsiaOne%2BNews/Malaysia/Story/A1Story20111007-303836.html>
- Mahathir, Malaysia and Globalisation: Challenging Orthodoxy,
<http://globalization.icaap.org/content/v4.2/wong.html>
- Malaysia: Internet Usage Stats and Marketing Report, <http://www.internetworldstats.com/asia/my.htm>