Malaysian Journal of Library & Information Science, Vol.13, no.1, July 2008: 103-116

THE *MALAYSIAN JOURNAL OF LIBRARY AND INFORMATION SCIENCE* 2001-2006: A BIBLIOMETRIC STUDY

Aryati Bakri and **Peter Willett**
Department of Information Studies, University of Sheffield,
211 Portobello Street, Sheffield, S1 4DP, United Kingdom
e-mail: p.willett@sheffield.ac.uk

ABSTRACT
This paper analyses publication and citation patterns in the *Malaysian Journal of Library and Information Science* (MJLIS) from 2001-2006, and compares the results with those obtained in an earlier study by Tiew et al. (2002) covering the period 1996-2000. Our results show that the number of publications has increased from the 76 articles in the Tiew study to 85 articles here, with statistically significant changes in the types of article, in the numbers of references per article and in the lengths of the articles. The complete set of 161 articles attracted a total of 87 citations, 52 of which were self-citations, with 14% of the MJLIS articles having been cited at least once.

Keywords: Bibliometrics; Citation Analysis; *Malaysian Journal of Library and Information Science*; Publications analysis

INTRODUCTION

The *Malaysian Journal of Library and Information Science* (MJLIS) was first published in 1996, with an electronic version becoming available in 1999. The journal's homepage (at http://ejum.fsktm.um.edu.my/) states that "The journal publishes original articles based on professional policies, practices, principles and progress in the field of library and information science. The journal aims to provide a forum for communication among library and information professionals, to introduce new concepts, systems and technology."

The history of MJLIS has been discussed by Edzan (2005), while Tiew, Abdullah and Kaur (2002) (hereafter "the Tiew study") have reported a bibliometric analysis of the articles published in the journal during the period 1996-2000. Bibliometrics was first defined by Pritchard (1969) as "the application of mathematical and statistical methods to books and other media", and there have been several previous bibliometric studies of Malaysian texts. However only four of these have studied citation analysis (Garfield 1979): two of them discuss citations in publications at the Universiti Teknologi Malaysia Perpustakaan Sultanah

Zanariah (UTM 2004; 2007) and the other two discuss citations and self-citations in the *Journal of Natural Rubber Research* (Tiew 2000; Tiew and Kaur, 2000). Here, we extend the Tiew study by analysing the papers published in MJLIS in the period 2001-2006, and we also report a citation analysis of papers in the journal for the entire period 1996-2006.

DATA AND METHODS

The MJLIS publication data for 2001-06 were downloaded via the *WilsonWeb Journal Directory* in March 2007. In all, there were 85 articles, and a range of data was then extracted from each of the downloaded articles. The data extracted were determined in large part by the analyses carried out in the Tiew study, since one of the principal aims of the present work is to compare the period 2001-2006 with the period 1996-2000 surveyed in the earlier study. We hence extracted the following data: year, volume, issues, number of authors, author's name, number of pages, number of references, and address of author. A note was also made as to whether the author had included any self-citations or journal self-citations. Finally, each article was then inspected to ascertain its type and subject category.

The MJLIS citation data were downloaded via Google Scholar by searching the database using the phrase "Malaysian Journal of Library and Information Science". The search retrieved a total of 216 citations to articles in the journal, and these records then underwent a cleaning process.

The resulting publication and citation data were then loaded into a spreadsheet. SPSS was used for statistical comparisons of our data with the Tiew study, using the χ^2 test at the 0.05 level of statistical significance.

RESULTS AND DISCUSSION

Publication analyses

Table 1 shows that there has been little variation over the years in the level of publication by researchers: the total number of articles during the six-year time frame of this study was 85, as against 76 during the five-year timeframe of the Tiew study.

Table 1: Annual numbers and types of article

Year	Articles	Research	Review	Concept
2001	14	11	2	1
2002	13	11	0	2
2003	16	10	0	6
2004	14	11	0	3
2005	14	11	0	3
2006	14	12	0	2
Total (2001-2006)	85	66	2	17
Total (1996-2000)	76	53	17	6

The Tiew study categorised the MJLIS articles using a three-part scheme described by Zainab and Fariza (2000): research articles, which report the results of research that has been carried out; review articles, which report critical evaluations of previous studies in a specific subject area; and concept articles, which present new ideas that are yet to be explored. The data in Table 1 shows that the vast majority of the papers are of the first type, as was also the case in the Tiew study. However, there has been a very substantial reduction in the proportion of review articles. This is reflected in the value of 18.08 for the χ^2 statistic (as against a critical value of 5.99 for two degrees of freedom). The observed reduction may be because information science in Malaysia was just emerging when MJLIS started, and submissions might accordingly tend towards reviews and background studies, rather than the results of completed research. Now that the journal and the discipline are well established, it is natural for researchers to publish the results of their work in the journal. Reviews tend to get cited frequently and can hence enhance a journal's profile: in view of the citation data that we present later, the editorial board of MJLIS might wish to consider encouraging the submission of high-quality review articles in the future.

Technical articles normally contain a number of references, as detailed in Table 2. The largest fraction of 2001-06 articles have 11-20 references, whereas the largest fraction in the Tiew study had <=10 references. The value of the χ^2 statistic for the data in Table 2 was 11.12 (as against a critical value of 7.82 for three degrees of freedom). We hence conclude that there is a statistically significant difference between the numbers of references per article here and the numbers in the Tiew study.

Table 2: Number of references per article in 1996-2000 and 2001-2006

References per article	Articles	
	1996-2000	2001-2006
< 10	37	20
11-20	21	35
21-30	10	16
> 30	8	14

Tables 3-7 consider the characteristics of the authors publishing in MJLIS. Table 3 investigates the extent to which authors work alone or collaborate as part of a group. There has been an increase between 1996-2000 and 2001-2006 in the proportion of multi-author contributions, as might be expected as research develops, but a χ^2 comparison of the two datasets reveals no overall significant difference: the computed value here is 2.89 (as against a critical value of 5.99 for two degrees of freedom).

Table 3: Authorship patterns of articles in 1996-2000 and 2001-2006

Authors	Frequency	
	1996-2000	2001-2006
1	36	31
2	29	34
≥ 3	11	20

Table 4 lists the most prolific authors in the journal; apart from those named in the table, there were 11 authors associated with two papers and 86 authors associated with a single paper. The most prolific author is Zainab (as was also the case in the Tiew study); she has been the editor of the journal, as have Edzan and Abdullah (who are second and fifth in the table).

The geographical spread of the authors is detailed in Table 5, which lists the most frequent national affiliations (defined here as responsible for at least five authors during 1996-2006); apart from those listed in the table, there were seven further countries with a total of nine authors in 1996-2000 and six further countries with a total of twelve authors in 2001-06. The six countries listed here (with Africa considered as a single country) thus contributed no less than 88.7% of the authors publishing in the journal. For comparison with our results, we have analysed issues of two journals that cover similar subject and geographical

areas: *Australasian Public Libraries and Information Services* and *Asian Libraries* as shown in Table 6. We have collected the data within 2001 to 2006 for *Australasian Public Libraries and Information Services*, whereas the available online data for *Asian Libraries* only covered the period 1997 to 1999. *Australasian Public Libraries and Information Services* is dominated by Australian authors, with New Zealand being the only other country providing at least five authors; apart from these two (contributing 93.5% of the authors), there were five further countries with a total of seven authors. *Asian Libraries* is analogous to MJLIS in having a much broader base, with six countries providing at least five authors; apart from the six listed in the table (which together contribute 86.2% of the authors) there were 12 further countries with a total of 26 authors.

Table 4: The most prolific contributors in 2001-2006

Author	Contributions
Zainab, A.N	14
Edzan, N.N	7
Kumar V.	6
Kademani B.S	6
Abdullah, A.	5
Tiew, W.S.	4
Mutula, S. M.	4
Kalyane, V.L	4
Majid, S.	3
11 other authors	2
86 other authors	1

Table 5: Authors by geographical affiliation in 1996-2000 and 2001-2006

Country	Authors per year	
	1996-2000	2001-2006
Malaysia	36	45
India	25	27
Bangladesh	9	6
Africa	0	6
Australia	1	5
Sri Lanka	0	5
All other countries	9	12
Total	**80**	**106**

Table 6: Authors by geographical affiliation in *Australasian Public Libraries and Information Services* (2001-2006) and *Asian Libraries* (1997-1999)

***Australasian Public Libraries and Information Services* (2001-2006)**		***Asian Libraries* (1997-1999)**	
Country	Authors	Country	Authors
Australia	88	Australia	44
New Zealand	13	New Zealand	41
5 other countries	7	China	26
		USA	23
		India	19
		UK	9
		12 other countries	**26**

The institutional types of the authors are quantified in Table 7, where we have identified four types of institution: a library school is an institution of higher learning specializing in the training of library or information professionals; an academic library is the library of a college, university, school or other institution of education, organized to meet the information needs of students, faculty and staff; a special library is a library that focuses on the interests inherent in the institution it serves; and any other type of institution. In both studies, the majority of the articles come from library schools, which is hardly unexpected given the nature of the LIS (library and information science) literature; in particular, many of the MJLIS articles come from staff and students on the LIS programmes at University of Malaya (Edzan 2005), which include a 12-credit dissertation module that can result in subsequent publications in the LIS literature.

Table 7: Institutional affiliations of MJLIS authors

Type of institution	**Frequency**	
	1996-2000	**2001-2006**
Library school	48	79
Academic library	6	22
Special library	6	2
Others	28	3
Total	88	106

The Tiew study investigated the subject coverage of the journal by classifying each of the 1996-2000 MJLIS papers into one of 25 categories. We attempted a similar categorisation of the 2001-2006 papers but experienced some difficulty in doing this since the Tiew categories contain a substantial degree of overlap. For example, there are five user-related categories: user/users of channel/sources of information; information seeking behaviour; user education; study of users; and use of library and information services. We have hence used a simplified version of the categorisation devised by Penas and Willett (2006) in a study of gender differences in library and information science research. The categorisation of the 1996-2000 and 2001-2006 sets of papers is summarised in Table 8. Book-related topics, as denoted by the second category, are the most prominent in both sets of papers, and the last few years have seen a noticeable increase in bibliometrics-related papers. However, papers related to information retrieval, cataloguing and information literacy appear to be under-represented in MJLIS given their importance in the current library and information science research agenda (Penas and Willett 2006); the editors might hence consider encouraging submission in these and related areas. A χ^2 analysis of the data in this table yields a value of 8.22 (as against a critical value of 9.49 for four degrees of freedom), showing that there has been no significant change in subject coverage over the journal's lifetime.

Table 8: Subject categories of MJLIS articles in 1996-2000 and 2001-2006

Subject category	Articles	
	1996-2000	2001-2006
Human and social aspects of information handling, organizational behaviour, user studies. Information literacy, teaching and learning	20	11
Digital libraries, e-books, e-publishing. Books, collections, records and library management literature, preservation, printing, publishing	34	34
Information retrieval. Cataloguing, classification, indexing, knowledge organization, taxonomies, thesaurus construction	5	6
Automation, database systems, system management, technical issues	8	13
Bibliometrics, citation studies, informetrics, webometrics	9	21

Further characteristics of the 1996-2000 and 2001-2006 papers are explored in Tables 9 and 10. The upper part of Table 9 considers the frequency of author self-citations, where a self-citation is a citation by the author of an article to a previous article by that author. Self-citations reflect in part an attempt to promote an author's research credibility and standing in the discipline (Hyland 2003) and have thus sometimes been considered to be of less importance than other, non-author citations (although the literature on topic is far from unequivocal (Tiew 2000)). The χ^2 value for the self-citation data is 0.005 (as against the critical value of 3.84 for one degree of freedom) showing no significant difference between the two sets of papers. The lower part of Table 9 considers the frequency of journal self-citations, where a journal self-citation is a citation by the author of an article in MJLIS to a previous article in MJLIS (as discussed by McVeigh (2002)). The χ^2 value for the journal self-citation data is 3.67, which is again not significant. Even so, journal self-citation has declined quite markedly between the two data sets, which is rather surprising since one might have expected journal self-citation to increase as MJLIS becomes established and has a greater number of previous papers that could be cited; an alternative view might be that the authors have become more outward looking, increasingly basing their work on external research developments.

Table 9: Author and journal self-citations in 1996-2000 and 2001-2006

Self-citation		**Frequency**	
		1996-2000	**2001-2006**
Author	Yes	30	**34**
	No	46	**51**
Journal	Yes	21	**13**
	No	**55**	**72**

Table 10 considers the lengths of the articles, in terms of numbers of pages, and the χ^2 analysis yields a value of 9.73 (as against the critical value of 5.99 for two degrees of freedom). There is hence a significant difference in the lengths of the papers in the two review periods.

Table 10: Lengths of articles in 1996-2000 and 2001-2006

Pages per article	Frequency	
	1996-2000	**2001-2006**
1-10	31	16
11-20	38	61
>= 21	**7**	**8**

Citation analyses

Citation analysis enables links to be made between an individual paper and the subsequent literature, thus providing a way of quantifying that paper's contribution to a subject. In this way, citations to numbers of papers can be used to assess the contribution of a specific author, institution or journal, *inter alia* (Baird and Oppenheim 1994; Cronin 1984; Garfield 1979; Nicolaisen 2007).

Examples of tools that can be used for citation analysis are the Web of Science (WOS), Scopus and Google Scholar. The best established is WOS, which covers important academic journals across the sciences, social sciences, arts and humanities. Unfortunately, MJLIS is not, as yet, included in the journals indexed in WOS, and has been included in the journals indexed in Scopus only since 2007. We have hence chosen to base our citation analysis on data in Google Scholar. This free service was launched in 2004 and tracks citations to peer-reviewed literature, conference proceedings, dissertations, pre-print servers, post-print servers and other non-traditional media. Its wide coverage means that more citation records may be found through Google Scholar than through WOS or Scopus (Bauer and Bakkalbasi 2005), but several problems have been reported with the system. In particular, it has been claimed that the indexing is inconsistent, with confusion between years of publication and page numbers or between the titles of articles and titles of journals (Jacso 2005a,b; Vine 2006), and that Google Scholar is much more time-consuming to use than are WOS and Scopus (Meho and Yang 2007).

The problems that have been identified with Google Scholar mirror our own experience, since we found that substantial pre-processing was required of the data that we downloaded from the database before it could used for analysis. In particular, we encountered many duplicate records and (more worryingly) impossible citations, in the sense of papers that were stated as citing some previous article X despite being published *before* X had in fact been published. There were also cases where inspection of the full text

and bibliography of a publication identified by Google Scholar as having cited some MJLIS paper, revealed that it did not in fact cite that paper. As of April 2007, we found a total of 216 citations to articles published in MJLIS 1996-2006; elimination of duplicate, impossible and non-citing records reduced this to 87 citations, or to 35 citations after excluding the 52 self-citations.

In all, 23 of the 161 1996-2006 MLIS articles attracted at least one citation after cleaning: of these 23, twelve attracted just a single citation and six attracted only self-citations. The cited articles are listed in Table 11. In all, about 86% of the MJLIS articles were uncited; this figure may appear to be high but is in line with other studies that have shown that the majority of articles are never cited (Baird and Oppenheim 1994). The total citation counts are low, about 0.54 citations per article when averaged over all of the articles published in MJLIS; this is line with the suggestion by Arunachalam (2003) that publications from developing countries have difficulty attracting attention at the international level; similar comments have been made by Baird and Oppenheim (1994), Chan et al. (2005) and Guan and Mo (2004).

The most cited article is the paper by Kademani and Kalyane (1996), entitled "Outstandingly cited and most significant publications of R. Chidambaram, a nuclear physicist". This article was published in the very first issue of MJLIS, and has thus had the maximum possible period during which it could be cited. Of the 24 citations, three-quarters are self-citations, and self-citations also figure highly for the other papers by these authors in Table 11.

A detailed study was made of the citations to the papers in the first five rows of Table 11, which together accounted for 81% of the total citations before cleaning (and 67% after cleaning) to the journal. After the elimination of duplicate, impossible and non-citing articles, there were 26 distinct articles that cited one or more of the top five from Table 11. Of these, all but two were published by Indian authors, with 18 of the papers emanating from the Bhabha Atomic Research Centre. There is thus a tight-knit group of authors (dominated by V.L. Kalyane) that frequently cite and/or self-cite MJLIS articles. Of the 26 citing papers, seven appeared in MJLIS itself, three in *Scientometrics* (one of the world's leading journals for bibliometric research) and three in *Kelpro Bulletin* (published by Kerala University Library), with no other source yielding more than two citations.

Table 11: MJLIS articles cited at least once after cleaning in 1996-2006

Cited article	Citations			
	Before cleaning	After cleaning	Self citations	Non-self citations
Kademani, B. S. and V. L. Kalyane (1996). "Outstandingly cited and most significant publications of R. Chidambaram, a nuclear physicist."	42	24	18	6
Kalyane, V. L. and B. K. Sen (1996). "Scientometric Portrait of Nobel Laureate Pierre-Gilles de Gennes."	40	17	12	5
Kademani, B. S. et al. (2001). "Scientometric portrait of Nobel laureate Ahmed Hassan Zewail."	34	8	6	2
Kalyane, V. L. et al. (2001). "Reference curve for Indian role model Scientist."	33	7	6	1
Swarna, T., et al. "Vijai Kumar (2004) Eponymous Citations to Homi Jehangir Bhabha."	26	2	2	0
Shanmugan, A. (1999). "Information seeking behaviour of trainee teachers in selected teacher training colleges in Malaysia."	4	3	0	3
Sen, B. K. (1999). "Changes in Impact Factor."	4	4	1	3
Sen, B. K. (1997). "Mega-authorship from a bibliometric point of view."	4	4	0	4
Koganuramath, M. M. (2004). "Physics Nobel laureate Wolfgang Ketterle: A scientometric portrait."	3	2	0	2
Tiew, W. S. (1998). "History of Journal of the Malaysian Branch of the Royal Asiatic Society (JMBRAS) 1878-1997: an overview."	3	2	2	0
Gupta, D. K. (2003). "Marketing of library and information services: building a new discipline for library and information science education in Asia."	2	1	0	1
Tiew, W. S. (1999). "Some scholarly English periodicals in Pre-independent Malaysia: A historical overview."	2	2	2	0
Maharana, B. and K. Chandra Panda (2001). "Planning business process reengineering (BPR) in academic libraries."	2	1	1	0
Gu, Y. and A. N. Zainab (2001). "Publication productivity of Malaysian researchers in the field of Computer Science and Information Technology."	1	1	0	1
Khan, M. S. (1998). "Library and information science literature in Bangladesh: a bibliometric study."	1	1	0	1
Tiew, W. S. (2000). "Characteristics of self-citations in Journal of Natural Rubber Research 1988-1997."	1	1	1	0
Nor Edzan, N. (1996). "The use of CD-ROM databases by Malaysian postgraduate students in Leeds."	1	1	0	1
Parvathamma, N. (1996). "The coverage of Indian literature in social science bibliographic databases on CD-ROM."	1	1	0	1

Ismail, R. and A. N. Zainab (2005). "The pattern of e-book use amongst undergraduate[s] in Malaysia: A case of to know is to use."	1	1	0	1
De Silva, S. M. and A. N. Zainab (1999). "Identifying and categorising published conference proceedings."	1	1	1	0
Zainab, A. N. and N. Eliza (1996). "MZ 1996. Introducing MAKLUM the general reference expert adviser developed for a university library."	1	1	0	1
Tiew, W. S. (1999). "Khoo Kay Kim, professor of Malaysian history: a bibliometric study."	1	1	0	1
Saechan, C. (2005). "The needs of continuing education for academic librarians in the South of Thailand."	1	1	0	1
Total	**216**	**87**	**52**	**35**

CONCLUSIONS

This paper has analysed publications in, and citations to, the first eleven volumes of the *Malaysian Journal of Library and Information Science*. The analysis shows that there have been statistically significant changes in the types of article, in the numbers of references per article and in the lengths of the articles. There is a reasonable spread of types of article, although the editors might consider encouraging the submission of reviews and of articles on information retrieval, information literacy, and cataloguing and classification. Citations to the journal are currently dominated by papers from a small number of authors working in the area of bibliometrics.

Acknowledgement

We thank the Ministry of Higher Learning, Malaysia and Universiti Teknologi Malaysia for financial support.

References

Arunachalam, S. 2003. Information for research in developing countries: information technology - friend or foe? *Bulletin of the American Society for Information Science and Technology*, Vol. 29, no. 4: 16-21.

Baird, L.M. and Oppenheim, C. 1994. Do citations matter? *Journal of Information Science*, Vol. 20, no. 1: 1-15.

Bauer, K. and Bakkalbasi, N. 2005. An examination of citation counts in a new scholarly communication environment. *D-Lib Magazine*, Vol. 11, no. 9. Available at http://www.dlib.org/dlib/september05/bauer/09bauer.html

Chan, L., Kirsop, N., Costa, S. and Arunachalam, S. 2005. *Improving access to research literature in developing countries: challenges and opportunities provided by Open Access.* Available at http://www.ifla.org/IV/ifla71/papers/150e-Chan.pdf

Cronin, B. 1984. *The Citation Process*. London: Taylor Graham.

Edzan, N.N. 2005. Tracing its origins: The history of the Malaysian Journal of Library and Information Science. *The Serials librarian*, Vol. 49, no. 1-2: 253-261.

Garfield, E. 1979. *Citation Indexing: its Theory and Application in Science, Technology, and Humanities.* New York: Wiley.

Guan, J. and Ma, N. 2004. A comparative study of research performance in computer science. *Scientometrics,* Vol. 61, no. 3: 339-359.

Hyland, K. 2003. Self-citation and self-reference: Credibility and promotion in academic publication. *Journal of the American Society for Information Science and Technology*, Vol. 54, no. 3: 251 – 259.

Jacsó, P. 2005a. As we may search—comparison of major features of the Web of Science, Scopus, and Google Scholar citation-based and citation-enhanced databases. *Current Science*, Vol. 89, part 9: 1537-1547.

Jacsó, P. 2005b. Google Scholar: the pros and the cons. *Online Information Review*, Vol. 29, no. 2: 208-214.

Kademani, B.S. and Kalyane, V.L. 1996. Outstandingly cited and most significant publications of R. Chidambaram, a nuclear physicist. *Malaysian Journal of Library and Information Science*, Vol. 1, no. 1: 21-36.

McVeigh, M.E. 2002. *Journal self-citation in the Journal Citation Reports*. Available at http://scientific.thomson.com/free/essays/journalcitationreports/selfcitation2002/

Meho, L.I and Yang, K. 2007. A new era in citation and bibliometric analyses: Web of Science, Scopus, and Google Scholar. *Journal of the American Society for Information Science and Technology,* Vol. 58, no. 13: 2105-2125.

Nicolaisen, J. 2007. Citation analysis. *Annual Review of Information Science and Technology*. Vol. 41: 609-641.

Pasterkamp, G., Rotmans, J., Kleijn, D. and Borst, C. 2007. Citation frequency: A biased measure of research impact significantly influenced by the geographical origin of research articles. *Scientometrics,* Vol. 70, no. 1: 153-165.

Penas, C.S. and Willett, P. 2006. Gender differences in publication and citation counts in librarianship and information science research. *Journal of Information Science*, Vol. 32, no. 5: 480-485.

Pless, I.B. 2005. Do scientific publications change anything? *British Medical Journal*, Vol. 11, no. 4: 193.

Pritchard, A. 1969. Statistical bibliography or bibliometrics? *Journal of Documentation*, Vol. 25, no. 4: 348-349

Tiew, W. S. 2000. Characteristics of self-citations in Journal of Natural Rubber Research 1988-1997: a ten-year bibliometric study. *Malaysian Journal of Library & Information Science*, Vol. 5, no. 1: 95-104.

Tiew, W. S., Abdullah, A. and Kaur, K. 2002. Malaysian Journal of Library and Information Science 1996-2000: a bibliometric study. *Malaysian Journal of Library and Information Science*, Vol. 6, no. 2: 43-56.

Tiew, W. S. and Kaur, K. 2000. Citation analysis of Journal of Natural Rubber Research, 1988-1997. *Malaysian Journal of Library & Information Science*, Vol. 5, no. 2: 45-56.

UTM 2004. *Projek keberkesanan koleksi: analisis citation tesis pasca ijazah* (Malay), Study the effective correlation: citation analysis of post-graduate thesis (in English). Skudai, Universiti Teknologi Malaysia.

UTM 2007. *Kajian 'citation' penulisan staf akademik UTM* (Malay), Study of citation: academic staff UTM (in English). Skudai, Universiti Teknologi Malaysia.

Vine, R. 2006. Google Scholar. *Journal of the Medical Library Association*. Vol. 94, no. 1: 97.

Zainab, A.N. and Fariza, H.N. 2000. The research communication process - the thesis to journal articles. *Bengkel Penulisan Ilmiah 'Dari tesis ke buku'* (Malay), Academic Publication Training 'From thesis to book' (in English) Universiti Utara Malaysia