MALAYSIAN JOURNAL OF LIBRARY AND INFORMATION SCIENCE 1996-2000: A BIBLIOMETRIC STUDY

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ABSTRACT

A bibliometric examination of all the journal articles published in the Malaysian Journal of Library & Information Science from 1996-2000 was carried out. The range of articles published per volume is between 14 and 17; average number of references per article is 22.5; the average length per article is 41.2 pages; 53 (69.74%) of the articles are research oriented; the percentage of multi-authored papers is slightly higher at 52.6% or 40 papers out of a total of 76; the most prolific author contributed 12 articles; 36 (45%) of the authors are geographically affiliated to Malaysia; authors affiliated to library schools were well represented (55.2%); the most productive institution is Faculty of Computer Science and Information Technology, University of Malaya with 26 out of 80 author's affiliation; the most popular subject is Scientific and Professional Publishing; 30 (39.5%) articles contained author's self-citation, while the rate of journal self-citation is found to be 27.6% and most of the articles (67.1%) contained no formal acknowledgement.

KEYWORDS: *Malaysian Journal of Library & Information Science*; *MJLIS*; Library and information science periodical; Bibliometrics; Malaysia.

MJLIS A BRIEF HISTORY

The idea of publishing a scholarly journal within the field of library and information science (LIS) was put first forward by Professor Dr. Mashkuri Yaacob, the then Dean of the Faculty of Computer Science and Information Technology, University of Malaya to faculty members involved in teaching the Master of Library and Information Science programme in 1995. He also agreed to serve as the first Editor-In-Chief. An editorial board comprising four faculty members as founding editors

and five other library professionals was established. The first issue, volume 1, number 1 was published in July 1996. This first issue is a welcome addition to the small pool of LIS literature in Southeast Asia and provides the quality and quantity of information available on current aspects of Asian librarianship, with special focus on Malaysia. Since its inception, the *Malaysian Journal of Library & Information Science* (*MJLIS*) has served as a vehicle for publishing original articles based on professional policies, practices, principles, progress and research in the field of library and information science. It also aims to provide a forum for communication among LIS professionals and to introduce new concepts, systems and technology.

MJLIS now runs into its fifth volume and is published semiannually. Miller (1997) reviewed the journal as "attractive in appearance, professionally published with high-quality English-language articles". As one would expect with a journal originating from an academic department, the majority of the articles tend to be scholarly in nature. Reviewers come from both developed and developing countries, namely, United States of America, United Kingdom, Finland, Japan, Taiwan, Africa and Indonesia. While the journal was international in perspective, *MJLIS*'s first authors were primarily Malaysians and scholars from India. After the first issue, there were occasional contributions from students of the Masters of Library and Information Science Programme. The journal is being indexed and abstracted by *LISA (Library Information Science Abstracts)*, *Library Literature* and *Journal of Academic Librarianship*. The success in getting the journal indexed by the major international indexing and abstracting agencies has helped works published in the journal to be more visible and accessible to anyone who searched these indexing services anywhere in the world. This effort has also helped to increase the usability of Malaysian research in the domain of LIS. Information scientists and researchers have also started to cite works published in *MJLIS*. Apart from that, requests for reprint of articles have also been received from researchers in the United States of America, United Kingdom, Australia, Singapore, Taiwan and Japan (Zainab et.al., 2000).

In an effort to make *MJLIS* more accessible, the editorial board had planned for an electronic version of the journal. The prototype web-based journal management system that manages the journal was developed in 1999. The process of uploading past volumes of articles has been successful. Presently, the online version of *MJLIS* precedes the printed version and can be viewed at www.fsktm.um.edu.my.

OBJECTIVES

A bibliometric examination of articles published in the *Malaysian Journal of Library and Information Science* (*MJLIS*) 1996-2000 was carried out to determine:
(a) the quantitative growth of articles by volume;
(b) the type of articles;
(c) the distribution of references by volume;
(d) the range and mean number of references per article;
(e) the authorship patterns of articles;
(f) the ranked list of most prolific contributors of articles;
(g) the ranked list of authors by geographical affiliation;
(h) the ranked list of authors by institutional affiliation;
(i) the ranking of the most productive author's affiliation;
(j) the range and mean length (pages) of articles;
(k) the ranked list by subjects of articles;
(l) the extent of author self citation in articles;
(m) the extent of journal self-citation in articles; and
(n) the extent of acknowledgement being included in articles.

THE DATA AND THE METHOD

The database of this study comprises 76 journal articles published in the *Malaysian Journal of Library and Information Science* since its inaugural issue, from July 1996 to December 2000. For each article, names of authors, number of authorship, number of references, author's institutional affiliation and country, type of article, subject of article, length (pages) of article, existence of acknowledgement, author's self-citation, and journal self-citation were noted down. All the necessary information were compiled, recorded, tabulated and analysed for making observations as indicated in the objectives of the study.

Zainab and Fariza (2000) categorised journal articles into three types, namely research articles, review articles and concept articles. Within this paper, the categorisation still holds true. In the interests of continuity, the authors used Jarvelin and Vakkari's (1990) classification schemes as the basis to analyse the distribution of articles by subjects. The authors feel that the most noteworthy characteristic of these classifications is that they provide a holistic as well as an analytical approach to LIS research. However, because of the different development of LIS research between developing and developed countries, the authors supplemented the research classification of Jarvelin and Vakkari with the scheme developed by Cheng (1996) for China. Jarvelin and Vakkari's classification schemes grouped articles under three

different categories, namely by topical distribution, type of organizations, and methodology used. Since the focus of this paper is not on analysing the contents of the articles, the authors used only the topical classifications mentioned above. This category divides the LIS topics into 11 major classes, with their respective subclasses (Appendix A). Each article was classified under only one main subclass. When an article dealt with more than one topic, only its main topic is considered. The authors did not make any modifications in the classifications, but added subclasses that do not exist in Jarvelin and Vakkari's scheme.

A database was created using Microsoft Access 2000 to accommodate and manage the data needed for analyses. Microsoft Excel 2000 was used to generate such data as frequency distribution, range, mean and ranked list of references, authorship, institutional affiliation, subject distribution, length (pages) as well as types of articles, author self citation, journal self-citation in articles and the extent of acknowledgements being included in the articles. The database of this study is inclusive enough to make highly reliable references about LIS journal articles published in Malaysia, though the database includes only the articles of one journal. The major reason for this assumption is due to the fact that there are very few professional LIS journals published on a regular basis in Malaysia, excluding several news-like periodicals issued by various libraries in this country.

DEFINITIONS

(a) Author's institutional affiliation: The institutional affiliation of the author of a document. The author's affiliation is taken as it appears in the journal article for all the authors. The institutional affiliation was categorised into five types namely library school, academic library, special library, school library/school resource centre and other non-library organisations.

(b) Author's geographical affiliation: The country in which the author resides or his/her place of work at the time when the journal article is published in *MJLIS*.

(c) Concept article: A paper throwing out new ideas or approaches for a research, but the actual research has not been conducted; usually written to obtain responses from other researchers.

(d) Most productive institution: The institution which produces the most number of authors and contributes the most number of articles.

(e) Research article: A paper reporting a research that has been done.

(f) Review article: A detail critical review of studies that have been done in a particular domain and the coverage of literature is usually large.

(g) Subject: The main subject assigned to the journal article is based on Jarvelin and Vakkari's classification schemes (Appendix A)

Type of article: Articles are divided into three types namely research articles, concept articles and review articles.

FINDINGS

1. Quantitative Growth of Articles by Volume

Table 1 shows the total number of articles published from 1996 to 2000. On the whole, from five volumes and 10 issues of the journal under study, the total number of articles published is 76. The distribution of articles by volume shows that the number of articles was highest in 1997, with 17 articles. The range of articles published per year during the period under study is between 14 and 17. It was noted that there is a slight decrease in the number of articles per volume after the first two years of publication.

Table 1: Frequency Distribution of Articles by Volume

Year	Volume	No. of Articles	Cumulative Total
1996	1	16	16
1997	2	17	33
1998	3	14	47
1999	4	15	62
2000	5	14	76

2. Types of Articles Published

Similar to most scholarly journals, the majority of articles published in *MJLIS*, that is, 53 of the 76 articles (69.74%) are research in nature (Table 2). In second placing are review articles with 17 articles (22.37%) and xix articles (7.89%) are categorised as concept articles.

Table 2: Type of Articles Published

Vol. No.	Research	Review	Concept	Total no of articles
1/96	10	4	2	16
2/97	11	3	3	17
3/98	13	1	0	14
4/99	11	3	1	15
5/2000	8	6	0	14
Total	53	17	6	76
Percentage	69.74	22.37	7.89	100.00

Distribution of References by Volume

The volume-wise distribution of references indicate that the five volumes (10 issues) of *Malaysian Journal of Library and Information Science* contained 1,712 references in 76 articles which means that every issue published 8 articles and each article has an average of 22.5 references (Table 3).

Table 3: Distribution of Reference by Volume

Vol. No	Year	No. of Reference	No. of Articles	Average No. of Reference /Article	Cumulative	
					Reference	Percent %
1	1996	181	16	11.3	181	10.57
2	1997	491	17	28.9	672	39.25
3	1998	202	14	14.3	874	51.05
4	1999	377	15	25.1	1251	73.07
5	2000	461	14	32.9	1712	100.00
Total		1712	76	22.5	1712	100.00

4. Range and Percentage of References Per Article

Table 4 indicates the range and percentage of references per article. A total of 35 (46.05%) articles top the list with between 1-10 references. This is followed by 21 (27.63%) articles having between 11–20 references, 10 (13.16%) articles with between 21-30 references per article, 4 (5.26%) with 101 or more references and finally 4 (1.32%) articles each with between 31-40, 41-50, 51-60 and 81-90 references per article. There are 2 (1.32%) articles with no references.

Table 4: Range and Percentage of References per Article

No. of References per Article	No. of Articles	Percent %
0	2	1.32
1- 10	35	46.05
11 – 20	21	27.63
21 – 30	10	13.16
31 – 40	1	1.32
41 – 50	1	1.32
51 – 60	1	1.32
61 – 70	0	0
71 – 80	0	0
81 – 90	1	1.32
91 – 100	0	0
101 and above	4	5.26
Total	76	100.0

5. Authorship Pattern of Articles

The authorship pattern of articles published in MJLIS indicated that multi-authored articles (52.6%) slightly outnumbered single-authored articles (47.4%).

Table 5: Authorship Pattern

No. of Authors	Number	Percent %
Single author	36	47.4
Two authors	29	38.2
Three authors	7	9.2
Four authors	3	3.9
Seven authors	1	1.3
Total	76	100.0

6. Ranked List of Most Prolific Contributor

On the whole, a total of 80 authors contributed 76 articles over a period of five years between 1996-2000 (Table 6). The most prolific authors are Zainab Awang Ngah who

Table 6: Ranked List of Most Prolific Contributor

Rank	Author	No. of Contribution
1	Zainab Awang Ngah	12
2	B. K. Sen	10
3	Tiew Wai Sin	8
4	C. R. Karisiddappa	3
4	Nor Edzan Nasir	3
4	V. L. Kalyane	3
4	Teh Kang Hai	3
4	B. M. Gupta	3
5	17 authors	2
6	55 authors	1

contributed 12 articles, B. K. Sen with 10 articles and Tiew Wai Sin with 8 contributions. Five other authors contributed three articles each, 17 authors contributed two articles each and 55 authors contributed one article each. It is interesting to note that all the three leading contributors are from the Faculty of Computer Science and Information Technology, University of Malaya. However, Tiew Wai Sin contributed his last four articles being affiliated to a Malaysian

secondary school. It is also worth noting that both Zainab Awang Ngah and B. K. Sen had played significant roles as executive editors of the journal under study.

7. Ranked List of Authors by Geographical Affiliation

On the whole 79 authors belonging to 10 countries contributed a total of 76 articles (Table 7). The study shows that 36 (45%) of the authors are geographically affiliated

Table 7: Ranked List of Authors by Geographical Affiliation

Rank	Country of Affiliation	No. of authors	Percent %
1	Malaysia	36	45
2	India	25	31.25
3	Bangladesh	9	11.25
4	United Kingdom	2	2.5
5	Taiwan	2	2.5
6	USA	1	1.25
6	Tanzania	1	1.25
6	Singapore	1	1.25
6	Botswana	1	1.25
6	Australia	1	1.25
6	Unknown	1	1.25
	Total	80	100.0

to Malaysia, followed by India with 25 (31.25%) and Bangladesh with 9 (11.25%) contributions. Two authors each are from the United Kingdom and Taiwan. USA, Tanzania, Singapore, Botswana and Australia all had one author each. One author's geographical affiliation cannot be ascertained because no affiliate status was given.

8. Ranked List of Authors by Institutional Affiliation

Table 8 presents the ranked list of authors by institutional affiliation. Institutional affiliation of authors is divided into five categories namely library school, academic

Table 8: Ranked List of Authors by Institutional Affiliation

Rank	Type of Institution	Frequency	Percent %
1	Library School	48	55.2
2	Others	28	31
3	Special Library	6	6.9
4	Academic Library	4	4.6
5	School Resource Centre	2	2.3
Total		88	100

library, special library, school library/school resource centre and others (nonlibrary). Library schools top the list with a total of 48 (55.2%) articles followed by others (31%), special library (6.9%), academic library (4.6%) and school resource centre (2.3%). One author's institutional affiliation cannot be determined because no affiliation was indicated.

(h) Ranking of Most Productive Institution

Table 9 presents the most prolific institution, which produces the most number of authors, which contributed articles to the journal under study. The most productive institution is none other than the institution that publishes the journal under study, namely Faculty of Computer Science and Information Technology, Universiti Malaya, Kuala Lumpur, Malaysia. The number of authors affiliated to this institution totaled 26. The next most prolific institution is National Institute of Science, Technology and Development Studies, India with 5 authors while in joint-third placing is Dept. of Library and Information Science, Dhaka University, Bangladesh and Dept. of Library and Information Science, International Islamic University, Malaysia with 4 authors each. One author's institutional affiliation cannot be ascertained.

Table 9: Rank List of Most Productive Institution

Rank	Institution	No. of Authors	Percent %	Cumulative Total %
1	Faculty of Computer Science and Information Technology, Universiti Malaya, Malaysia	26	29.9	29.9
2	National Institute of science, Technology and Development Studies, India	5	5.8	35.7
3	Dept. of Library and Information Science, Dhaka University, Bangladesh	4	4.6	40.3
3	Dept. of Library and Information Science, International Islamic University, Malaysia	4	4.6	44.9
5	Central Electrochemical Research Institute, India	3	3.4	48.3
5	Computer Science Department, Universiti Kebangsaan Malaysia, Malaysia	3	3.4	51.7
7	Library and Information Science Division, Bhabha Atomic Research Centre, India	2	2.3	54
7	Dept. of Library and Information Science, Andhra University, India	2	2.3	56.3
7	Dept. of Library and Information Science, Universiti Kebangsaan Malaysia, Malaysia	2	2.3	58.6
7	Universiti Malaya's Library, Malaysia	2	2.3	60.9
11	34 other institutions	34	39.1	100

10. Length of Articles (Pages)

Table 10 indicates the length of articles in term of pages. Out of a total of 76 articles, half (50%) of the articles are between 11-20 pages in length. Only 1 (1.3%) article has between 41-50 pages in length. The average length of an article is 41.2 pages.

Table 10: Length of Articles (Pages)

No. of pages per article	No. of articles	Percent %
1 –10	31	40.9
11 – 20	38	50.0
21 – 30	3	3.9
31 – 40	3	3.9
41 –50	1	1.3
Total	76	100

11. Ranked List by Subjects of Articles

Table 11 shows the ranked list by subject. The most popular subject covered within the period of this study is Scientific & Professional Publishing with 11 articles.

Table 11: Ranked List by Subjects of Articles

Rank	Subject	No. of Articles	Percent %
1	Scientific and Professional Publishing	11	14.5
2	Use/ Users of Channels/ Sources of Information	9	11.8
2	Other Aspects of LIS	9	11.8
3	Automated Information Retrieval	7	9.2
4	Electronic Publishing	6	7.9
5	Citation Patterns and Structures	5	6.6
6	Publishing and Book History	3	3.9
6	Analysis of LIS	3	3.9
7	Information Services	2	2.6
7	Bibliographic Database	2	2.6
7	Bibliography Science	2	2.6
7	Information Seeking Behavior	2	2.6
7	Library Buildings and Facilities	2	2.6
7	The Professions	2	2.6
8	User Education	1	1.3
8	Legal Issues	1	1.3
8	Information Management	1	1.3
8	Collection Information	1	1.3
8	Classification and Indexing	1	1.3
8	Non-bibliographic Databases	1	1.3
8	Cataloguing	1	1.3
8	Sources of Information	1	1.3
8	Study of Users	1	1.3
8	Use of Library & Information Services	1	1.3
8	Information Storage & Retrieval	1	1.3

On the other hand, Use/ Users of channels/ Sources of Information and Other Aspects of Library and Information Science were second with 9 (11.8%). Automated Information Retrieval is placed third with 7 (9.2%), Electronic Publishing is fourth with 6 (7.9%) and Citation Patterns and Structures is fifth with 5 (6.6%). The percentage of Publishing & Book History and Analysis of LIS was quite modest and they tied with 3 each (3.9%). Next, Information Services, Bibliographic Database, Bibliography Science, Information Seeking Behavior, Library Buildings and Facilities and The Professions had 2 each (2.6%). The rest, namely User Education, Legal Issues, Information Management, Collection Information, Classification and Indexing, Non-bibliographic Databases, Cataloguing, Sources of Information, Study of Users, Use of Library & Information Services, and Information Storage & Retrieval appeared to be the least popular with only one (1.3%) article respectively.

12. Author Self-citation

The frequency of author self-citation in the references of articles published in the journal under study is indicated in Table 12. Out of a total of 76 articles, 30 (39.5%) contained author's self-citation. This indicated that some of the contributors of the journal under study are quite productive and are continuously working towards contributing more articles to LIS journals of their choice.

Table 12: Author Self-citation

Author Self Citation	Frequency	Percent %
Yes	30	39.5
No	46	60.5
Total	76	100

13. Journal Self-citation

Table 13 shows the extent of journal self-citation during the period under study. It shows that out of 76 articles, 21 (27.6%) contained journal self-citation. The low percentage of journal self-citation is not surprising considering the relatively young age of the journal under study.

Table 13: Journal Self-citation

Journal Self-citation	Frequency	Percent %
Yes	21	27.6
No	55	72.4
Total	76	100

14. Acknowledgement in the Articles

A total of 25 articles out of the 76 published contained formal acknowledgement, whereas the remaining 51 contained no formal acknowledgement. In other words most of the articles published in the journal contained no formal acknowledgement.

Table 14: Acknowledgement in the Articles

Acknowledgement	Frequency	Percent %
Yes	25	32.9
No	51	67.1
Total	76	100

CONCLUSION

This paper attempts to identify the bibliometric characteristics of *MJLIS* articles. Conclusions drawn from this study are:
1. The range of articles published per volume during the period under study is between 14 and 17 with an average of 22.5 references per article and an average length of 41.2 pages.
2. During the period under study, out of a total of 76 articles, 53 (69.74%) are research orientated in nature.
3. The number of multi-authored papers is slightly higher at 52.6% or 40 papers out of a total of 76.
4. The top three leading contributors are affiliated to the faculty that published the journal under study. The most prolific author is Zainab Awang Ngah who contributed 12 articles.
5. Out of 80 authors who contributed a total of 76 articles, 36 (45%) are geographically affiliated to Malaysia.
6. Authors affiliated to library schools were well represented as 55.2% of the authors were affiliated to library schools.
7. The most popular subject covered within the period of this study is Scientific & Professional Publishing with 11 (14.5%) articles.
8. Out of a total of 76 articles, 30 (39.5%) contained author's self-citation, while 46 (60.5%) of the articles did not contain author's self-citation.
9. The rate of journal self-citation is found to be 27.6%.
10. Most of the articles (67.1%) published in the journal contained no formal acknowledgement.
11. There were inconsistencies in the citing of authors' names. For example, Zainab Awang Ngah and A. N. Zainab actually refer to the same author as the author

has the same e-mail address and institutional affiliation. However, this has been depicted as variant name in the electronic version of *MJLIS*. It was also found that names of certain authors were spelt wrongly, for example C. R. Karisiddippa or C. R. Karisiddappa. Apart from that, institutional affiliation of certain authors was missing, not provided or intentionally left out by authors. These inconsistencies may create problem when analysing data as more time and care had to be spent to examine these issues.

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Appendix A – The Classification Scheme

Major classes

1. The Professions
2. Library history
3. Publishing and Book History
4. Education in LIS
5. Methodology/Analysis of LIS
6. Library & information service activities
7. Information storage and retrieval
8. Information seeking
9. Scientific and professional communication
10. Other aspects of LIS
11. Other study

Subclasses

1. The Professions
2. Legal issues
3. Library history
4. Publishing and Book history
5. Electronic Publishing (added)
6. Education in LIS
7. Methodology /Analysis of LIS
8. Library & information service activities
9. Circulation or interlibrary loans
10. Collections information/reference services
11. User education
12. Library buildings and facilities/administration/planning
13. Library automation
14. Other LIS activities
15. Information storage and retrieval
16. Cataloguing
17. Classification and indexing
18. Information retrieval
19. Automated information retrieval (added)
20. Bibliographic databases or bibliographies
21. Other types of databases / Non-bibliographic databases
22. Information seeking
23. Dissemination of information

24. Use/users' of channels/sources of information
25. Use of L&I services
26. Information seeking behaviour
27. Study of users (added)
28. Use of library & information services
29. Information management
30. Scientific and professional communication
31. Scientific and professional publishing
32. Citation patterns and structures
33. Bibliography science
34. Other aspects
35. Other aspects of LIS
36. Other study