

PERFORMANCE OF MALAYSIAN JOURNALS IN *MyCite*: 2013

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Performance of Malaysian Journals in *MyCite*: 2013

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PREFACE

As part of the Malaysian Citation Centre (MCC) assessment exercise, a bibliometrics analysis of Malaysian scholarly publications was conducted in 2014 to produce the second report of Malaysian journals performance. The data reported here are as at October 2014 and were compiled solely from *MyJurnal* and *MyCite* databases. The analysis was based on the journals that are fully indexed from the years 2008 to 2013 by the MCC, currently based at the Department of Higher Education, Ministry of Education, Malaysia.

This report applies the bibliometric method and uses datasets which comprise articles published in 129 Malaysian journals and citations to the 22,926 articles published in these journals. The performance indicators include journals publication productivity, the citations they garner, and their scores on other bibliometric indices such as journal impact factor (IF), h-index, cited half-life and immediacy index. This datasets are used to evaluate publication productivity and impact to highlight research disciplines, persons and institutions of excellence.

The main difference of this report from the first (2012) is the reporting of international collaboration which covers foreign authors contributing to Malaysian journals, university-international collaboration, and international collaboration by journals and fields of studies. Those journals that indicate more than 40.0% of foreign collaboration, which reflect good degree of regional or international significance, are mainly indexed in international databases i.e. *Scopus* and *Web of Science*.

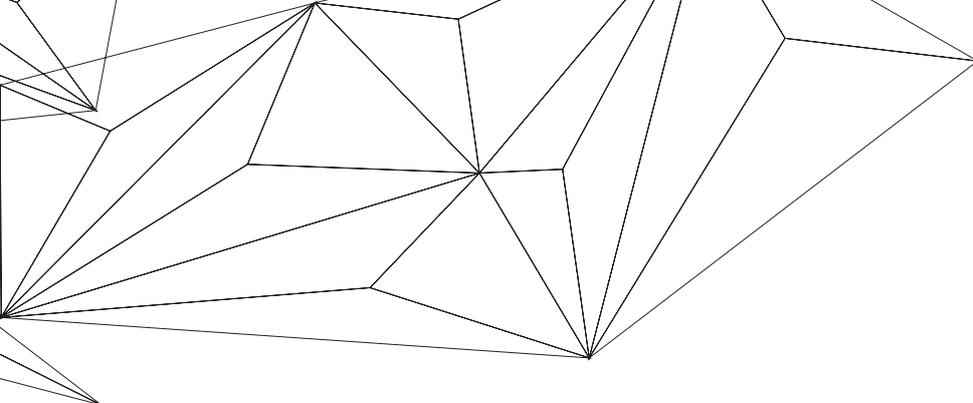
This report is useful for the government or funding agencies as they indicate journals that performed well in the country. Identifying the strengths and weaknesses of journals will help the editors and publishers to improve the quality and visibility of Malaysian journals and strategize to bring their journal to the international level of indexation.

This report is certainly limited by its coverage of only scholarly journals published in Malaysia, which are indexed by the centre. We acknowledge that such indicators are not the direct measure of journal quality but we consider it as a reflection of productivity and impact evidenced by data retrieved from a national citation database initiated by the Ministry of Education, Malaysia.

Head of MCC
Ministry of Education Malaysia

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EXECUTIVE SUMMARY

MyCite as a national citation database. The Malaysian Citation Centre (MCC), Ministry of Education established *MyCite*, a Malaysian citation indexing system in 2011. MCC's task was to control the bibliographic and citation information about Malaysian journals and where ever possible provide access to all journals' contents on the Web through its journal hosting management system, *MyJurnal*, also established in 2011. *MyJurnal* assumes the role of a backup system for Malaysian journals so that information about their contents could be searched and accessed on a single platform. *MyCite* extracts data from *MyJurnal* to report the performance of the journals indexed. This report focuses on the performance of Malaysian scholarly journals in 2013, highlighting journals publication productivity, the citations they garner, and their scores on other bibliometric indices such as journal impact factor (IF), h-index, cited half-life and immediacy index. *MyCite* was officially launched in 2012 and is the youngest citation database in the Asia-Pacific region, compared to China, which established their *Chinese Science Citation Database* as early as 1989 and the *Chinese Social Science Database* in 1997. Taiwan too saw the importance of controlling their scientific bibliographic information as they started their *Taiwan Science Citation Index* in 1996 and followed by their humanities and social sciences citation databases in 1999. Thailand started their *Thai Journal Citation Index* in 2001. This report hopes to improve the publication quality of scholarly journals in Malaysia, as publishers are made aware of their journal's national impact in terms of productivity and citation. The information provided by *MyCite* and *MyJurnal* could be used by future bibliometric researchers to assess the performance between journals in the various subject fields or device new algorithm to take into account international and national indices to measure the true impact of Malaysian journals.

Malaysian journal performance in the Web of Science and Scopus. The number of Malaysian journals indexed in the *Web of Science (WoS)* is 12 and this number has not changed since the 2012 report. The most improved performance is indicated by the *Bulletin of the Malaysian Mathematical Sciences Society (BMMSS)*, published jointly by the Malaysian Mathematical Sciences Society and Universiti Sains Malaysia. *BMMSS* performed very well in the field of mathematics with an impact factor (IF) of 0.854, ranking 65 out of 299 titles in this subject category and listed as quartile 1. The journals that gain indexation status in *WoS* exhibit certain characteristics, such as they are mainly published by professional or academic societies or government research institutions; they remain current in publishing their issues over the latest five years or longer; they are accessible both in print and on the Web and show impact in their respective fields through citation counts. The journals that have longevity such as *Journal of Rubber Research*, *Journal of Oil Palm Research*, and *Journal of Tropical Forest Sciences* have long publication history evidenced by the high cited half-life counts of 10.0, 8.4 and 7.7 respectively.

There is an improvement in the number of journal titles covered in *Scopus* from 53 titles in 2011 to 76 titles in 2013. The journals in the arts, humanities and social sciences (AHSS) are performing better, with for example *3L: Language, Linguistic, Literature and GEMA Online® Journal of Language Studies* (both published by Universiti Kebangsaan Malaysia) are listed as quartile 1 in the subject category literature and literary theory. The title *International Journal of China Studies* published by University of Malaya has also attained quartile 1 in the subject category of cultural studies. Overall a total of 12 (15.8%) out of the 76 Malaysian titles listed achieved listing as quartile 1 or/and 2 in the various subject categories in *Scopus*. The universities publish the majority of the Malaysian journals indexed in *Scopus* (51 titles, 67.1%). In *Scopus* impact is measured by the SCImago Journal Ranking (SJR). Overall, Malaysian journals do not perform very well on their impact scores as indicated by their SJR index (all below 1.0) indicating comparatively low citations. *Bulletin of the Malaysian Mathematical Sciences Society* attain the highest SJR score of 0.582. Those journals that attain SJR score of above 0.4 are *Tropical Biomedicine* (0.491) published by Malaysian Society of Parasitology and Tropical Medicine, *International Journal of Mechanical and Materials Engineering* (0.443), published by University of Malaya and *International Journal of Automotive and Mechanical Engineering* (0.406), published by Universiti Malaysia Pahang.

Journals indexed by MyCite. By the end of 2013, a total of 294 titles have been covered in *MyJournal*. However, the performance of some titles cannot be reported due to the failure of these journals to meet *MyCite* journal selection criteria, especially due to timeliness and availability/accessibility factor. Out of 294 journal titles, a total of 129 (43.9%) journals have been completely covered from 2008 to 2013. These 129 journals have begun to show their performance in *MyCite*. Many of these journals are still published in either print format or in hybrid print/electronic. Only 12 (9.3%) journals have gone fully electronic. The majority of these journals are published in the English language, or in both English and Malay language. Only three journals are fully published in the Malay language. Based on publication frequency, most journals are either published biannually or annually. Only one journal (i.e. *Sains Malaysiana*) is published 12 times per year. There are more titles published in the AHSS (71, 55.0%) successful in getting indexation status in *MyCite*, compared to the Science, Technology and Medicine (STM) disciplines (58, 45.0%). The majority of the journals indexed are published by public higher educational institutions (98, 76.0%), and this indicates that the universities are the main publishers followed by professional societies and government agencies.

Journal performance on h-index in MyCite. Out of the 129 journal titles indexed in *MyCite*, six titles obtained h-index score of 4 and above, 18 titles with h-index of 3, 38 titles with h-index of 2, 55 titles with h-index of 1 and 12 titles do not score any h-index. Out of the six with good h-index, *GEMA Online@ Journal of Language Studies* published by Universiti Kebangsaan Malaysia scores the highest h-index of 6. The three titles which score h-index of 5 include, *International Food Research Journal* published by Universiti Putra Malaysia, *Tropical Biomedicine* published by the *Malaysian Society of Parasitology and Tropical Medicine*, and *Medical Journal of Malaysia* published by the Malaysian Medical Association. Two titles scored an h-index of 4 comprising *Malaysian Journal of Medical Sciences* published by Universiti Sains Malaysia and *Malaysian Journal of Library & Information Science* published by University of Malaya. The calculation of h-index takes into account both the productivity and citations received by journals and is not bound by length of year span. The total articles published in a journal helps to improve h-index score as citation possibility increases. However, increasing publication of articles per issue must be adopted with caution as this would have an effect on journal IF scores.

Impact of Malaysian journals in MyCite. The yearly IF measures the average number of times articles published in the past 2-year window that have been cited in 2013. A total of 70 titles (54.0%) attain yearly IF scores, while the rest 59 titles do not acquire any score. The IF of the 70 titles are low (below 1.0). *GEMA Online@ Journal of Language Studies* published by Universiti Kebangsaan Malaysia attained the highest IF score of 0.406. It is observed that journals in the AHSS benefit from being indexed in *MyCite*, as most of the journals in this discipline find difficulties in getting indexed by universal citation database such as *WoS* and *Scopus*. For example, two journals in the top 5 journal ranked by IF scores are *JATI: Journal of Southeast Asian Studies* (IF:0.333) published by University of Malaya, and *Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)* (IF:0.314) published by Universiti Kebangsaan Malaysia. Both journals are not indexed in *Scopus* but *MyCite* indicates they have national significance or impact in the Malaysian context. Also, more titles in the AHSS discipline are not available on the Web and *MyCite* provides accessibility and therefore visibility. The citing behaviour of Malaysian authors also resulted in low citation scores. Malaysian authors seldom cite articles published in other Malaysian journals. This may be due to lack of accessibility to the contents of local journals over the Web. However, this situation is changing and citing of Malaysian articles is expected to increase in future. The Malaysian journals which are indexed in *WoS* and/or *Scopus* may not rank high in the yearly IF list. This situation arise when Malaysian journals begin to receive more citations from articles published in foreign journals.

Impact of Malaysian journals in the STM and AHSS disciplines in MyCite. There are 58 journal titles in the STM fields and only 35 (60.3%) titles attain yearly IF scores. However, more titles (46, 79.3%) attain 5-year IF scores, indicating that citations are received over a longer period of time. The journal with the highest yearly IF score is *Malaysian Journal of Civil Engineering* published by Universiti Teknologi Malaysia with a yearly IF of 0.370 and an h-index of 2. This journal is not indexed in either *WoS* or *Scopus* but

performs well in *MyCite*, indicating its national impact within Malaysia. For a journal that is covered by both *WoS* or *Scopus* such as *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS) published by the Malaysian Mathematical Sciences Society and Universiti Sains Malaysia, performs equally well in *MyCite* (IF 0.255) as well as in *WoS* (quartile 1) and *Scopus* (quartile 1, 2). This indicates that this journal has made an impact both in the Asia-Pacific region and nationally. It is also a good example where a university publisher recognises its potential and help support its publication, which is both in print and on the Web. It is also observed the effect on a journal's IF when it publishes too many articles per issue. For example *International Food Research Journal* published by Universiti Putra Malaysia indicates receiving citations in their 2-year and 5-year windows but the IF it obtains is only 0.101. The impact of this journal is reduced when the total number of articles published is too large, which in this case 666 titles in the 5-year period and 447 in the 2-year period. This situation indicates that publishing higher number of articles does not guarantee increase in citation. However, it does help to boost its h-index score, which in *MyCite* is 5.

It is observed that out of the 71 journals in the AHSS, 35 titles show yearly IF and 45 titles attain 5-year IF in *MyCite*. *GEMA Online® Journal of Language Studies* published by Universiti Kebangsaan Malaysia attained the highest IF score of 0.406 and an h-index of 6. The IF score received by *GEMA* may be offset by the large number of articles it published, 101 and 145 in the 2-year and 5-year period respectively. Again, in this situation the number of articles published need to be controlled and perhaps the journal focuses only on 'hot' topics in the language studies field. *GEMA* performs well in *Scopus* attaining an SJR score of 0.352 and an h-index of 7, indicating that this journal has impact in the Asia-Pacific region and more so in Malaysia. It is observed that some Malaysian journals not covered by either *WoS* or *Scopus* indicate they have impact at the national level. For example, *JATI: Journal of Southeast Asian Studies* published by the University of Malaya and *Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)* published by Universiti Kebangsaan Malaysia are not indexed by *Scopus*, but attain IF scores of 0.333 and 0.314 respectively in 2013. These journals are ranked second and third among journals ranked by IF in the AHSS fields in *MyCite*. This shows that both journals have attained national impact and are important channels for publishing research results in the respective fields. The Malaysian journals in the AHSS have benefited from being indexed in *MyCite* and having coverage in *MyJournal* as they can gauge their performance in terms of productivity and impact.

Foreign authors contribution to Malaysian journals in *MyCite*. A total of 82,646 authors contribute to the 129 scholarly journals covered in 2013 and among this figure 61,696 are Malaysians. A total of 20,950 (25.3%) foreign authors contribute articles to Malaysian journals, out of which the highest number come from the Asian region (14,103 authors). From Asia the highest number of authors are from India (4,263), Iran (1,453), Indonesia (1,426), Thailand (1,267), China (849) and Japan (797). The rest of Asian authors come from 36 other countries. After Asia, the next highest number of authors come from the African continent (2,106) and the biggest contributing country is Nigeria (962 authors). The third highest contributing authors come from Europe (2,083 authors) with the biggest number comes from the United Kingdom (979), followed by France (162), Germany (130), Italy (116), Spain (91), Netherlands (88) and Belgium (71). Oceania region contributes 1,243 authors with the highest number of authors from Australia (1,036). A total of 1,415 authors come from the Americana region, with the biggest number from the United States (727) and Brazil (236). Some Malaysian journals have attained international status evidenced by the larger number of foreign authors submitting their articles for publication. This is true for Malaysian journals that have gained indexation in *WoS* and/or *Scopus*, where because of the emphasis on quality articles result in the marginalisation of Malaysian contributions.

Citedness and uncitedness of Malaysian articles in *MyCite*. Journal articles which received high citations were published in Malaysian journals with relatively high or moderate impact factor in *MyCite*, as well as indexed in *Scopus*. This finding confirms that an article that has a good impact at the national level is also cited well at the international level. Two articles received the highest citation in STM field and were published in the *International Food Research Journal* and *Malaysian Journal of Medical Sciences*, with a

citation count of 10 respectively. The article with the highest citation in AHSS field was published in *GEMA Online® Journal of Language Studies*, the journal which has performed the best in *MyCite* 2013 in terms of yearly IF and h-index. This article received a citation count of 16. This situation confirms that articles in the AHSS receive higher citations compare to articles in the STM, indicating higher national impact.

Out of the total 20,970 articles that are published in the 129 journals indexed in *MyCite* 18,860 (89.9%) receive no citations. The field of arts and humanities has the lowest percentage of uncited papers (86.1%), slightly below the overall percentage for total uncited articles, which is 89.9%. This situation again confirms that articles in the AHSS in *MyCite* receive higher citations compare to articles in the STM, indicating their higher national impact. This is interesting as other studies using the Thomson Reuters citation database found the reverse, that is the proportion of uncited papers is larger in the AHSS fields. The phenomenon of uncitedness may also be country dependent. In the Malaysian context, there is a real need to find out the percentage of uncitedness at the article and field levels to discover age effect on uncitedness using data from universal as well national citation databases. There is also a need to study the citation behaviour of authors publishing in Malaysian journals, which may reveal the reasons for uncitedness. Issues such as discipline behaviour, the length of citation windows, the size of journals available in a particular field, the length and age of references used and the keywords used by authors needed to be factored to understand cited and uncitedness of articles published in Malaysian journals.

International collaboration indicated by country affiliations in *MyCite*. Collaboration is measured from the country affiliation of co-authorship of articles. The top 20 institutions that indulge in international collaboration as indicated by country affiliation information are extracted from articles published in Malaysian journals that are indexed in *MyCite*. Malaysian public universities publish collaboratively with a total of 85 countries worldwide, while 13 countries indicated 30 or more collaboration. Malaysian universities collaborate most with the United Kingdom (307), followed by Indonesia (225), Japan (174), Australia (156), United States (110), Iran (94), India (85), Bangladesh (58), Saudi Arabia (53), New Zealand (35), Singapore and Thailand (34 each) and Iraq (30). The 5 research universities indicate to be active collaborators with Universiti Kebangsaan Malaysia topping the list in terms of total collaborative works. Among the research universities in Malaysia that show active international collaboration, University of Malaya collaborated with 53 countries, followed by Universiti Putra Malaysia (45 countries), Universiti Kebangsaan Malaysia and Universiti Sains Malaysia (40 countries respectively). University of Malaya indicates collaborating with authors mainly from the United Kingdom, Japan and India. More than one third (22, 41.5%) of countries are one-time contributors (1 article).

Internationalization status of journals in *MyCite*. Through broad differentiation between the Malaysian and foreign country affiliation of authors publishing in Malaysian journals it is possible to observe the degree of internationalization of journal titles. The term international refers to a situation where the geographical distribution of articles published, reflect an international or regional dimension. An international journal would reflect an entity comprising internationally contributed articles, which in turn are expected to be internationally or regionally consumed and cited. The analysis should answer the question, where does most of the intellectual output published in journals come from? In the context of this report the journals, which publish 40.0% or more of articles with foreign country affiliations is regarded as reflecting some degree of regional or international significance. In summary, among the 129 Malaysian journals indexed in *MyCite* there are fairly equal distributions of active, fair active and less active foreign country contributions. A total of 36 titles (28.0%) show a range of 40.0 to 89.0% active foreign country contributions, followed by 46 titles (35.7%) with foreign country contributions of 20.0 to 39.0%, and 26 titles (20.2%) with 10.0 to 19.0% foreign country contributions. The journals that have high percentage of foreign country contributions show evidence of internationalization in terms of their content. Universal citation databases require evidence of the international or regional standing of a journal and the data from *MyCite*, can be used by journal editors to backup requests for indexation.

2.0 • INTRODUCTION

This section introduces the following issues: the need for citation databases as a repository to obtain data that a country can use to assess its published research performance; the growth of citation databases in Asia-Pacific countries; the use of citation data to assess research performance at country levels; and the growth of bibliometric-based studies emanating from Malaysia using universal citation databases as well as *MyCite*.

2.1 The Need for Citation Databases for Evidence-Based Research Performance

A country would find that it is useful to know and control information about scholarly publications that it produces in order to gauge research performance and identify strengths and gaps. The onus of keeping such information must surely fall upon the shoulder of an agency in a country. This is because an international agency or database would not be able to or may be less interested in such information. International citation databases such as the *Web of Science (WoS)* (owned by Thomson Reuters) and *Scopus* (owned by Elsevier) control information on scholarly publications and citations through their indexing databases. However, their focus is on scholarly publications that are published in selective journals deemed to be of international quality measured by their own derived indices. The information that these two databases produce has fed the explosion of university rankings, and in particular international rankings such as the Shanghai Jiao Tong's *Academic Ranking of World Universities* and *Times Higher Education's World University Ranking* (both using WoS data), as well as the QS (Quacquarelli Symonds) *World University Ranking* (using Scopus data).

An identified national agency therefore, should and could cover the rest of research publications published in national journals and this is the purpose of the Malaysian Citation Centre (MCC) established by the Ministry of Higher Education in 2011. Why is this necessary? This effort would provide information about research publications published in all Malaysian journals, those covered by *WoS* and *Scopus* and those, which are not. In other words, it should establish an information pool of the nation's published research heritage found in journals financed by public funding and making them visible as well as accessible to both national and international global research community. This effort provides an opportunity for their contents to stand alongside other accessible publications to be used and referenced. Also, from the information collated, it would be possible to report the national publication productivity and impact of Malaysian journals measured in terms of accepted international indices. MCC does this by indexing Malaysian journals through its *MyJournal* database (www.myjournal.my) and reporting the journals and publication performances in its *MyCite* database (www.mycite.my), both established in 2011.

2.2 The Growth of Citation Databases in Asia-Pacific Countries

The effort to capture information about published research at domestic level through citation databases is recent in Malaysia but has been widespread in other Asian countries. In Thailand, the *Thai Journal Citation Index (TCI 2005)*, available at www.kmutt.ac.th/jif was developed by King Mongkut University in 2001 and provides a referral indexing and abstracting service as well as yearly bibliometrics report on the performance of Thai journals (Sombatsompop et al. 2012). To make Chinese scholarly journals more visible, the Chinese Academy of Sciences published *Chinese Science Citation Database (CSCD)* in 1989 (Meng 1995), which indexed over 1,100 top science and technology journals published in China (*Chinese Social Sciences Citation Index*, 1989 – Current). The database contains about 2 million records with 200,000 source items added each year. Presently, the Chinese Academy of Sciences has successfully partnered with Thomson Reuters to host this database on its *ISI Web of Knowledge* platform (available at thomson-reuters.com/chinese-science-citation-database). Another venture is the *Chinese Social Sciences Citation Index (CSSCI)* (available at cssci.nju.edu.cn), which was developed in 1997 and made available online in 2000 by the Chinese Social Sciences Research Evaluation Centre, Nanjing University and Hong Kong University of Science and Technology. The database covers over 60,000 articles published in 496 Chinese language scholarly journals in the social sciences (*Chinese Social Sciences Citation Index*, 1998 - 2012; Su, Han and Han 2001; Sun, Deng and Shen 2012). This is also a referral database. Both the CSCD and CSSCI are available on subscription. Because of the large pool of Chinese journals covered, this database has become economically viable to sustain and maintain. Taiwan is also moving towards de-isolating Taiwanese scholarly journals. In 1996 the National Science Council of Taiwan produced *Taiwan Science Citation Index* and in 1999 two more indexes were produced, *Taiwan Social Science Citation Index* (available at terms.naer.edu.tw/detail/1678889/) by the National Academy for Education Research and *Taiwan Humanities Citation*

Index by the Centre for Humanities Research of the National Science Council of the Republic of China (*Taiwan Humanities Citation Index* 2014; *Taiwan Social Science Citation Index* 2012). Both indexes provide reference information as well as yearly citation reports for Taiwanese journals (Chui 1998; Chen 2004 2012). In early 2014, it was announced that these two Taiwan citation databases will be the basis for the new Taiwan Citation Database: Humanities and Social Sciences, which will cover 2,000 humanities and social sciences journals published in Taiwan, Hong Kong and Macao. Another discipline-specific citation database initiative is the *Taiwan Medicinal and Life Science Citation Index* (TpubMed) covering over 112 medical related journal titles (Guo and Hung 2008). In Korea, the National Research Foundation of Korea is responsible for the *Korean Citation Index* (available at www.kci.go.kr) (Choi 2012), which currently indexes 1,048,620 articles derived from 4,874 Korean journals. In 2001, the Korean Academy of Medical Sciences initiated the *Korean Medical Citation Index* (KoMCI). This index covers over 110 Korean medical journals and the online portal has been made available at www.komci.org since 2011. The citation database for Japanese papers is an initiative by the National Institute of Informatics, Japan in 1995 (Negishi et al. 2004). The online service was released in 2000 providing access to over 15 million papers (4 million of which is full texts) from 2,939 Japanese journals (Su 2012). In India, the multi disciplinary *Indian Citation Index* (ICI) (available at www.indiancitationindex.com) is a commercial venture by a registered society named "The Knowledge Foundation". The ICI index covers over 410,449 articles from more about 873 scholarly journals of Indian origin (Bhushan and Lal 1991; ICI: *Indian Citation Index*, 2010). The ICI database also produces other by-products namely *Indian Science Citation Index* (ISCI), *Indian Social Science and Humanities Citation Index* (ISSHCI), *Indian Journals Citation Reports* (IJCR), *Indian Science and Technology Abstracts* (ISTA), and *Directory of Indian Journals* (DOIJ).

Besides these initiatives, a total of 57 Islamic countries, which are members of the Organisation of Islamic Cooperation (OIC) have agreed to the setting up of an *Islamic World Science Citation Centre*. The centre is based in Shiraz, Iran and funded by OIC and the Iranian Ministry of Science, Research and Technology. All member countries are expected to contribute their national journals to the centre to be indexed, and the centre is expected to provide indexing and abstracting services as well as access to full text of documents and produce citation reports for its member countries (*Islamic World Science Citation Centre* 2011). In Indonesia, a conference paper describes the development of an *Indonesian electronic citation system* (Sari and Kurniawan 2010). In Malaysia, the proposal for the setting up of a Malaysian abstracting and indexing system was first mooted at a publishers' conference in 2006 (Zainab 2006). The Ministry of Higher Education, Malaysia eventually saw to the approval of the setting up of a Malaysian Citation Centre (MCC), which is responsible for the national citation index system *MyCite* (Zainab et al. 2012a; Zainab, Abrizah and Raj 2013). In 2012, MCC released its first report which informs about the status and performance of 112 Malaysian journals indexed in *MyCite* (Malaysian Citation Centre 2013). Currently *MyCite* indexes 22,926 articles and reports on the performance of 129 journals. Similar to all the citation databases, *MyCite* uses international bibliometric indicators and indices to report on the journals performance and this will be explained under the methodology section.

2.3 The Use of Citation Data to Assess Research Performance at Country Levels

Using citation information to report on the scientific performance at the country level has been widely practiced. In Europe, Schneider (2010) reported the research performance of the Nordic countries (Sweden, Norway, Finland and Iceland). The data used covered a period of 20 years (1989 to 2008) and was derived from the Thomson Reuters' citation databases. Sweden contributed the largest publication output when publication output is measured per 1000 population and Norway and Iceland showed significantly higher relative growth in publication output in the last 5 recent years under study. In terms of field strength, Denmark and Sweden showed similar growth in clinical medicine and biomedical research, while Norway and Iceland performed better in geoscience, biology and agricultural research. In 2013, the European Commission reported on the strength and weaknesses of United Kingdom's research and innovation systems compared to other European Union (EU) countries (*Research and innovation performance in United Kingdom* 2013).

Evidence Ltd (an arm of Thomson Reuters) puts forward the use of bibliometric indices to measure United Kingdom's research quality of publications published in 2007 (Evidence 2007). Evidence published another report in 2009, highlighting United Kingdom's good performance in fields such as mathematics and the physical sciences, where the citations ranked amongst the best worldwide but was less dominant globally in the biomedical sciences (Evidence 2009). Schmoch et al. (2011) reported on the performance and structures of the German Science system, especially of public non-university research institutions. Even though publication output increased from 7.0% in 1990 to 8.2% in 2000, there was a decrease in Germany's world share of scientific output. The report observed the rapid growth from emerging countries such as China, India, South Korea, Brazil and Taiwan. Semeniuk (2014) discussed Canadian researchers' performance in *Globe and Mail*, a nationally distributed Canadian newspaper. The discussion was based on a report published by Thomson Reuters (*The world's most influential scientific minds: 2014*, 2014) and highlighted that Canada has 89 names on the list and its scientific researchers ranked 7th when researchers are listed by country based on total citations per million population. This report has also named three Malaysian-based authors¹ among the world's leading scientific minds who have earned their distinction by publishing the highest number of papers that were most frequently cited by their peers.

In the African continent, Bouabid and Martin (2009) evaluated Moroccan research performance using bibliometric-based approach and focused on publications published between 1997 and 2006 as well as compared Moroccan performance with other neighboring countries such as South Africa, Algeria, Portugal and Greece. Hammouti (2010) evaluated scientific production in Maghreb countries using the *Scopus* database and found that Tunisia produced higher number of publications compared to Morocco and Algeria. Jacobs (2001) evaluated the publication patterns of scientists from 10 universities in South Africa using publications published between 1992 and 1996 and found direct relationship between status and publication productivity, between institutional funding and productivity, and productivity between areas of sciences.

Among the Asian countries, Saudi Arabia commissioned a report on its research performance in 2012 (*Research performance indicators report, KACST2012*). The report used data published by Thomson Reuters and focused on publication and citation activity of research institutions in Saudi Arabia. The report shows that the rate of growth in Saudi Arabia's publication output compared to other gulf countries has doubled between 2009 and 2011. Saudi Arabia produced less than 2.0% of the world's output in 2000, which increased to 5.0% by 2011. A number of studies has focused and highlighted on China's impressive publication performances (Moed 2002; Evidence 2011). Liang (2003) evaluated China's research performance as reported both in *WoS* and Chinese domestic databases. Liang found that Chinese papers indexed in the Science Citation Index (SCI) were more sensitive as an indicator compared to papers in the domestic databases. However, the role of domestic databases as a reflection of performance in research evaluation was equally viable in showing national contributions as China's publications in national journals are more comprehensively covered in the Chinese citation database (estimated about 95.0% of Chinese scientific papers). A more recent study (Fu and Ho 2013) compared China's publication output with output from 7 other major industrialized countries (Canada, France, Japan, Germany, Italy, United Kingdom and the United States). The study highlighted China's drastic growth in contributions, which was second to the United States since 2006, and was highly active in fields such as chemistry and physics. Glanzel and Gupta (2008) reported on the research performance of India. This study looked at India's publication activity between 1991 and 2006 and made comparisons with countries such as Korea, Russia, Brazil, Taiwan and Turkey. Glanzel, Debackere and Meyer (2008) reported on the dynamic emergence of five countries such as China, Korea, Taiwan, Brazil and Turkey as mirrored by bibliometric indicators. Evidence (2010) published a report on India's research output and international collaboration. The report studied papers published by Indian researchers over 27-year period (1981 to 2008) and found that although funding for research has increased over the years, India ranked 7th in world output of total papers, and 10th in citation impact. India collaborated actively with the scientists in the United States, Germany and the United Kingdom.

¹Ahmad, Abdul Latif (Universiti Sains Malaysia); Hashim, Ishak (Universiti Kebangsaan Malaysia); and Saidur, Rahman (University of Malaya).

The bibliometrics studies and reports highlighted in the earlier paragraphs indicate the need for Malaysians to have access to publication and citation data that can only be provided by both international citation databases such as the *WoS* and *Scopus* or country-based citation databases. In 2012, the Malaysian Science and Technology Information Centre (MASTIC) reported on Malaysia's knowledge production and knowledge impact in the fields of science, technology and social sciences based on data retrieved from the *Science Citation Index Expanded*, *Social Science Citation Index* and *Essential Science Indicators* for the period 2001 to 2011 (MASTIC, 2012), spanning a period of 11 years and covered the 8 and 9 Malaysia Plans. The report highlighted Malaysia's research productivity and citations by fields and institutions and made comparisons with other 147 countries. In 2012 the Malaysian Citation Centre (MCC) published a report on Malaysian scientific performance in *WoS* based on the data retrieved for the period 2001 to 2010 (Malaysian Citation Centre 2012). The report highlighted total publications and citations by broad fields of studies and indicated higher performances by research designated public universities. However, these reports do not truly reflect the total research publication output produced by researchers in Malaysia as like the case in most developing countries, most publications would be channelled through national journals. In the context of Malaysia, the data provided by *MyCite*, through the journal hosting system *MyJournal*, has made it possible for MCC, the coordinating body responsible for citation indexing of Malaysian journals, to publish its first report describing the Malaysian journal productivity and citation performance as well as authors and institutions that are active in contributing to Malaysian journals (Malaysian Citation Centre 2013). Some of the journals covered by the report are also indexed in *WoS* and/or *Scopus*, and their performance in these two databases is also made known.

2.4 The Growth of Bibliometrics Studies Emanating from Malaysia

The subject of measuring research performance using bibliometric methods is increasingly active over the last 10 years in Malaysia. A keyword search in the *WoS* database for "bibliometric" AND "Malaysia" and focusing only on journal articles revealed 21 articles with 56 total citations received, indicating an average of 2.67 citation per article. The field of Malaysian bibliometrics achieve a h-index of 4. Appendix 1 lists the articles on bibliometrics and Malaysia listed in *WoS* and their total citations. The diversity of coverage by the articles indicated the growth of bibliometrics studies in Malaysia, which found coverage in various *WoS* indexed journals. The list indicate that the *Malaysian Journal of Library & Information Science (MJLIS)* (indexed in the *Social Science Citation Index* database in *WoS* since 2007) is the main publisher (10 articles), besides other journals such as *Scientometrics* (4), *Aslib Proceedings* (2), and *Learned Publishing, International Forum on Information and Documentation, Journal of the Palm Oil Research, Program: Electronic Library and Information Systems, and Health Information and Libraries Journal* (1 each). A search in *MyCite* database for bibliometrics articles produced 78 articles (Appendix 2). There is more coverage on bibliometrics by MJLIS because of its complete indexation by *MyCite* (from 1998 to 2014). This shows that the main channel that communicates bibliometrics studies in Malaysia is the *Malaysian Journal of Library & Information Science* published by the Department of Library and Information Science, University of Malaya. This journal is also increasingly being used by foreign-based authors to publish their bibliometrics articles.

The scholarly journals publication system in Malaysia is plagued by many problems and the establishment of the MCC by the Ministry of Education is helping to improve the situation of "knowing" about the publication productivity of these journals. By collating publishing information in *MyJournal*, a journal publishing platform for Malaysian scholarly journals, it has been possible to harness and collate data on journals performances and report them in *MyCite*, the citation indexing system for *MyJournal*. This report will describe the performance of Malaysian journals based on publication and citation counts calculated from papers completely indexed for the past six years (from 2008 to 2013) in *MyCite*. This report aims to encourage Malaysian journal publishers to sustain and provide their publication information to MCC in order for their performances to be reported in both *MyJournal* and *MyCite*. This effort will ultimately improves the journals' accessibility and visibility as well as increases their use and citability.

3.0 • OBJECTIVES AND METHOD

This section presents the objectives of the report and details the bibliometrics method used in the study. Bibliometrics and scientometrics are a set of methods for measuring the production and dissemination of scientific knowledge. Derek de Solla Price and Vasilij Vasilevich Nalimov were the originators of the method, which they developed for the purpose of providing research tools to historians and sociologists of science. However, it was only with the advent of the tools developed by the Institute for Scientific Information (known as Thomson ISI and now is part of the Intellectual Property & Science business of Thomson Reuters) and the research conducted by its founder, Eugene Garfield, that the use of bibliometrics became widespread. The method grew out of the sociology of science, information science and library science, but it quickly carved out a place for itself in quantitative research evaluation.

3.1 Objectives

Using bibliometric indicators that are primarily based on counts of scientific papers and citations to papers will help the Ministry of Education to assess the contributions made by Malaysian-based scholarly journals, the researchers and their institutions to the nation science in particular fields. The objectives of this report are as follows:

- a) To show the performance of Malaysian journals for 2013 at the national and international level. The performance at the international level is gauged through the global citation databases, *Web of Science* and *Scopus*. The performance at the national level is gauged through *MyCite*, which aims to cover all scholarly journals published by Malaysian institutions and agencies.
- b) To provide the list of Malaysian journals indexed in *MyCite* together with their publication characteristics, with listings by broad fields and types of publishers.
- c) To show the performances of the Malaysian journals completely indexed in *MyCite* for the period of 2008 to 2013 (five-year citation window). The units of measures used are total publications and total citations in 2-year and 5-year windows, journal impact factor (IF) and 5-year IF, immediacy index, cited half-life and h-index.
- d) To show the top 20 authors who are active in contributing to Malaysian journals ranked based on productivity and impact.
- e) To show the top 50 institutions ranked by total publications.
- f) To show the top countries contributing to Malaysian journals.
- g) To show institutional and country collaboration as indicated contributions from collaborating authors.
- h) To examine the uncitedness of the Malaysian scientific contribution indexed by *MyCite* based on journals and disciplines.
- i) To provide information about the internationalization status of Malaysian journals.

3.2 Method

This report applies the bibliometric method and uses datasets, which comprises articles published in Malaysian journals and citations to the articles. Malaysian journals refer to the entire body of journal published by a Malaysian based institutions or agencies. As a result journals that are covered by international or regional associations and societies, whose editorial are temporarily based in Malaysia, are excluded.¹

This datasets will be used to evaluate publication productivity and impact. Journal article is the normal output of the research process and is a universal activity. Bibliometrics injects objectivity and confidence in the evaluation process as it is based on the articles published and their citations. This method traces relationships between papers and the citations they receive. Publications accumulate citation counts when, they are referenced by other articles. The citations received put a value on a work by later researchers. The article and citation count can be bounded to the article, the author, the institution the author belongs to, and the journal he publishes in. It is the norm that some publications get cited frequently and many remain uncited. Articles that are frequently cited have often been regarded as showing greater significance and impact. Studies have indicated that higher citation rates are correlated with other evaluates of research performances such as peer reviews. This is especially so in the science, technology and medical fields.

¹*Asia-Pacific Journal of Public Health* (published at the University of Malaya by Sage for the Asia-Pacific Academic Consortium for Public Health), *Asian Myrmecology* (published at the Universiti Malaysia Sabah for the International Network for the Study of Asian Ants) and *Neurology Asia* (published at the University of Malaya Medical Centre for the Asean Neurological Association).

Productivity and citation data are used with caution as the speed of the publication process (from submission to publication) vary between fields. Citation accumulates over time and a yearly count is the norm. The fields of social sciences and humanities might be at a disadvantaged in this context, as a longer yearly citation window may be needed to reflect the true significance of publications in these fields.

The unit of measurement used to measure research performance varies but basically carried out from four perspectives, the individual researcher, the scientific journal, the institution and country. The researchers are evaluated for various purposes, for hiring, promotion, application for grants and awards, as well as for incentives. The value of the researchers are indicated by the number of publications, the general impact of the journals they publish in, the number of citations they garner for their published works measured in terms by the number of citations, and their h-index, which is the measure of both their productivity and citation impact of total body of researchers published scholarly works.

Due to increased need to publish, researchers normally compete to publish in journals accepted by their institutions when evaluating their performances. This results in the explosion of journals being published. Researchers are also therefore, assessed based on the impact factor of the journals they publish in. This data can be obtained from international citation databases such as *WoS* and *Scopus*, and national indexing systems and in this instance from *MyCite*. In this context the journal impact factor (JIF) as devised by the *WoS* is used to calculate the impact of Malaysian journals.

The universities themselves are constantly competing and are being compared. This has resulted in the ranking of universities and the most widely used are Shanghai Jiao Tong's *Academic Ranking of World Universities* and Times Higher Education's *World University Ranking* (both using *WoS* data), as well as the QS (Quacquarelli Symonds) *World University Ranking* (using *Scopus* data). In this report universities are ranked in terms of the total publications produced by researchers affiliated to them, the total citations received and their calculated h-index based on their overall productivity and citation. Countries too are being subjected to performance revaluation based on their aggregated performance of their institutions both public and private. In this context the report only presents the journals performance within Malaysia, at the micro (author and discipline) and meso (institution) levels, and therefore is not compared to their performance with other countries.

3.3 Materials

Authoritative and accurate data sources are required for bibliometric analysis. Hence the publication and citation data were collected solely from the Malaysian Citation Centre (MCC), a national body that serves the database of academic papers published in Malaysian scholarly journals. MCC collects all the published articles, make the bibliographic and citation information accessible through *MyCite* (Malaysian Citation Index). *MyCite* is linked to *MyJurnal*, the Malaysian Journal Management System, to extract bibliographic data and statistics of productivity and impact for display. *MyCite* provides citation and bibliometric information on Malaysian researchers, journals and institutions. This database covers all fields in Sciences, Engineering & Technology, and Medical & Health Sciences (STM) and Arts & Humanities and Social Sciences (AHSS). The subject categorization used in *MyCite* (Appendix 3) is simplified mainly due to the small number of journals published in Malaysia and over categorization could result in non-representation of any journals.

The main datasets for this report cover the articles published in journals for 2000 to 2013 that have been indexed and retrieved from *MyCite*. Only those journals, which met *MyCite*'s indexation criteria and the following specific criteria, have been considered:

- a) All the issues of 2013 volumes were published by 30 October 2014. This means journals that do not make available or accessible all the issues of 2013 by this date are left out.

- b) The journal publishers have given full access to their online contents, or for those still publishing in print, provide MCC with the softcopies of articles or undertake the scanning of their own issues which are then submitted to MCC for processing.
- c) Journals that do not change names in 2013.

With this exercise, a total of 129 journal titles stood out with a total of 22,926 articles. The term articles include research papers, short communications, research reports and review papers. The non-research items such as meeting abstracts, letters, editorials, book reviews, corrections, news items, obituaries, reprints, bibliographies are not indexed in *MyCite*, hence are not included in this report.

3.4 Data Analysis

Data retrieved from *MyCite* were tabulated in a spreadsheet application and checked to ensure the accuracy of names before final analysis. The data have been verified and unified and they belonged to three categories: authors of articles, authors' institutional and country affiliations, as well as journal titles attached to articles. The references appended to all the articles of the journals were segmented by *MyCite* reference generator of which only references pertained to journals covered in *MyJournal*, Malaysian-based authors and Malaysian-based institutions were recorded for citation analysis.

Verifications was made possible by MCC's indexers during the indexing process through checking with official directories and websites provided by universities and research organisations. For articles where the authors' affiliations were not indicated in *MyCite* were identified from their research papers available in digital repositories and online CVs. Variants of author names and institutions were also checked with the Web. During this process, some inconsistencies were found, such as authors who publish using different name forms and university named under variant spellings. These inconsistencies were edited and merged to bring all the papers affiliated with a specific institution or works by the same authors together.

To show the performance of a journal, this report uses the publication productivity and citation activity in 2-year and 5-year windows, impact indicators such as the journal yearly IF for 2013, 5-year impact, immediacy index, cited half-life and h-index. To quantify the productivity and impact of an author and an institution, their number of papers, citations and h-index were calculated respectively.

3.5 Bibliometric Indicators

Statistics were produced based on the following bibliometric indicators:

5-year impact: The average citation rate for a journal based on a five year window. A base of five years may be more appropriate for journals in certain fields because the body of citations may not be large enough to make reasonable comparisons, publication schedules may be consistently late, or it may take longer than two years to disseminate and respond to published works.

Citation counts: The number of citations is an indicator of acknowledgement and recognition of previous research by the person who cites the work, and can be used to evaluate the scientific impact of research. The citation counts used in this report are those obtained from references to only journal articles that are indexed within *MyCite*.

Cited half-life: The cited half-life refers to the median age of the articles that were cited in the current journal citation report year, and is a measure of the rate of decline of the citation curve. It is the number of years that the number of current citations takes to decline to 50% of its initial value. It measures how long articles in a journal continue to be cited after publication.

h-index: The *h*-index reflects both the number of publications and the number of citations per publication. It can be used to gauge the impact of a researcher, institution, and even a journal. The *h*-index serves as an alternative to traditional journal IF metrics in the evaluation of the impact of the work of a particular researcher. The index works properly only for comparing researchers working in the same field; because citation conventions differ widely among different fields. A scholar with an index of *h* has published *h* papers each, of which has been cited in other papers at least *h* times.

Immediacy index: The immediacy index is the average number of times an article is cited in the year it is published. It is calculated by dividing the citations a journal receives in the current year by the number of articles it publishes in that year, i.e., the 2013 immediacy index is the average number of citations in 2013 to articles published in 2013. The number that results can be thought of as the initial gradient of the citation curve, a measure of how quickly items in that journal get cited upon publication.

Journal yearly impact factor: The journal yearly IF for this report refers to impact calculated for 2013. The IF of a scholarly journal is a measure reflecting the average number of citations to recent articles published in the journal. It is frequently used as a proxy for the relative importance of a journal within its field, with journals with higher impact factors deemed to be more important than those with lower ones. It is calculated by dividing the number of current citations a journal receives to articles published in the two previous years by the number of articles published in those same years. For example, the 2013 impact factor is the citations in 2013 to articles published in 2011 and 2012 divided by the number articles published in 2011 and 2012. The number that results can be thought of as the average number of citations the average article receives per annum in the two years after the publication year. *MyCite* database is designed to calculate the journal IF automatically and compute it the same way as is done in the case of *WoS*.

Number of papers: Number of scientific papers written by authors associated with Malaysian sectors or organizations (based on authors' affiliation addresses). Publications can be counted fully, i.e., each participating unit is credited with one publication, or fractionally, assigning an equal fraction of the paper to each entity (Price 1981). In this report, the whole count approach is used where each author is given full credit for the paper, regardless of the number of co-authors.

Citedness / Uncitedness: This metric refers to the percentage of cited or uncited papers in a sample. A "cited" paper has received at least one citation. This measure can reveal the amount of publications with no or very little influence.

3.6 Caveats on the Report

As bibliometric analysis employs a non-obtrusive method of investigation and depends entirely on available published records that have been systematically kept and maintained in a bibliographic database, the following points should be borne in mind when using the bibliometric data and the findings of this report:

- a) Data quality is essential in bibliometrics studies. This involves the selection of a suitable database and cleaning of bibliographic metadata. The reliability of data and results depends very much upon the reliability of the recorded data in *MyCite*. *MyCite*, in turn depends on the accuracy of data from publishers of journals that have met *MyCite* journal selection criteria.
- b) As in other citation databases such as the *WoS* and *Scopus*, a citation search in *MyCite* is not a complete citation search because only citations from the 129 source journals covered in *MyJournal* are counted. Citations from books, dissertation & theses, patents and technical reports are not included in the database; therefore disciplines that publish heavily in the journal literature (such as the Sciences) are better covered than those that do not (such as History). Subjects may not be covered evenly by date; for example the science journals used for the source of citation data may go much farther back in time than the source journals in the arts, engineering, humanities,

- and social sciences. Some subject areas are poorly covered such as dentistry, pharmacology, earth sciences, sports sciences, literature, performing arts, visual arts, cultural & ethnic studies, library and information science, geography, and psychology.
- c) The dependency on secondary data sources had made the work tedious, especially when verifying data where authors do not have affiliations, or the same affiliations are written with variant names, or where journals do not include the affiliation information of authors. In such cases, attempts have been made to verify data accuracy by checking with institutional staff directories, authors' web CVs, and other Malaysian reference sources.
 - d) In this report, the whole count approach is used, as opposed to the fractional count. Using whole count, a paper in collaboration is credited to all the performing sectors, i.e. authors or institutes or disciplines, and this method artificially increases the paper count. In fractional method, an assumption is made that each co-author contributes equally to the paper. Thus the number of fractional count authors is lower than reality because authors with less than half a paper in total are discarded.
 - e) This report includes self-citations of journals, and at the micro and meso level analysis. To a certain extent, author self-citations are natural, as researchers usually build on their own previous research. However, in the context of research evaluation, where citations are used as a proxy for impact on the scientific community, self-citations are problematic as they do in fact not mirror influence on the work of other researchers and thus distort citation rates (Asknes 2003; Glänzel et al. 2006). Self-citations continue to be a thorny issue in citation analysis (Malaysian Science and Technology Centre 2012). Self citations may be removed from bibliometrics studies to prevent distortions particularly at the micro and meso level. However, the correlations between citations and co-citations on a larger aggregation level were shown to be strong so that it is not necessary to control for self-citations at the macro or country level (Glänzel and Thijs 2004).
 - f) Basic publication and citation indicators are size-dependent measures and are influenced by different publication patterns of disciplines and also by the size or age of the measured entity. Using basic instead of normalized metrics, a researcher from the medical sciences would thus seem more productive and to have higher citation impact than a social scientist, because medical scientists contribute to more papers and their papers contain a larger number of and more recent references than those in social sciences. Therefore, comparing the publication output and citation impact of authors, institutions, journals and countries without an accurate normalization is thus like comparing apples with oranges (Haustein and Larivière 2015).

4.0 • MALAYSIAN JOURNALS IN THE WEB OF SCIENCE AND SCOPUS

Scholarly journals published in a country represent the published research heritage of the country. As a result, most governments render support to the publication of scholarly journals channelled through various ministries and agencies. The situation of journal publications in Malaysia is of no exception. The result of an audit carried out in 2012 (Zainab et al. 2012b) indicated a total of 464 journals have been published in Malaysia. The audit shows that universities and colleges publish 55.5% (257) of the journal titles, while 20.6% (104) by government agencies, and 22.4% (96) by professional societies and associations. Almost all the universities and colleges involved are public funded. As the audit focused on titles identified in university library catalogues, it is suspected that maybe half of the titles have ceased publication. A realistic figure of journals, which are currently in publication, would be above 200 as indicated by Roosfa (2006) who focused on current listings. Roosfa observed the difficulty of keeping track of electronic journals, which has increasingly mushroomed.

Although it is now possible to currently gauge journal performance within Malaysia, through *MyCite*, the Malaysian government and public are concerned about journal performance in international databases. The visibility of Malaysian scholarly journals is viewed in terms of its indexation status by the world's two largest citation databases of peer-reviewed journals, Elsevier's *Scopus* and Thomson-Reuters's *Web of Science* (*WoS*). The former contains a much larger number of journals than the latter, but the difference is to a certain extent the decision of *Scopus* to include more lower-impact (i.e., less-frequently cited) journals (Higher Education Strategy Associates 2012). While these databases are extensive, no database can ever be truly comprehensive, as database managers have to make editorial judgements about which publications will and will not be included in the database. Malaysian journals indexed by the *WoS* and *Scopus* are considered to have a certain degree of quality and authority, and since the distribution of this database is worldwide, journals cited in *WoS* can be said to have achieved a certain degree of "visibility" (Abrizah et al. 2012). Also, increasingly Malaysian universities have mandated their academic researchers to publish only in journals indexed by *WoS*.

The article by Abrizah et al. (2012) indicated that 9,675 articles in the *WoS* cited 212 Malaysian journals. Many of the journals cited are not indexed in *WoS* and a selection is being indexed in *Scopus* and *MyCite*. This situation indicates the citedness of articles published in Malaysian journals even though the numbers of journals, which gain indexation in the universal databases are small. As *WoS* citation databases and *Scopus* are international indexing agencies, it is relevant to identify their coverage of Malaysian journals and examine the journal's position in the various subject categories.

4.1 Journal Performance in the *Web of Science*

Table 4.1 lists the 12 Malaysian journals indexed in the *WoS* citation database, which comprises the *Science Citation Index Expanded* (SCIE), the *Social Science Citation Index* (SSCI) and the *Arts & Humanities Citation Index* (AHCI), and reported in the Journal Citation Report (JCR) 2013. This number of journals covered has not increased since JCR 2012. Societies or associations published the majority of the journal titles (5), universities (4) and government research institutions (3). The longevity and currency of the journals indexed in *WoS* is also evident as all titles, except one (*Al-Shajarah*), have accrued both a 2-year and 5-year impact factor counts. The most improved performance is indicated by the *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS), published jointly by the Malaysian Mathematical Sciences Society and Universiti Sains Malaysia. BMMSS performed very well in the field of mathematics with an IF of 0.854, ranking 65 out of 299 titles in this subject category and listed in quartile 1 (top 25.0%). The journal *Al-Shajarah*, published by the International Islamic University Malaysia does not show any citation performance since Thomson Reuters does not give citation counts for journals in the arts and humanities. However, the AHCI indicated 53 articles have been published in this journal since 2011. In summary, the journals that gain indexation status in *WoS* exhibit certain characteristics, such as they remain current in publishing their issues over the last five years or longer; they are accessible both in print and on the Web; and they show impact in their respective fields through citation counts. The journals that have longevity such as *Journal of Rubber Research*, *Journal of Palm Oil Research*, and *Journal of Tropical Forest Sciences*, have long publication history evidenced by the high cited half-life counts of 10.0, 8.4 and 7.7 respectively. This count infers that articles published in these journals remain garnering or having the chance of receiving citations for over a period of 7 to 10 years.

Table 4.1: Malaysian Journals Indexed in the *Web of Science*

No.	Title	ISSN	IF	5-Y IF	Immediacy Index	Cited Half-life	Journal Ranking	Quartile	Category (Citation Index*SCIE,SSCI or AHCI)	Publisher
1	Asia-Pacific Journal of Public Health	1010-5395	1.111	1.312	0.614	3.9	114/160 93/136	Q3 Q3	Public, Environmental & Occupational Health (SCIE) Public, Environmental & Occupational Health (SSCI)	SAGE Publications for Asia Pacific Academic Consortium for Public Health
2	Asian Myrmecology	1985-1944	0.625	0.613	0.110	N/A	62/90	Q3	Entomology (SCIE)	Universiti Malaysia Sabah for International Network for the Study of Ants
3	Bulletin of the Malaysian Mathematical Sciences Society	0126-6705	0.854	0.860	0.260	2.9	65/299	Q1	Mathematics (SCIE)	Malaysian Mathematical Sciences Society
4	Journal of Oil Palm Research	1511-2780	0.177	0.399	0.180	8.4	117/123	Q4	Food Science & Technology (SCIE)	Malaysian Palm Oil Board
5	Journal of Rubber Research	1511-1768	0.128	0.198	0.000	>10.0	82/82	Q4	Polymer Science (SCIE)	Rubber Research Institute Malaysia
6	Journal of Tropical Forest Science	0128-1283	0.667	0.675	0.050	7.7	43/64	Q3	Forestry (SCIE)	Forest Research Institute Malaysia
7	Malaysian Journal of Computer Science	0127-9084	0.500	0.570	0.000	N/A	99/121 79/102	Q4 Q4	Computer Science, Artificial Intelligence (SCIE) Computer Science, Theory & Methods (SCIE)	University of Malaysia
8	Neurology Asia	1823-6138	0.244	0.350	0.020	5.2	191/194	Q4	Clinical Neurology (SCIE)	ASEAN Neurological Association with University of Malaysia
9	Sains Malaysiana	0126-6039	0.480	0.430	0.010	2.8	33/55	Q3	Multidisciplinary Sciences (SCIE)	Universiti Kebangsaan Malaysia
10	Tropical Biomedicine	0127-5720	0.816	1.050	0.060	5.0	32/36 15/20	Q4 Q4	Parasitology (SCEI) Tropical Medicine (SCIE)	Malaysian Society of Parasitology and Tropical Medicine
11	Malaysian Journal of Library & Information Science	1394-6234	0.333	0.350	0.000	N/A	65/83	Q4	Information Science & Library Science (SSCI)	University of Malaysia
12	Al-Shajarah	1394-6870	N/A	N/A	N/A	N/A	N/A	N/A	(AHCI)	International Islamic University Malaysia

Source: No 1-11 : Journal Citation Report (JCR) 2013

*Citation Index - SCIE (Science Citation Index Expanded), SSCI (Social Science Citation Index), AHCI (Arts & Humanities Citation Index)

Only one title i.e. *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS) is assigned to quartile 1 in *WoS*, while five titles are assigned to quartile 5, eight are assigned to quartile 4, and one title *Al-Shajarah* is not assigned to any quartile. The Malaysian journal that attains the highest impact score in *WoS* is *Asia Pacific Journal of Public Health* (IF1.111, quartile 3) published by Sage Publications for the Asia-Pacific Academic Consortium for Public Health. Although published by an international publisher, the country location of this journal is Malaysia since the consortium has awarded the editorial handling to the Faculty of Medicine, University of Malaya. This is an example of a journal that has improved its performance after partnering with an established publisher (Sage). However, this situation has created problem of accessibility since MCC would have to purchase the journal from Sage. Therefore, this journal has not been indexed in *MyCite*. Other journals indexed by *WoS*, which are not covered by *MyCite* are *Asian Myrmecology*, *Journal of Rubber Research* and *Neurology Asia*. This is due to constrain issues related to requirement for subscription or purchase. As a result it is not possible to show the national impact of these journals.

4.2 Journal Performance in *Scopus*

Table 4.2 lists journals whose publishers' country are assigned as "Malaysia" indexed in *Scopus* and listed in *SCImago* in 2013. There is an improvement in the number of journal titles covered in *Scopus* from 53 titles in 2011 to 76 titles in 2013. There is a higher coverage of Malaysian-based journals in the science, technology and medical fields (STM) with 50 titles (65.8%), compared to 19 titles (25.0%) in the social sciences and 7 titles (9.2%) in the arts and humanities. This indicates that *Scopus'* indexation of Malaysian journals in the arts, humanities and social sciences (AHSS) is improving comprising a third of the total Malaysian journals covered.

The universities publish the majority of the Malaysian journals indexed in *Scopus* (51 titles, 67.1%). Universiti Sains Malaysia publishes 11 titles, followed by University of Malaya (10), Universiti Putra Malaysia (8), Universiti Kebangsaan Malaysia (6), International Islamic University Malaysia (4), Universiti Utara Malaysia, Universiti Teknologi Malaysia, and Taylor's University (2 each) and one title each from the newer universities (Universiti Malaysia Sabah, Universiti Malaysia Pahang, Universiti Malaysia Sarawak, Universiti Malaysia Terengganu, Universiti Malaysia Perlis and Universiti Teknologi MARA). Taylor's University is the only private university that has two titles covered in *Scopus*. Figure 4.1 shows the number of journals published by each of these universities.

Table 4.2: Malaysian Journals Indexed in Scopus as Listed in SCImago 2013

No.	Title	ISSN	SJR Index	h-index	Cites/Doc. (2years)	SNIP (CWTS Journal Indicators)	Category/Quartile	Publisher
1	3L: Language, Linguistics, Literature	0128-5157	0.222	3	0.140	0.129	Literature & Literary Theory - Q1, Linguistics & Language - Q2, Language & Linguistics - Q2	Universiti Kebangsaan Malaysia
2	ABU Technical Review	0126-6209	0.100	2	0.040	0.000	Electrical & Electronic Engineering - Q4	Asia Pacific Broadcasting Union
3	Al-Shajarah	1394-6870	0.102	0	0.000	0.000	History - Q3, Religious Studies - Q3, Cultural Studies - Q3, Philosophy - Q3	International Islamic University Malaysia
4	Asian Academy of Management Journal	2180-4184	0.132	2	0.260	0.787	Business, Management & Accounting - Q3	Universiti Sains Malaysia
5	Asian Academy of Management Journal of Accounting and Finance	1823-4992	0.153	2	0.100	0.389	Accounting - Q4, Finance - Q4	Universiti Sains Malaysia
6	Asian Journal of Business and Accounting	1985-4064	0.122	3	0.050	0.485	Accounting - Q4, Business & International Management-Q4	University of Malaya
7	Asian Myrmecology	1985-1944	0.307	5	0.630	1.332	Ecology, Evolution, Behavior & Systematics - Q3 Insect Science - Q3, Ecology - Q3	Universiti Malaysia Sabah
8	Asia-Pacific Journal of Molecular Biology and Biotechnology	0128-7451	0.129	10	0.110	0.104	Biotechnology - Q4, Molecular Biology - Q4	Malaysian Society for Molecular Biology and Biotechnology
9	Asiatic	1985-3106	0.101	0	0.000	0.000	Language & Linguistics - Q4, Literature & Literary Theory - Q3, Linguistics & Language - Q4,	International Islamic University Malaysia
10	ASM Science Journal	1823-6782	0.101	1	0.000	0.000	Multidisciplinary - Q4	Academy of Sciences Malaysia
11	Biomedical Imaging and Intervention Journal	1823-5530	0.232	11	0.760	0.349	Radiological & Ultrasound Technology - Q3 Biomedical Engineering - Q3 Radiology, Nuclear Medicine & Imaging - Q3	University of Malaya
12	Bulletin of the Geological Society of Malaysia	0126-6187	0.116	2	0.270	0.445	Earth and Planetary Sciences - Q4	Geological Society of Malaysia
13	Bulletin of the Malaysian Mathematical Sciences Society	0126-6705	0.582	12	0.800	1.221	Mathematics - Q2	Universiti Sains Malaysia
14	CFD Letters	2180-1363	0.304	4	0.440	0.445	Fluid Flow & Transfer Processes - Q2 Modeling & Simulation - Q3	Universiti Teknologi Malaysia for Islamic Society of Scientific Research
15	Defence S and T Technical Bulletin	1985-6571	0.188	4	0.150	0.288	Engineering - Q3	Science & Technology Research Institute for Defence
16	GEMA Online® Journal of Language Studies	1675-8021	0.352	7	0.780	1.063	Language & Linguistics- Q2, Literature & Literary Theory- Q1, Linguistics & Language-Q2	Universiti Kebangsaan Malaysia
17	Institutions and Economics	2232-1640	0.122	1	0.220	0.294	Economics, Econometrics & Finance (misc.) - Q4, Business, Management & Accounting (misc.) - Q3	University of Malaya
18	Intellectual Discourse	0128-4878	0.111	1	0.111	0.091	Sociology & Political Science - Q4, Philosophy - Q3	International Islamic University Malaysia
19	International Food Research Journal	1985-4668	0.368	13	0.880	0.886	Food Science - Q2	Universiti Putra Malaysia
20	International Journal of Asia-Pacific Studies	1823-6243	0.111	1	0.190	0.316	Cultural Studies - Q3, Sociology & Political Science - Q4	Universiti Sains Malaysia
21	International Journal of Automotive and Mechanical Engineering	2229-8649	0.406	6	1.500	2.106	Mechanical Engineering - Q2, Automotive Engineering - Q2	Universiti Malaysia Pahang

Table 4.2: Malaysian Journals Indexed in *Scopus* as Listed in *SCImago* 2013 (cont.)

No.	Title	ISSN	SJR Index	h-index	Cites/Doc. (2years)	SNIP (CWTS Journal Indicators)	Category/Quartile	Publisher
22	International Journal of Business and Society	1511-6670	0.121	2	0.230	0.052	Strategy & Management - Q4, Economics & Econometrics - Q4, Finance - Q4, Business & International Management - Q4	Universiti Malaysia Sarawak
23	International Journal of China Studies	2180-3250	0.266	4	0.200	0.052	Sociology & Political Science - Q3 Political Science & International Relations - Q2 Cultural Studies - Q1	University of Malaya
24	International Journal of Economics and Management	1823-836X	0.149	6	0.120	0.491	Business & International Management - Q3 Strategy & Management - Q4, Economics, Econometrics & Finance (misc.) - Q3	Universiti Putra Malaysia
25	International Journal of Mechanical and Materials Engineering	1823-0334	0.443	9	0.590	0.737	Mechanical Engineering - Q2, Mechanics of Materials - Q2, Materials Science - Q2	University of Malaya
26	International Journal of Nanoelectronics and Materials	1985-5761	0.166	2	0.500	1.185	Electrical & Electronic Engineering - Q3 Electronic, Optical & Magnetic Materials - Q4	Universiti Malaysia Perlis
27	International Medical Journal Malaysia	1823-4631	0.104	1	0.110	0.147	Medicine - Q4	International Islamic University Malaysia
28	Journal of Construction in Developing Countries	1823-6499	0.161	1	0.260	0.361	Civil & Structural Engineering - Q4 Building & Construction - Q3	Universiti Sains Malaysia
29	Journal of Engineering Science and Technology	1823-4690	0.172	6	0.280	0.599	Engineering (misc.) - Q3	Taylor's University
30	Journal of Information and Communication Technology	1675-414X	0.112	1	0.060	0.000	Computer Science (misc.) - Q4 Mathematics - Q4	Universiti Utara Malaysia
31	Journal of Mechanical Engineering	1823-5514	0.11	1	0.130	0.785	Mechanical Engineering - Q4	Universiti Teknologi MARA
32	Journal of Oil Palm Research	1511-2780	0.249	6	0.180	0.511	Agronomy & Crop Science - Q3, Biomaterials - Q4 Food Science - Q3, Renewable Energy, Sustainability & the Environment - Q3	Malaysian Palm Oil Board
33	Journal of Physical Science	1675-3402	0.208	3	0.840	1.302	Materials Science (misc.) - Q3, Physics and Astronomy - Q4	Universiti Sains Malaysia
34	Journal of Rubber Research	1511-1768	0.193	6	0.180	0.404	Organic Chemistry - Q4 Plant Science - Q4	Malaysian Rubber Board
35	Journal of Science and Technology in the Tropics	1823-5034	0.126	2	0.070	0.225	Multidisciplinary -Q4, Engineering - Q4	Confederation of Scientific and Technological Association in Malaysia with Academy of Sciences Malaysia.
36	Journal of Sustainability Science and Management	1823-8556	0.164	3	0.400	0.521	Management, Monitoring, Policy & Law - Q4 Pollution -Q3, Geography, Planning & Development-Q3	Universiti Malaysia Terengganu
37	Journal of the University of Malaya Medical Centre	1823-7339	0.103	3	0.000	0.000	Medicine - Q4	University of Malaya
38	Journal of Tropical Forest Science	0128-1283	0.388	16	0.800	0.737	Forestry - Q2	Forest Research Institute Malaysia
39	Jurnal Ekonomi Malaysia	0127-1962	0.188	2	0.120	0.440	Business, Management & Accounting - Q3	Universiti Kebangsaan Malaysia
40	Jurnal Pengurusan	0127-2713	0.131	3	0.140	0.125	Accounting -Q4, Business, Management & Accounting (misc) - Q3, Business & International Management-Q3	Universiti Kebangsaan Malaysia

Table 4.2: Malaysian Journals Indexed in Scopus as Listed in SCImago 2013 (cont.)

No.	Title	ISSN	SJR Index	h-index	Cites/Doc. (2years)	SNIP (CWTS Journal Indicators)	Category/Quartile	Publisher
41	Jurnal Teknologi (Sciences and Engineering)	0127-9696	0.132	5	0.180	0.137	Engineering - Q3	Universiti Teknologi Malaysia
42	Kajian Malaysia	0127-4082	0.110	1	0.000	0.000	History - Q4, Cultural Studies -Q4 Sociology & Political Science - Q4	Universiti Sains Malaysia
43	Kemanusiaan	1394-9330	0.101	1	0.060	0.490	Philosophy- Q4, Literature & Literary Theory -Q3 Linguistics & Language- Q4, Cultural Studies -Q4 Language & Linguistics -Q4	Universiti Sains Malaysia
44	Malayan Nature Journal	0025-1291	0.246	4	0.570	1.131	Ecology, Evolution, Behavior & Systematics - Q4 Nature & Landscape Conservation - Q3	Malaysian Nature Society
45	Malaysian Applied Biology	0126-8643	0.106	1	0.060	0.097	Agricultural & Biological Sciences - Q4	Malaysian Society of Applied Biology
46	Malaysian Construction Research Journal	1985-3807	0.120	1	0.040	0.082	Building & Construction - Q4	Construction Research Institute of Malaysia
47	Malaysian Family Physician	1985-207X	0.142	5	0.170	0.237	Community & Home Care - Q4 Family Practice - Q3	Academy of Family Physicians of Malaysia
48	Malaysian Forester	0302-2935	0.217	3	0.290	0.614	Forestry-Q3	Forest Research Institute Malaysia
49	Malaysian Journal of Analytical Sciences	1394-2506	0.134	2	0.134	0.134	Analytical Chemistry - Q4	Universiti Kebangsaan Malaysia
50	Malaysian Journal of Computer Science	0127-9084	0.257	9	0.720	0.720	Computer Science - Q3	University of Malaya
51	Malaysian Journal of Consumer and Family Economics	1511-2802	0.101	1	0.000	0.141	Economics, Econometrics & Finance - Q4	Malaysian Consumer & Family Economics Association
52	Malaysian Journal of Economic Studies	1511-4554	0.161	3	0.360	0.238	Economics, Econometrics & Finance (misc.)-Q3	University of Malaya
53	Malaysian Journal of Learning and Instruction	1675-8110	0.104	0	0.000	0.000	Education - Q4	Universiti Utara Malaysia
54	Malaysian Journal of Library & Information Science	1394-6234	0.380	11	0.520	0.913	Library & Information Sciences - Q2	University of Malaya
55	Malaysian Journal of Mathematical Sciences	1823-8343	0.278	6	0.770	0.995	Mathematics (misc.) - Q3	Universiti Putra Malaysia
56	Malaysian Journal of Medical Sciences	1394-195X	0.181	8	0.680	0.548	Medicine (misc.) - Q3	Universiti Sains Malaysia
57	Malaysian Journal of Medicine and Health Sciences	1675-8544	0.102	2	0.100	0.100	Medicine (misc.) - Q4	Universiti Putra Malaysia
58	Malaysian Journal of Microbiology	1823-8262	0.140	3	0.490	0.582	Microbiology (medical) -Q4, Infectious Diseases-Q4	Malaysian Society for Microbiology
59	Malaysian Journal of Microscopy	1823-7010	0.104	2	0.090	0.216	Pathology & Forensic Medicine-Q4 Instrumentation- Q4, Histology - Q4	Universiti Putra Malaysia
60	Malaysian Journal of Nutrition	1394-035X	0.331	9	0.660	0.969	Food Science - Q3 Nutrition & Dietetics - Q3	Nutrition Society of Malaysia
61	Malaysian Journal of Pathology	0126-8635	0.267	11	0.680	0.624	Histology - Q3, Cell Biology - Q4 Pathology & Forensic Medicine-Q3	Academy of Medicine of Malaysia
62	Malaysian Journal of Public Health Medicine	1675-0306	0.106	1	0.190	0.133	Public Health, Environmental & Occupational Health - Q4	Malaysian Public Health Physicians' Association
63	Malaysian Journal of Science	1394-3065	0.135	5	0.090	0.338	Multidisciplinary - Q3	University of Malaya
64	Malaysian Journal of Soil Science	1394-7990	0.139	2	0.260	0.304	Agronomy & Crop Science- Q4, Soil Science-Q4	Malaysian Society of Soil Science
65	Medical Journal of Malaysia	0300-5283	0.214	19	0.440	0.444	Medicine - Q3	Malaysian Medical Association

Table 4.2: Malaysian Journals Indexed in Scopus as Listed in SCImago 2013 (cont.)

No.	Title	ISSN	SJR Index	h-index	Cites/Doc. (2years)	SNIP (CWTS Journal Indicators)	Category/Quartile	Publisher
66	Neurology Asia	1823-6138	0.151	7	0.260	0.304	Neurology (clinical) - Q4 Neurology - Q4	ASEAN Neurological Association with University of Malaya
67	Pertanika Journal of Science and Technology	0128-7680	0.161	3	0.270	0.485	Environmental Science (misc.) - Q3, Agricultural & Biological Sciences (misc.) - Q3, Chemical Engineering (misc.) - Q3, Computer Science - Q3	Universiti Putra Malaysia
68	Pertanika Journal of Social Science and Humanities	0128-7702	0.151	3	0.190	0.234	Economics, Econometrics & Finance (misc.) - Q3 Business, Management & Accounting (misc.) - Q3 Arts & Humanities (misc.)-Q3, Social Sciences (misc.)-Q3	Universiti Putra Malaysia
69	Pertanika Journal of Tropical Agricultural Science	15111-3701	0.142	5	0.280	0.418	Agronomy & Crop Science - Q4	Universiti Putra Malaysia
70	Planning Malaysia	1675-6215	0.141	1	0.170	0.154	Geography, Planning & Development - Q3 Urban Studies - Q3	Malaysian Institute of Planners
71	Sains Malaysiana	0126-6039	0.23	9	0.650	0.621	Multidisciplinary-Q2	Universiti Kebangsaan Malaysia
72	SEASIS Quarterly (South East Asia Iron and Steel Institute)	0129-5721	0.104	5	0.030	0.188	Condensed Matter Physics - Q4, Physical & Theoretical Chemistry - Q4, Metals & Alloys - Q4 Materials Chemistry - Q4	South East Asian Iron and Steel Institute
73	SEARCH (Malaysia)	2229-872X	0.106	0	0.000	0.000	Cultural Studies - Q3 ,Arts & Humanities (misc.) - Q4, Communication - Q4	Taylor's University
74	Tropical Biomedicine	0127-5720	0.491	16	1.060	0.818	Parasitology - Q3 Infectious Diseases - Q3	Malaysian Society of Parasitology and Tropical Medicine
75	Tropical Life Sciences Research	1985-3718	0.146	3	0.340	0.370	Medicine (misc.) - Q3, Biochemistry, Genetics & Molecular Biology - Q4, Agricultural & Biological Sciences (misc.) - Q3	Universiti Sains Malaysia
76	Wacana Seni	1675-3410	0.102	0	0.000	0.000	Visual Arts & Performing Arts - Q2, Music - Q3 Cultural Studies - Q3	Universiti Sains Malaysia

Source: <http://www.scimagojr.com/journalrank.php>, <http://www.scopus.com/> * Institutions: Others (Government agencies/societies/associations)

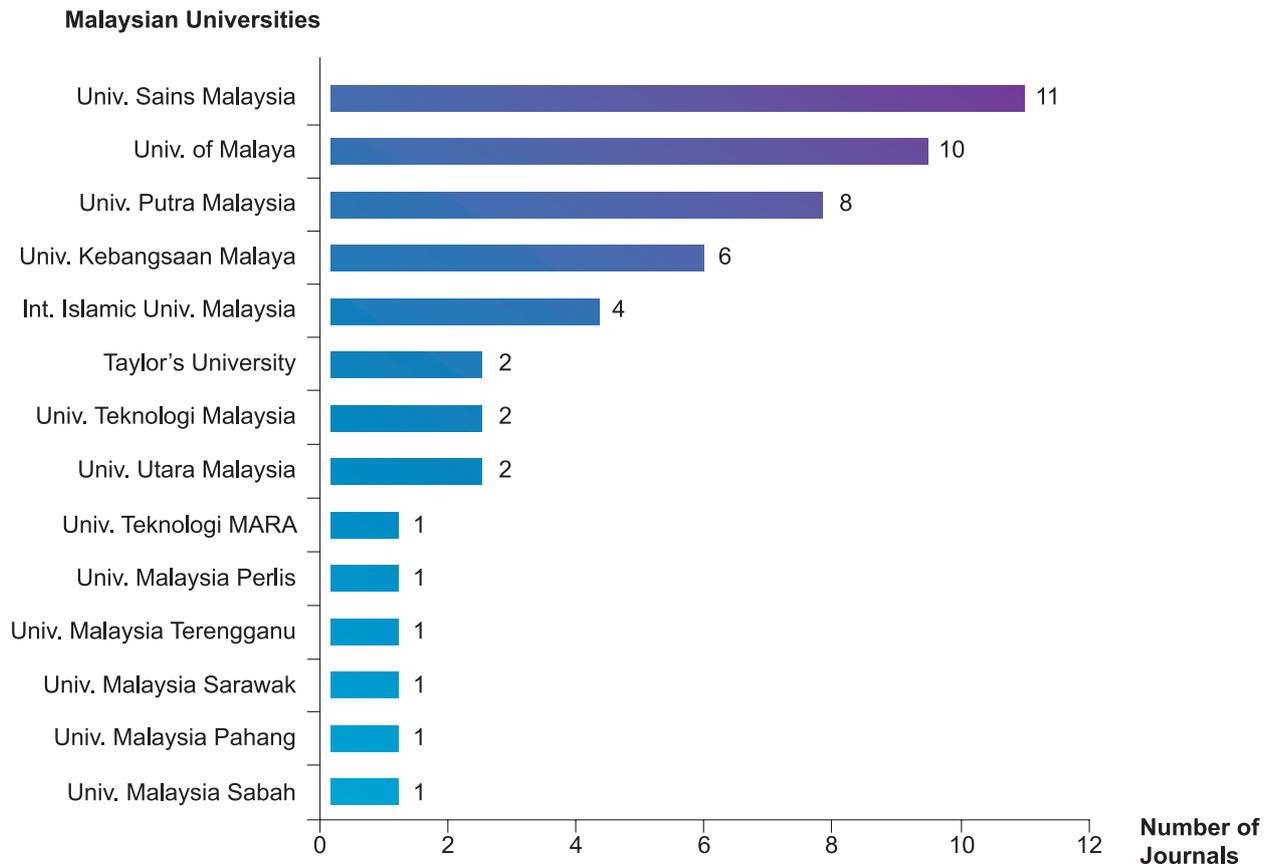


Figure 4.1: The Number of Journals Indexed in *Scopus* Published by Malaysian Universities

Professional or academic societies and associations in Malaysia publish 18 titles (23.7%), and government research agencies publish seven titles (9.2%). It is observed that journals that have larger body (years) of issues covered performed better with their *h*-index scores, and nine of the titles listed scored *h*-index of 10 and above with *Medical Journal of Malaysia* topping the list with an *h*-index of 19. The other journals that attain good *h*-index scores are *Journal of Tropical Forest Science* (16), *Tropical Biomedicine* (16), *International Food Research Journal* (13), *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS) (12), *Biomedical Imaging and Intervention Journal*, *Malaysian Journal of Library & Information Science*, and *Malaysian Journal of Pathology* (11 each).

In *Scopus* impact is measured by the SCImago Journal Ranking (SJR). Overall, Malaysian journals do not perform very well on their impact scores as indicated by their SJR index (all below 1.0) indicating comparatively low citations. *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS) attains the highest SJR score of 0.582. Those journals that attain SJR score of above 0.4 are *Tropical Biomedicine* (0.491) published by *Malaysian Society of Parasitology and Tropical Medicine*, *International Journal of Mechanical and Materials Engineering* (0.443), published by University of Malaya and *International Journal of Automotive and Mechanical Engineering* (0.406), published by Universiti Malaysia Pahang.

The 76 journal titles indexed in *Scopus* are categorized to a single or more subject categories (Table 4.2) and against each category is indicated the quartile assigned. When a title is assigned to three subject categories and all categories are assigned to quartile 3, then the title is regarded as being assigned to a single quartile, which is 3. The quartile listing is derived from the total journals in subject categories, arranged from the highest to the lowest IF scores of each title. Quartile 1 therefore, comprises the titles that achieved the highest IF scores and so forth with subsequent quartiles. Figure 4.2 indicates the number of titles distributed by the quartiles assigned to them. The figure indicates that there are 99 titles as some titles are assigned to 2 or more quartiles. In this context, 53 titles are assigned to a single quartile, and 23 titles are assigned to 2 or more quartiles. Even though the majority of Malaysian journals are assigned to quartile 3 and 4 under the various subject categorizations, there are 12 journals that have improved their performance as they are being assigned to quartile 1 or/and 2.

In terms of journal quartile, the AHSS journals are performing well, with for example *3L: Language, Linguistic, Literature* and *GEMA Online® Journal of Language Studies* (both published by Universiti Kebangsaan Malaysia) are listed as quartile 1 in the subject category literature and literary theory. The title *International Journal of China Studies* published by University of Malaya has also attained quartile 1 in the subject category of cultural studies. Overall a total of 12 (15.8%) out of the 76 titles listed achieved quartile 1 or/and 2 listing in *Scopus*. The journal *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS) is in quartile 2 and this may be due to the larger body of journals covered in the field of Mathematics by *Scopus*.

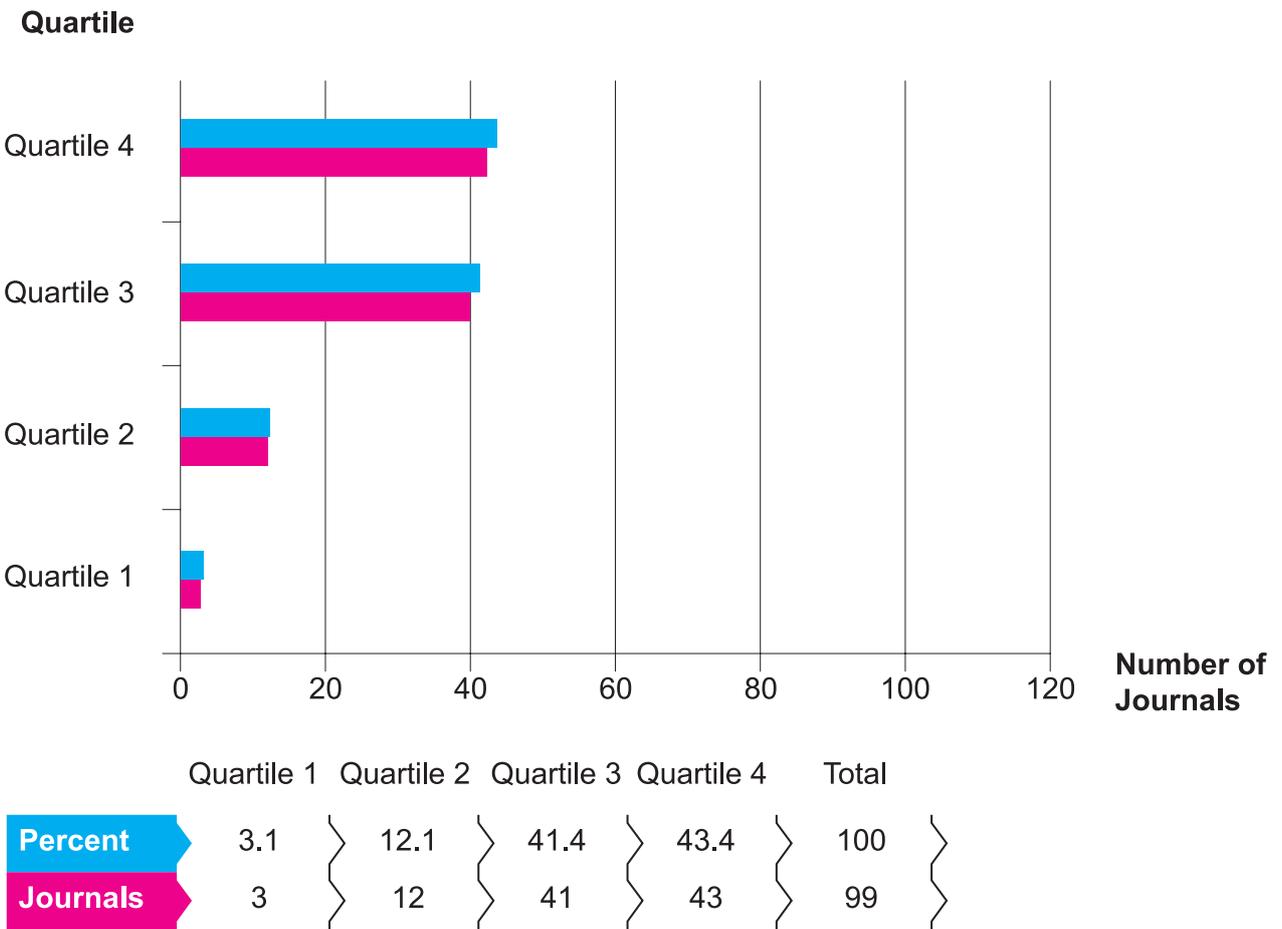


Figure 4.2: The Number of Journals and their Quartile Assignments in *Scopus*

5.0 • MALAYSIAN JOURNALS INDEXED IN *MyCite* 2013

This section reports on the current status of Malaysian journals in *MyCite*. In an earlier attempt to determine the status of journals published in Malaysia, a journal audit was carried out in early 2012 (Zainab et al. 2012) and the study revealed that there were 464 journals published in Malaysia. The first report on the performance of Malaysian journals in 2012 covered in *MyJurnal* indicated that the number of journals successfully indexed in *MyCite* was 112 (Malaysian Citation Centre 2013). By the end of 2013, a total of 294 titles have been covered in *MyJurnal* (Appendix 4).

Even though these titles are covered in *MyJurnal*, the performance of 165 titles cannot be reported due to the failure of these journals to meet MyCite's indexing criteria especially on timeliness factor (irregular issues or lapse in publication status) and availability/accessibility factor. This explains why a total of 25 journals (16 STM¹ and 9 AHSS²) reported in the 2012 report are not included in the current report for reasons such as the change in the journal title, articles in PDF format are password protected, and full texts are not available online, reference information is not available online, current issues are not available online and no response for request of full journal information.

5.1 Coverage of Journals in MyCite

Out of 294 journal titles covered in *MyJurnal*, a total of 129 (44.2%) have been completely indexed from 2008 to 2013. Journals that are covered for this six year duration have begun to show their performance in *MyCite*. Many of these journals are still published in print format (76, 58.9%), and 41 (31.8%) are published in hybrid i.e. print and electronic. Only 12 (9.3%) journals have gone fully electronic. This seems to infer why problems of accessibility exist. To ensure rapid delivery of the scholarly contents, journals are increasingly becoming online but in the context of Malaysia, such initiatives are yet to gain momentum as many of the journals still do not have online presence. The majority of these journals are published in the English Language (72, 55.8%), whereas 47 (36.4%) are published in both English and Malay, seven multi-lingual (5.4%, English, Malay and Arabic) and only three journals (2.3%) are fully published in the Malay language. Based on publication frequency, most journals are published biannually (72, 55.8%), followed by annually (27, 20.9%), quarterly and tri-annually (12, 9.3% respectively). Five journals (3.9%) are published bi-monthly (with six issues per year) and only one is published monthly (with 12 issues per year) i.e. *Sains Malaysiana*. Table 5.1 presents these findings.

¹Annals of Dentistry; ASM Science Journal; Biomedical Imaging and Intervention Journal; Buletin Persatuan Genetik Malaysia; Bulletin of the Geological Society of Malaysia; Engineering e-Transaction; Geoinformation Science Journal; International Journal of Nanoelectronics and Materials; Journal of Fundamental Sciences (currently Malaysian Journal of Fundamental and Applied Sciences); Journal of Mechanical Engineering; Journal of Nuclear and Related Technologies; Journal of Science and Technology; Journal of Sustainability Science and Management; Malaysian Journal of Nutrition; Malaysian Journal of Science; Medicine & Health

²Asia Pacific Journal of Educators and Education (formerly Jurnal Pendidik dan Pendidikan); Asian Journal of University Education; e-Bangi Journal of Social Sciences and Humanities; International Journal of Institutions and Economies; International Journal of Management Studies; Journal of Techno-Social; SARI : Jurnal Alam dan Tamadun Melayu; SARJANA; Tirai Panggung

Table 5.1: Language of Publication, Publication Format and Publication Frequency of Journals Covered in MyCite 2008-2013

Language of Publication	No. of Journals	Percent
English	72	55.8
Malay	3	2.3
Bilingual (English & Malay)	47	36.4
Multi-lingual	7	5.4
TOTAL	129	100.0
Publication Format	No. of Journals	Percent
Print	76	58.9
Electronic	12	9.3
Hybrid	41	31.8
TOTAL	129	100.0
Publication Frequency	No. of Journals	Percent
Monthly (12 issues per year)	1	0.8
Bi-monthly (six issues per year)	5	3.9
Annually (one issue per year)	27	20.9
Bi-annually (two issues per year)	72	55.8
Tri-annually (three issues per year)	12	9.3
Quarterly (four issues per year)	12	9.3
Hybrid	129	100.0

Table 5.2 provides the alphabetical list of 129 journal titles and their publishers respectively. All 129 journals have the International Standard Serial Number (ISSN), indicating their listing in *Ulrich's Periodicals Directory*.

Table 5.2: The 129 Journals Completely Covered in MyCite 2008-2013

No.	Journal Title	ISSN/E-ISSN	Publisher
1	3L :The Southeast Asian Journal of English Language Studies	0128-5157	Universiti Kebangsaan Malaysia
2	AKADEMIKA : Jurnal Sains Kemasyarakatan dan Kemanusiaan	0126-5008	Universiti Kebangsaan Malaysia
3	Al-Bayan : Journal of al-Quran and al-Hadith	2232-1950	University of Malaya
4	Archives of Orofacial Sciences	1823-8602	Universiti Sains Malaysia
5	ASEAN Journal of Psychiatry	2231-7805	ASEAN Federation of Psychiatry and Mental Health, Universiti Kebangsaan Malaysia Medical Center
6	ASEAN Journal of Teaching & Learning in Higher Education	1985-5826	Universiti Kebangsaan Malaysia

Table 5.2: The 129 Journals Completely Covered in MyCite 2008-2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
7	Asian Academy of Management Journal	1394-2603	Universiti Sains Malaysia
8	Asian Academy of Management Journal of Accounting and Finance	1823-4992	Universiti Sains Malaysia
9	Asian Journal of Accounting and Governance	2180-3838	Universiti Kebangsaan Malaysia and the Malaysian Accountancy Research and Education Foundation
10	Asian Journal of Business and Accounting	1985-4064	University of Malaya
11	Asian Journal of Environment-Behaviour Studies	1394-0384	Universiti Teknologi MARA
12	Asia-Pacific Journal of Molecular Biology and Biotechnology	0128-7451	Malaysian Society for Molecular Biology and Biotechnology
13	Asia-Pacific Management Accounting Journal	1675-3194	Asia-Pacific Management Accounting Association, Universiti Teknologi MARA
14	Asiatic : IIUM Journal of English Language and Literature	1985-3016	International Islamic University Malaysia
15	Bulletin of the Malaysian Mathematical Sciences Society	0126-6705	Malaysian Mathematical Sciences Society and Universiti Sains Malaysia
16	Defence S&T Technical Bulletin	1985-6571	Science & Technology Research Institute for Defence
17	Economic and Technology Management Review	1823-8149	Malaysian Agricultural Research and Development Institute
18	Education in Medicine Journal	2180-1932	Universiti Sains Malaysia
19	English Teacher	0128-7729	Malaysian English Language Teaching Association
20	ESTEEM Academic Journal	1675-7939	Universiti Teknologi MARA
21	GEMA Online® Journal of Language Studies	1675-8021	Universiti Kebangsaan Malaysia
22	Geografia: Malaysian Journal of Society & Space	2180-2491	Universiti Kebangsaan Malaysia
23	IIUM Engineering Journal	1511-788X	International Islamic University Malaysia
24	IIUM Law Journal	0128-2530	International Islamic University Malaysia
25	Institutions and Economies (formerly International Journal of Institutions and Economies)	2232-1640	University of Malaya
26	Intellectual Discourse	0128-4878	International Islamic University Malaysia
27	International e-Journal of Science, Medicine & Education	2231-8194	International Medical University Malaysia

Table 5.2: The 129 Journals Completely Covered in *MyCite* 2008-2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
28	International Food Research Journal	1985-4668	Universiti Putra Malaysia
29	International Journal of Asia-Pacific Studies	1823-6243	Universiti Sains Malaysia
30	International Journal of Automotive and Mechanical Engineering	2229-8649	Universiti Malaysia Pahang
31	International Journal of Banking and Finance	1675-7227	Universiti Utara Malaysia
32	International Journal of Business and Society	1511-6670	Universiti Malaysia Sarawak
33	International Journal of Economics and Management	1823-836X	Universiti Putra Malaysia
34	International Journal of Economics, Management and Accounting (formerly IIUM Journal of Economics and Management)	0128-006	International Islamic University Malaysia
35	International Journal of Integrated Engineering	2229-838X	Universiti Tun Hussein Onn Malaysia
36	International Journal of Mechanical and Materials Engineering	1823-0334	University of Malaya
37	International Journal of Sustainable Construction Engineering and Technology	2180-3242	Universiti Tun Hussein Onn Malaysia, and Concrete Society of Malaysia
38	International Journal of West Asian Studies	2229-8924	Universiti Kebangsaan Malaysia
39	International Journal on Quranic Research	2180-4893	University of Malaya
40	International Medical Journal Malaysia	e-1823-4631	International Islamic University Malaysia
41	Islamiyyat The International Journal of Islamic Studies	0216-5636	Universiti Kebangsaan Malaysia
42	JATI: Journal of Southeast Asian Studies	1823-4127	University of Malaya
43	JEBAT : Malaysian Journal of History, Politics and Strategic Studies	0126-5644	Universiti Kebangsaan Malaysia
44	Journal of Agrobiotechnology	2180-1983	Universiti Sultan Zainal Abidin
45	Journal of Al-Tamaddun	1823-7517	University of Malaya
46	Journal of ASIAN Behavioural Studies	2180-4567	Universiti Teknologi MARA
47	Journal of Building Performance	2180-2106	Universiti Kebangsaan Malaysia
48	Journal of Construction in Developing Countries	1823-6499	Universiti Sains Malaysia
49	Journal of Design + Built	1985-6881	Universiti Kebangsaan Malaysia

Table 5.2: The 129 Journals Completely Covered in MyCite 2008-2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
50	Journal of Design and Built Environment	1823-4208	University of Malaya
51	Journal of Engineering Science and Technology	1823-4690	Taylor's University
52	Journal of Governance and Development (formerly known as Jurnal Rekayasa)	2289-2311	Universiti Utara Malaysia
53	Journal of Human Capital Development	1985-7012	Universiti Teknikal Malaysia Melaka
54	Journal of Information and Communication Technology	1675-414X	Universiti Utara Malaysia
55	Journal of International Studies	1823-691X	Universiti Utara Malaysia
56	Journal of Mechanical Engineering and Technology	2180-1053	Universiti Teknikal Malaysia Melaka
57	Journal of Modern Languages	1675-526X	University of Malaya
58	Journal of Oil Palm Research	1511-2780	Malaysian Palm Oil Board
59	Journal of Physical Science	1675-3402	Universiti Sains Malaysia
60	Journal of Research, Policy & Practice of Teachers and Teacher Education	2232-0458	Universiti Pendidikan Sultan Idris
61	Journal of Surveying, Construction and Property	1985-7527	University of Malaya
62	Journal of Technical Education and Training	2229-8932	Universiti Tun Hussein Onn Malaysia
63	Journal of Telecommunication, Electronic and Computer Engineering	2180-1843	Universiti Teknikal Malaysia Melaka
64	Journal of Tourism, Hospitality & Culinary Arts	1985-8914	Universiti Teknologi MARA
65	Journal of Tropical Agriculture and Food Science	1394-9829	Malaysian Agricultural Research and Development Institute
66	Journal of Tropical Forest Science	0128-1283	Forest Research Institute Malaysia
67	JUMMEC	1823-7339	University of Malaya
68	Jurnal al-Hikmah	1985-6822	Universiti Kebangsaan Malaysia
69	Jurnal Bahasa	1511-9084	Dewan Bahasa dan Pustaka
70	Jurnal Ekonomi Malaysia	0126-1962	Universiti Kebangsaan Malaysia
71	Jurnal Fiqh	1823-089X	University of Malaya
72	Jurnal Fizik Malaysia	0128-0333	Institut Fizik Malaysia
73	Jurnal Intelek	2231-7716	Universiti Teknologi MARA
74	Jurnal Kemanusiaan	1675-1930	Universiti Teknologi Malaysia
75	Jurnal Komunikasi, Malaysian Journal of Communication	2289-151X	Universiti Kebangsaan Malaysia
76	Jurnal Linguistik	1823-9242	Persatuan Linguistik Malaysia
77	Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)	2180-4842	Universiti Kebangsaan Malaysia
78	Jurnal Pendidikan Malaysia (Malaysian Journal of Education) (formerly Jurnal Pendidikan)	2180-0782	Universiti Kebangsaan Malaysia

Table 5.2: The 129 Journals Completely Covered in *MyCite* 2008-2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
79	Jurnal Pendidikan Sains & Matematik Malaysia	2232-0393	Universiti Pendidikan Sultan Idris
80	Jurnal Pengajian Media Malaysia	1511-2284	University of Malaya
81	Jurnal Pengurusan	0127-2713	Universiti Kebangsaan Malaysia
82	Jurnal Sains Kesihatan Malaysia	1675-8161	Universiti Kebangsaan Malaysia
83	Jurnal Syariah	0128-6730	University of Malaya
84	Jurnal Teknologi (Sains dan Kejuruteraan)	0127-9696	Universiti Teknologi Malaysia
85	Jurnal Undang-Undang dan Masyarakat (Malaysian Journal of Law and Society)	1394-7729	Universiti Kebangsaan Malaysia
86	Kajian Malaysia (Journal of Malaysian Studies)	0127-4082	Universiti Sains Malaysia
87	Kemanusiaan :The Asian Journal of Humanities (formerly Jurnal Ilmu Kemanusiaan)	1394-9330	Universiti Sains Malaysia
88	Labuan Bulletin of International Business & Finance	1675-7262	Universiti Malaysia Sabah
89	Labuan e-Journal of Muamalat and Society	1985-482X	Universiti Malaysia Sabah
90	Malaysian Accounting Review	1675-4077	Universiti Teknologi MARA and Malaysian Accountancy Research & Education Foundation
91	Malaysian Applied Biology (formerly Malaysian Agricultural Research)	0126-8643	Malaysian Society of Applied Biology
92	Malaysian Family Physician	1985-207X	Academy of Family Physicians of Malaysia
93	Malaysian Journal of Analytical Sciences	1394-2506	Malaysian Society of Analytical Sciences
94	Malaysian Journal of Chemistry	1511-2292	Institut Kimia Malaysia
95	Malaysian Journal of Civil Engineering	1823-7843	Universiti Teknologi Malaysia
96	Malaysian Journal of Computer Science	0127-9084	University of Malaya
97	Malaysian Journal of Distance Education	1511-6433	Universiti Sains Malaysia
98	Universiti Sains Malaysia	1511-4554	University of Malaya
99	Malaysian Journal of ELT Research	1511-8002	Malaysian English Language Teaching Association
100	Malaysian Journal of Learning & Instruction	1675-8110	Universiti Utara Malaysia
101	Malaysian Journal of Library & Information Science	1394-6234	University of Malaya
102	Malaysian Journal of Mathematical Sciences	1823-8343	Universiti Putra Malaysia
103	Malaysian Journal of Medical Sciences	1394-195X	Universiti Sains Malaysia
104	Malaysian Journal of Microbiology	1823-8262	Malaysian Society for Microbiology
105	Malaysian Journal of Pathology	0126-8635	Academy of Medicine of Malaysia

Table 5.2: The 129 Journals Completely Covered in MyCite 2008-2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
106	Malaysian Journal of Pharmaceutical Science	1675-7319	Universiti Sains Malaysia
107	Malaysian Journal of Psychiatry	2232-0385	Malaysian Psychiatric Association
108	Malaysian Journal of Soil Science	1394-7990	Malaysian Society of Soil Science
109	Malaysian Journal of Sport Science and Recreation	1823-3198	Universiti Teknologi MARA
110	Malaysian Journal of Veterinary Research	2180-3897	Department of Veterinary Services Malaysia
111	Malaysian Journal of Youth Studies	2180-1649	Kementerian Belia dan Sukan Malaysia
112	Malaysian Management Journal	0128-6226	Universiti Utara Malaysia
113	Malaysian Orthopaedic Journal	1985-2533	Malaysian Orthopaedic Association
114	Malaysian Polymer Journal	1823-7789	Plastics and Rubber Institute of Malaysia
115	MANU Jurnal Pusat Penataran Ilmu & Bahasa	1511-1989	Universiti Malaysia Sabah
116	MATEMATIKA	0127-8274	Universiti Teknologi Malaysia
117	Medical Journal of Malaysia	0300-5283	Malaysian Medical Association
118	PERSPEKTIF Jurnal Sains Sosial dan Kemanusiaan	1985-496X	Universiti Pendidikan Sultan Idris
119	Pertanika Journal of Science & Technology	0128-7680	Universiti Putra Malaysia
120	Pertanika Journal of Social Sciences & Humanities	0128-7702	Universiti Putra Malaysia
121	Pertanika Journal of Tropical Agricultural Science	1511-3701	Universiti Putra Malaysia
122	Sains Malaysiana	0126-6039	Universiti Kebangsaan Malaysia
123	SEARCH Journal of the Southeast Asia Research Centre for Communications and Humanities	2229-872X	Taylor's University
124	Sepilok Bulletin	1823-0067	Sabah Forestry Department
125	TEAM Journal of Hospitality and Tourism	1823-4003	Taylor's University
126	Terengganu International Management and Business Journal	e-2232-0741	Universiti Teknologi MARA
127	Tropical Biomedicine	0127-5720	Malaysian Society of Parasitology and Tropical Medicine
128	Tropical Life Sciences Research (formerly Journal of Bioscience)	1985-3718	Universiti Sains Malaysia
129	Wacana Seni : Journal of Arts Discourse	1675-3410	Universiti Sains Malaysia

5.2 Coverage of Journals by Disciplines and Fields

The 129 journals produce a total of 22,926 articles in five broad disciplines (Table 5.3). The results show that there are more titles published in the arts & humanities and social sciences (AHSS) fields (71, 55.0%) compared to the science, technology and medicine (STM) fields (58, 45.0%). There are more journals in the social sciences fields successful in getting indexation status in *MyCite* (46, 35.7%). In the arts and humanities, there are more journals in the fields of languages and religion, whereas in the social sciences, more journals in the fields of business and economics are represented. It is safe to assume that there are more journals in the fields of engineering and general medicine published in Malaysia, as there are more journals in these two fields (12 respectively) covered by *MyCite*.

Table 5.3: Number of Journals Indexed in *MyCite* by Broad Disciplines and Fields

Disciplines	Number of Journals	Percent	Number of Articles	Percent
Arts & Humanities	25	19.4	2,744	12.0
Engineering & Technology	18	14.0	3,004	13.1
Medical & Health Sciences	15	11.6	4,748	20.7
Sciences	25	19.4	7,496	32.7
Social Sciences	46	35.7	4,934	21.5
TOTAL	129	100.0	22,926	100.0

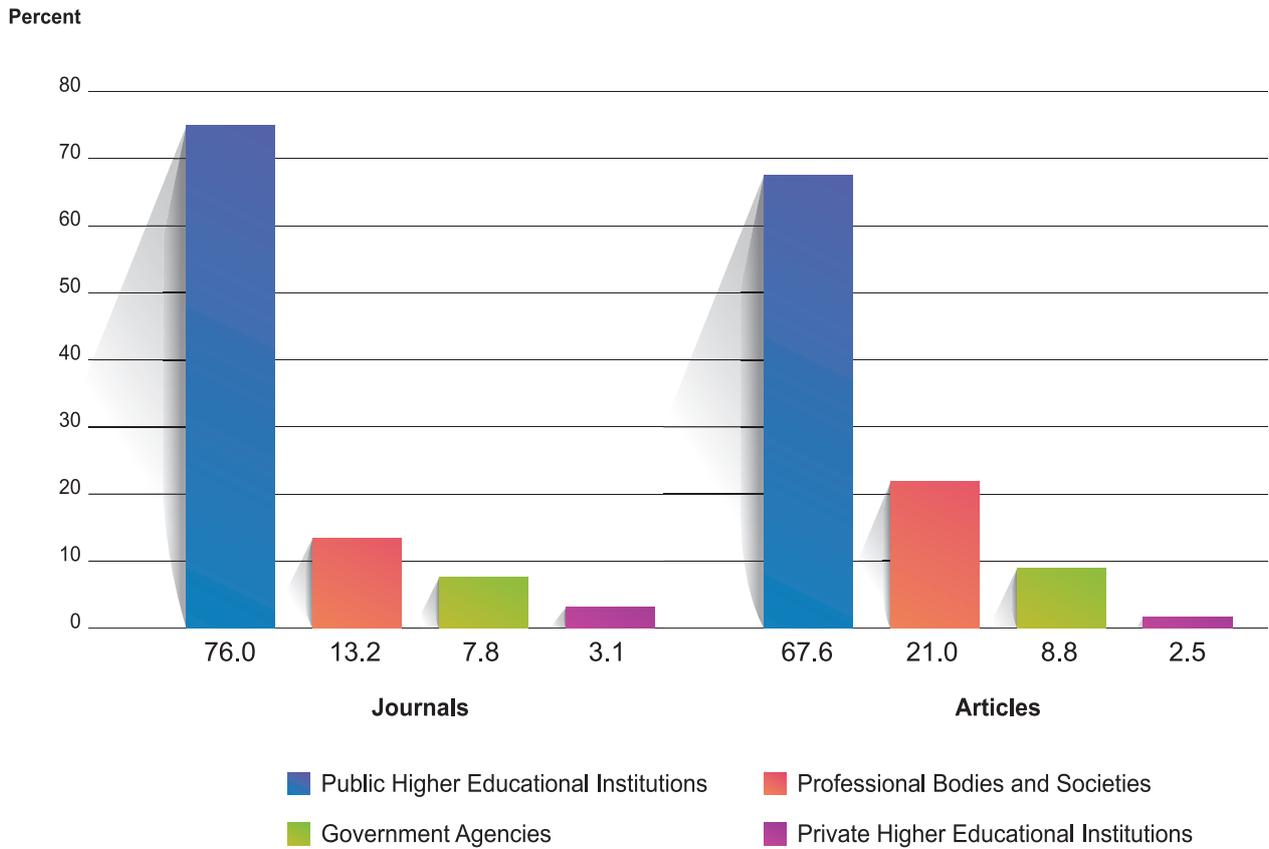
Fields/Sub-Fields	Number of Journals	Percent	Number of Articles	Percent
Arts & Humanities	25	19.4	2,744	12.0
History	4	3.1	474	2.1
Languages & linguistics	9	7.0	1,275	5.6
Literature	1	0.8	29	0.1
Performing arts	1	0.8	64	0.3
Philosophy	2	1.6	129	0.6
Religion	7	5.4	728	3.2
Visual arts	1	0.8	45	0.2
Engineering & Technology	18	14.0	3,004	13.1
Architecture & design	4	3.1	219	1.0
Computer sciences	2	1.6	408	1.8
Engineering	12	9.3	2,377	10.4
Medical & Health Sciences	15	11.6	4,748	20.7
Dentistry	1	0.8	113	0.5
Immunology & Microbiology	1	0.8	409	1.8
General Medicine	12	9.3	4,135	18.0
Pharmacology, Toxicology & Pharmaceutics	1	0.8	91	0.4

Table 5.3: Number of Journals Indexed in MyCite by Broad Disciplines and Fields (cont.)

Fields/Sub-Fields	Number of Journals	Percent	Number of Articles	Percent
Sciences	25	19.4	7,496	32.7
Agricultural sciences	6	4.7	1,677	7.3
Biological sciences	6	4.7	2,362	10.3
Chemistry	3	2.3	595	2.6
Earth sciences	1	0.8	74	0.3
Life sciences	2	1.6	1,301	5.7
Mathematics & statistics	3	2.3	936	4.1
Physics	3	2.3	498	2.2
Sports Sciences	1	0.8	53	0.2
Social Sciences	46	35.7	4,934	21.5
Business & administration	10	7.8	932	4.1
Cultural and ethnic studies	1	0.8	90	0.4
Economics & finance	12	9.3	1,448	6.3
Education & educational research	9	7.0	704	3.1
Geography	1	0.8	335	1.5
Law	3	2.3	220	1.0
Library & Information Science	1	0.8	308	1.3
Media & communication	2	1.6	233	1.0
Political science	2	1.6	125	0.5
Psychology	1	0.8	91	0.4
Sociology	4	3.1	448	2.0
TOTAL	129	100.0	22,926	100.0

5.3 Coverage of Journals by Types of Publishers

The majority of the journals indexed are published by public higher educational institutions (98, 76.0%), and this indicates that the universities are the main publishers, followed by professional societies (17, 13.2%) and government agencies (10, 7.8%). This is because universities in Malaysia consider scholarly journals as a prerequisite for faculty promotion and tenure and so they are an important publishing outlet for the country's research. This may also be due to the fact that the universities and/or the university presses have increasingly been adopting the Gold Road Open Access policy, opening full access to their journals and consciously requesting to be indexed to increase the journals visibility and gauge their performance. Figure 5.1 illustrates and details the proportion of journals and articles indexed in MyCite by types of publishers. These findings indicate that (a) most authoritative journal publishers in Malaysia are still either educational or non-profit organizations, and (b) Malaysian journals are not run by for-profit publishers or publishers that are commercial in nature.



Publisher Type	Number of Journals	Percent	Number of Articles	Percent
Public Higher Educational Institutions	98	76.0	15,508	67.6
Professional Bodies And Societies	17	13.2	4,824	21.0
Government Agencies	10	7.8	2,028	8.8
Private Higher Educational Institutions	4	3.1	566	2.5
TOTAL	129	100.0	22,926	100.0

Figure 5.1: Proportion of Journals and Articles Indexed in *MyCite* by Types of Publisher

The public higher educational institutions were compared on the basis of the number of journals published and completely indexed in *MyCite*. As could be expected, research-designated universities have published substantial number of journals, with Universiti Kebangsaan Malaysia having the most number of journals completely indexed (21), followed by University of Malaya (17) and Universiti Sains Malaysia (15) (Figure 5.2). This finding indicates that Malaysia has developed a well-defined local scholarly journal publishing industry based in its universities.

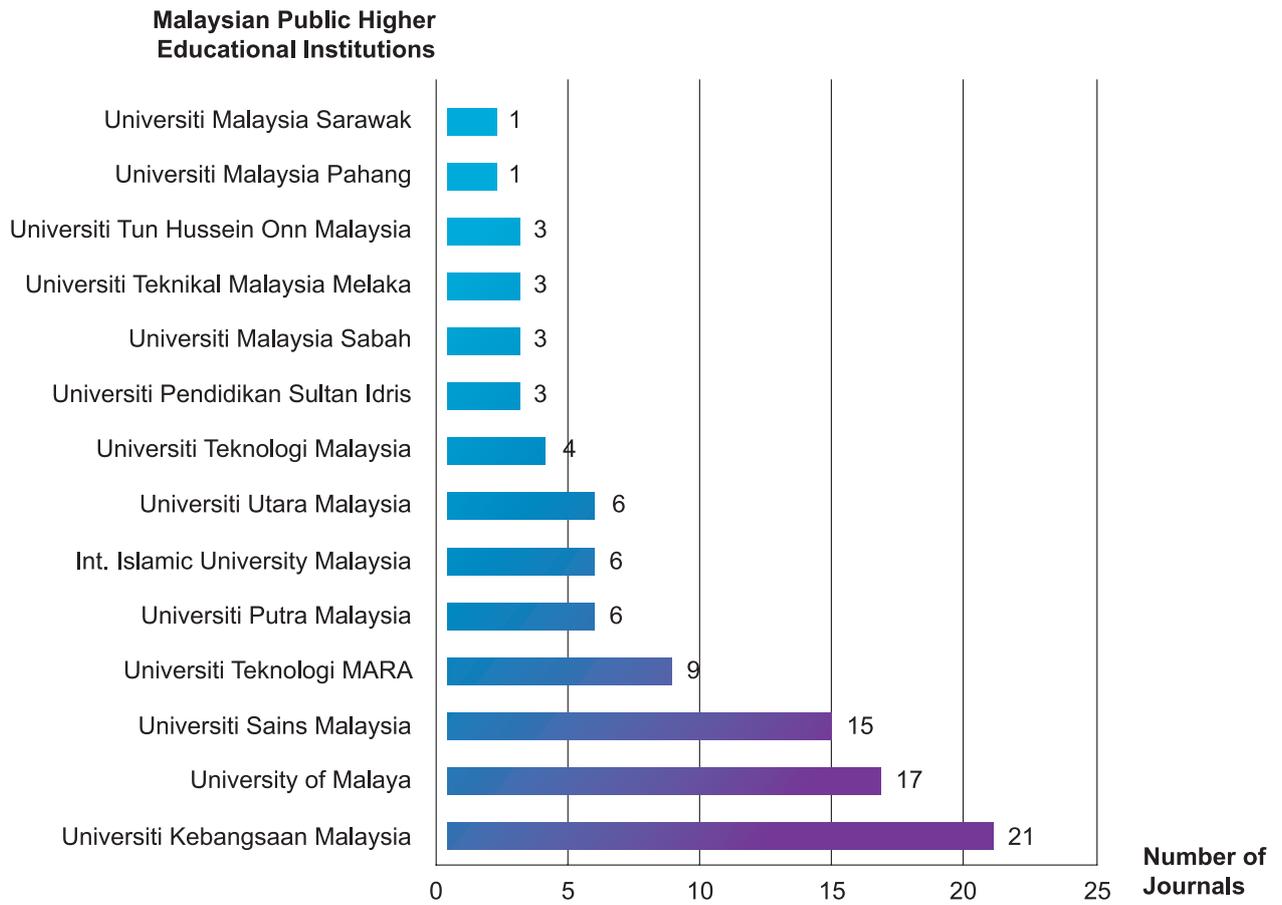


Figure 5.2: The Number of Journals Published by Malaysian Public Higher Educational Institutions and Completely Indexed in MyCite 2008-2013

6.0 • PERFORMANCE STATUS OF JOURNALS INDEXED IN *MyCite*

This section describes the performance of the journals indexed in *MyCite* based on bibliometric indicators comprising, publication productivity and citation activity in 2-year and 5-year windows, yearly and 5-year impact factor (IF), immediacy index, cited half-life and *h*-index. The report will provide information about active authors and institutions, foreign authors that contribute articles to Malaysian journals, international research collaboration from co-authorship pattern, highly-cited papers, the uncited pattern of articles published in Malaysian journals by broad disciplines as well as by journal titles, and the internationalization status of the journals. Citation counts are not carried out for journals that adopt the footnoting citation style instead of the practice of end of the article referencing. The section begins with the listing and making observations about the journals performances in terms of their bibliometric scores related to IF, *h*-index, cited half-life and immediacy index. The following sections provide a ranked list of Malaysian journals by their yearly IF and inferring how the volume of articles published may affect journal's impact performance. The journals' IF performances are also observed by broad STM and AHSS fields, and through foreign authorship.

The productivity is observed in terms of the active authors and active institutions by their total article contribution, the total citations accrued as well as productivity by broad fields of STM and AHSS. A section lists the highly-cited papers and the uncitedness of Malaysian articles in general as observed by fields of studies, as well as by journal titles listed under broad subject fields. International research collaboration and the internationalization status measured through country co-authorships is also shown in the final paragraphs of this section.

6.1 Journals' Performances: *h*-index, Immediacy, Cited Half-life

This section highlights the journals' performances in terms of their *h*-index, cited half-life and immediacy index. Table 6.1 shows an alphabetical list of 129 journal titles indexed in MyCite and against each title, the bibliometric scores are indicated. Out of the 129 titles only 1(0.8%) title, *GEMA Online® Journal of Language Studies*, published by Universiti Kebangsaan Malaysia achieved an *h*-index score of 6. A total of 3 titles (2.3%), *International Food Research Journal* (Universiti Putra Malaysia), *Tropical Biomedicine* (Malaysian Society of Parasitology and Tropical Medicine), and *Medical Journal of Malaysia* (Malaysian Medical Association) have an *h*-index of 5. Two titles (1.5%), *Malaysian Journal of Medical Sciences* (Universiti Sains Malaysia) and *Malaysian Journal of Library & Information Science* (University of Malaya) scored an *h*-index of 4 each. A total of 18 titles (14.0%) scored an *h*-index of 3, and 38 titles (29.5%) have an *h*-index of 2. The majority of titles (55,42.6%) score an *h*-index of 1 and 12 titles (9.3%) did not obtain any score. Figure 6.1 presents these findings and Table 6.2 lists 24 journal titles that obtained an *h*-index of 3 and above. Hirsch (2007) and Harzing and Wal (2008) indicate that the *h*-index score could be a better measure in predicting the achievements of a journal. The calculation takes into account both the productivity and citations received by a journal and is not bound over a specific or multiple year window frames. Therefore, the number of papers a journal publishes could influence its *h*-index, as more papers would have higher likelihood to be cited. This is evidenced by the total articles published in journals that have fairly high *h*-indices such as *International Food Research Journal* and *Medical Journal of Malaysia*, which contributed 1,327 and 1,349 articles respectively. The *h*-index situation indicates that larger indexation coverage would help improve a journal's *h*-index score. Therefore, it is encouraged that Malaysian journal publishers commit to submit or give notice of all issues they publish (print or electronic) to the MCC for indexation. This effort would make it possible to fully gauge the performance of the journals they publish at the national level.

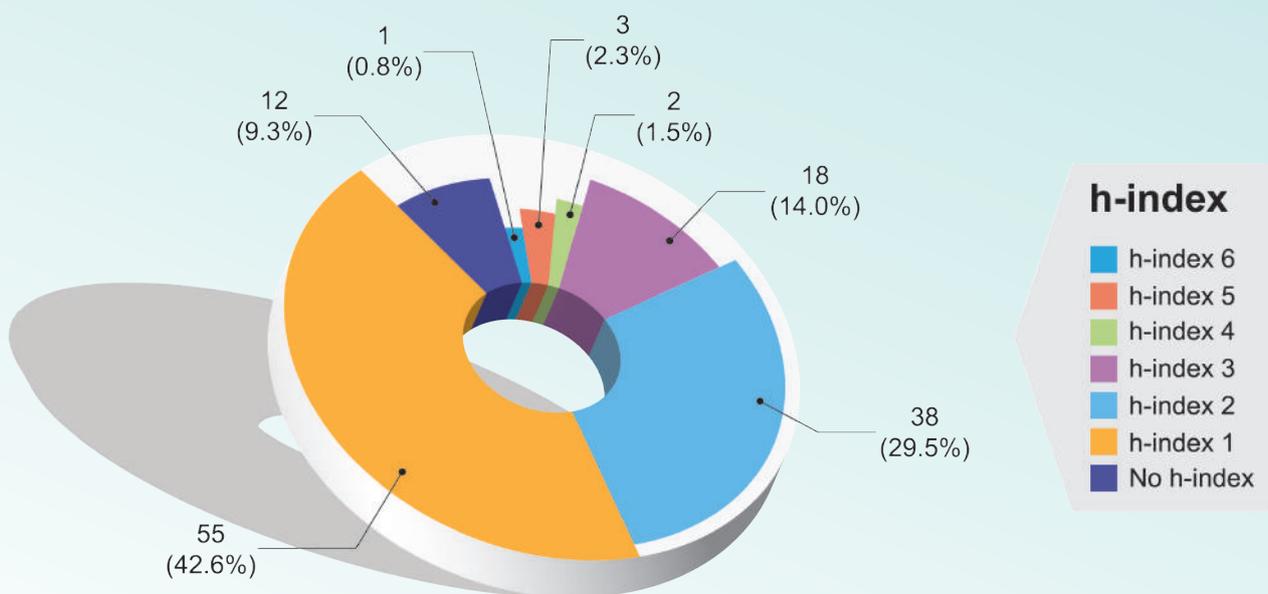


Figure 6.1: The Number and Percentage of Journals and their *h*-index Assignments in MyCite

Table 6.1: Performance of Malaysian Journals Indexed in MyCite 2013

No.	Journals	ISSN/ E-ISSN	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	Imme- diacy Index	Cited Half- Life	h-index
1	3L: The Southeast Asian Journal of English Language Studies	0128-5157	112	83	12	8	0.107	0.096	0.030	1.5	3
2	AKADEMIKA: Jurnal Sains Kemasyarakatan dan Kemanusiaan	0126-5008	137	72	9	5	0.066	0.069	0.000	3.0	2
3	Al-Bayan: Journal of al-Quran and al-Hadith	2232-1950 e-2232-1969	51	22	0	0	-	-	0.000	1.0	1
4	Archives of Orofacial Sciences	1823-8602 e-2231-7163	67	33	1	0	0.015	-	0.000	2.4	2
5	ASEAN Journal of Psychiatry	2231-7805 e-2231-7791	116	48	8	4	0.069	0.083	0.000	2.2	2
6	ASEAN Journal of Teaching & Learning in Higher Education	1985-5826	59	35	1	1	0.017	0.029	0.000	1.6	1
7	Asian Academy of Management Journal	1394-2603 e-2180-4184	66	31	4	2	0.061	0.065	0.000	1.7	1
8	Asian Academy of Management Journal of Accounting and Finance	1823-4992 e-2180-4192	63	30	8	3	0.127	0.100	0.000	1.9	3
9	Asian Journal of Accounting and Governance	2180-3838	21	16	2	2	0.095	0.125	0.000	0.5	1
10	Asian Journal of Business and Accounting	1985-4064 e-2180-3137	53	21	1	0	0.019	-	0.000	2.7	2
11	Asian Journal of Environment-Behaviour Studies	1394-0384	69	49	4	2	0.058	0.041	0.000	1.4	2
12	Asia-Pacific Journal of Molecular Biology and Biotechnology	0128-7451	131	39	5	0	0.038	-	0.000	2.6	2
13	Asia-Pacific Management Accounting Journal	1675-3194	36	19	3	2	0.083	0.105	0.000	2.0	2
14	Asiatic: IJUM Journal of English Language and Literature	1985-3016	148	59	2	0	0.014	-	0.000	0.8	1
15	Bulletin of the Malaysian Mathematical Sciences Society	0126-6705	257	157	53	40	0.206	0.255	0.069	0.8	3
16	Defence S&T Technical Bulletin	1985-6571	50	33	2	2	0.040	0.061	0.100	2.8	1
17	Economic and Technology Management Review	1985-6571	43	16	2	1	0.047	0.063	0.000	2.0	1
18	Education in Medicine Journal	2180-1932	47	41	10	8	0.213	0.195	0.000	0.6	2
19	English Teacher	0128-7729	54	24	4	1	0.074	0.042	0.000	2.5	3
20	ESTEEM Academic Journal	1675-7939 e-2289-4934	100	30	0	0	-	-	0.000	1.0	1
21	GEMA Online® Journal of Language Studies	1675-8021	145	101	60	41	0.414	0.406	0.050	1.4	6
22	Geografia: Malaysian Journal of Society & Space	2180-2491	216	165	2	2	0.009	0.012	0.021	1.3	2
23	IJUM Engineering Journal	1511-788X e-2289-7860	149	114	2	0	0.013	-	0.000	1.0	1
24	IJUM Law Journal	0128-2530	62	23	0	0	-	-	0.000	1.0	1
25	Institutions and Economics (formerly International Journal of Institutions and Economics)	2232-1640 e-2232-1349	53	43	5	4	0.094	0.093	0.000	0.6	2
26	Intellectual Discourse	0128-4878 e-2289-5639	55	23	1	1	0.018	0.043	0.000	0.7	1
27	International e-Journal of Science, Medicine & Education	2231-8194	79	44	3	1	0.038	0.023	0.045	2.0	2
28	International Food Research Journal	1985-4668	666	447	74	45	0.111	0.101	0.009	1.8	5
29	International Journal of Asia-Pacific Studies	1823-6243	54	27	0	0	-	-	0.000	1.5	1
30	International Journal of Automotive and Mechanical Engineering	2229-8649 e-2180-1606	65	46	19	7	0.292	0.152	0.036	0.5	2
31	International Journal of Banking and Finance	1675-7227	73	35	2	1	0.027	0.029	0.091	0.6	1
32	International Journal of Business and Society	1511-6670	79	40	1	0	0.013	-	0.000	3.0	1
33	International Journal of Economics and Management	1823-836X	108	42	14	2	0.130	0.048	0.000	1.5	2
34	International Journal of Economics, Management and Accounting (formerly IJUM Journal of Economics and Management)	2229-8649	20	20	0	0	-	-	0.000	0.0	0
35	International Journal of Integrated Engineering	2229-838X	92	38	0	0	-	-	0.000	1.0	1
36	International Journal of Mechanical and Materials Engineering	1823-0334	211	93	5	2	0.024	0.022	0.059	2.0	3
37	International Journal of Sustainable Construction Engineering and Technology	2180-3242	53	34	3	1	0.057	0.029	0.000	0.7	1

Table 6.1: Performance of Malaysian Journals Indexed in *MyCite* 2013 (cont.)

No.	Journals	ISSN/ E-ISSN	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	Imme- diacy Index	Cited Half- Life	h-index
38	International Journal of West Asian Studies	2229-8924 e-2180-4788	36	24	0	0	-	-	0.000	1.0	1
39	International Journal on Quranic Research	2180-4893	26	26	1	1	0.038	0.038	0.000	0.5	1
40	International Medical Journal Malaysia	e-1823-4631	115	44	4	1	0.035	0.023	0.000	1.0	2
41	Islamiyyat The International Journal of Islamic Studies	0216-5636	30	23	0	0	-	-	0.000	0.0	0
42	JATI : Journal of Southeast Asian Studies	1823-4127	77	33	16	11	0.208	0.333	0.000	0.8	2
43	JEBAT : Malaysian Journal of History, Politics and Strategic Studies	0126-5644 e-2180-0251	50	32	2	0	0.040	-	0.000	1.0	2
44	Journal of Agrobiotechnology	2180-1983	22	14	2	0	0.091	-	0.000	0.5	0
45	Journal of Al-Tamaddun	1823-7517	61	28	0	0	-	-	0.000	1.0	1
46	Journal of ASIAN Behavioural Studies	2180-4567	49	49	1	1	0.020	0.020	0.000	0.5	1
47	Journal of Building Performance	2180-2106	27	16	1	1	0.037	0.063	0.000	0.5	1
48	Journal of Construction in Developing Countries	1823-6499 e-2180-4222	61	31	3	0	0.049	-	0.000	1.6	1
49	Journal of Design + Built	1985-6881	57	27	6	2	0.74	0.6	0.000	0.6	2
50	Journal of Design and Built Environment	1823-4208 e-2232-1500	47	22	0	0	-	-	0.000	1.5	1
51	Journal of Engineering Science and Technology	1823-4690	229	120	7	5	0.031	0.042	0.014	1.9	3
52	Journal of Governance and Development (formerly known as Jurnal ReKayasa)	2289-2311	20	14	0	0	-	-	0.000	0.0	0
53	Journal of Human Capital Development	1985-7012	81	37	4	1	0.049	0.027	0.000	0.8	1
54	Journal of Information and Communication Technology	1675-414X e-2180-3862	41	21	5	1	0.122	0.048	0.000	1.0	1
55	Journal of International Studies	1823-691X	42	18	0	0	-	-	0.000	0.0	1
56	Journal of Mechanical Engineering and Technology	2180-1053	47	26	0	0	-	-	0.077	1.0	1
57	Journal of Modern Languages	1675-526X	19	10	0	0	-	-	0.000	2.1	1
58	Journal of Oil Palm Research	1511-2780	163	79	13	2	0.080	0.025	0.077	3.6	3
59	Journal of Physical Science	1675-3402 e-2180-4230	87	32	0	0	-	-	0.000	3.0	1
60	Journal of Research, Policy & Practice of Teachers and Teacher Education	2232-0458	20	20	0	0	-	-	0.000	0.0	0
61	Journal of Surveying, Construction and Property	1985-7527	29	23	0	0	-	-	0.000	0.0	0
62	Journal of Technical Education and Training	2229-8932	52	26	2	1	0.038	0.038	0.000	0.8	1
63	Journal of Telecommunication, Electronic and Computer Engineering	2180-1843	71	41	6	5	0.085	0.122	0.000	0.6	2
64	Journal of Tourism, Hospitality & Culinary Arts	1985-8914	78	41	0	0	-	-	0.000	1.0	1
65	Journal of Tropical Agriculture and Food Science	1394-9829	102	56	2	1	0.020	0.018	0.000	1.3	1
66	Journal of Tropical Forest Science	0128-1283	262	121	11	3	0.042	0.025	0.017	3.4	3
67	JUMMEC	1823-7339 e-2289392X	70	17	2	0	0.029	-	0.000	5.0	1
68	Jurnal al-Hikmah	1985-6822	23	23	0	0	-	-	0.000	0.0	0
69	Jurnal Bahasa	1511-9084	70	28	4	1	0.057	0.036	0.000	2.6	3
70	Jurnal Ekonomi Malaysia	0126-1962	68	42	7	3	0.103	0.071	0.031	1.5	2
71	Jurnal Fiqh	1823-089X e-2289-7518	51	18	0	0	-	-	0.000	1.0	1
72	Jurnal Fizik Malaysia	0128-0333	42	7	0	0	-	-	0.000	8.4	1
73	Jurnal Intelek	2231-7716	65	49	0	0	-	-	0.000	2.0	1
74	Jurnal Kemanusiaan	1675-1930	78	34	0	0	-	-	0.000	1.9	2
75	Jurnal Komunikasi, Malaysian Journal of Communication	0128-0496 e-2289-1528	67	47	9	7	0.134	0.149	0.042	1.9	3
76	Jurnal Linguistik	1823-9242	59	40	1	1	0.017	0.025	0.000	1.5	1
77	Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)	2180-4842	35	35	11	11	0.314	0.314	0.067	1.1	3
78	Jurnal Pendidikan Malaysia (Malaysian Journal of Education)	0126-6020	78	26	5	0	0.064	-	0.000	1.6	3
79	Jurnal Pendidikan Sains & Matematik Malaysia	2232-0393	23	23	1	1	0.043	0.043	0.063	0.5	1
80	Jurnal Pengajian Media Malaysia	1511-2284 e-2231-8143	65	26	3	1	0.046	0.038	0.000	2.8	2
81	Jurnal Pengurusan	0127-2713	92	57	4	2	0.043	0.035	0.024	0.9	3
82	Jurnal Sains Kesihatan Malaysia	1675-8161 e-2289-4535	87	37	2	0	0.023	-	0.000	2.3	2
83	Jurnal Syariah	0128-6730	111	28	13	1	0.117	0.036	0.000	3.0	2

Table 6.1: Performance of Malaysian Journals Indexed in MyCite 2013 (cont.)

No.	Journals	ISSN/ E-ISSN	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	Imme- diacy Index	Cited Half- Life	h-index
84	Jurnal Teknologi (Sains dan Kejuruteraan)	0127-9696 e-2180-3722	228	140	29	11	0.127	0.079	0.004	0.7	2
85	Jurnal Undang-Undang dan Masyarakat	1394-7729	64	24	0	0	-	-	0.000	2.5	1
86	Kajian Malaysia (Journal of Malaysian Studies)	0127-4082 e-2180-4273	54	38	3	2	0.056	0.053	0.000	2.0	2
87	Kemanusiaan: The Asian Journal of Humanities (formerly Jurnal Ilmu Kemanusiaan)	1394-9330 e-2180-4257	34	19	1	0	0.029	-	0.000	1.8	0
88	Labuan Bulletin of International Business & Finance	1985-482X	23	8	0	0	-	-	0.000	1.7	1
89	Labuan e-Journal of Muamalat and Society	1985-482X	27	8	0	0	-	-	0.000	2.0	1
90	Malaysian Accounting Review	1675-4077	61	22	7	0	0.115	-	0.000	2.8	3
91	Malaysian Applied Biology (formerly Malaysian Agricultural Research)	0126-8643	99	37	2	0	0.020	-	0.000	2.8	2
92	Malaysian Family Physician	1985-207X e-1985-2274	111	39	3	3	0.027	0.077	0.000	1.8	2
93	Malaysian Journal of Analytical Sciences	1394-2506	205	80	4	0	0.020	-	0.000	3.8	2
94	Malaysian Journal of Chemistry	1511-2292	45	13	1	0	0.022	-	0.000	1.0	1
95	Malaysian Journal of Civil Engineering	1823-7843	81	27	12	10	0.148	0.370	0.000	1.8	2
96	Malaysian Journal of Computer Science	0127-9084	68	32	6	3	0.088	0.094	0.000	4.8	2
97	Malaysian Journal of Distance Education	1511-6433 e-2180-4265	63	27	0	0	-	-	0.000	2.5	1
98	Malaysian Journal of Economic Studies	1511-4554	50	22	1	0	0.020	-	0.083	3.7	3
99	Malaysian Journal of ELT Research	1511-8002	40	21	4	2	0.100	0.095	0.000	0.8	1
100	Malaysian Journal of Learning & Instruction	1675-8110 e-2180-2483	36	15	8	3	0.222	0.200	0.000	0.7	2
101	Malaysian Journal of Library & Information Science	1394-6234	106	48	8	2	0.075	0.042	0.000	4.1	4
102	Malaysian Journal of Mathematical Sciences	1823-8343	108	44	4	2	0.037	0.045	0.034	2.0	1
103	Malaysian Journal of Medical Sciences	1394-195X e-2180-4303	203	93	13	4	0.064	0.043	0.000	3.2	4
104	Malaysian Journal of Microbiology	1823-8262 e-2231-7538	152	80	7	2	0.046	0.025	0.000	2.1	3
105	Malaysian Journal of Pathology	0126-8635	112	45	4	1	0.036	0.022	0.045	6.2	2
106	Malaysian Journal of Pharmaceutical Science	1675-7319 e-2180-429X	38	8	0	0	-	-	0.000	2.5	1
107	Malaysian Journal of Psychiatry	0128-8628	114	41	3	1	0.026	0.024	0.000	4.8	2
108	Malaysian Journal of Soil Science	1394-7990	45	19	1	1	0.022	0.053	0.000	2.3	1
109	Malaysian Journal of Sport Science and Recreation	1823-3198	32	10	0	0	-	-	0.000	0.0	0
110	Malaysian Journal of Veterinary Research	2180-3897	46	38	1	0	0.022	-	0.000	0.5	1
111	Malaysian Journal of Youth Studies	2180-1649	69	46	2	0	0.029	-	0.000	1.2	1
112	Malaysian Management Journal	0128-6226 e-2289-6651	29	10	0	0	-	-	0.000	4.0	2
113	Malaysian Orthopaedic Journal	1985-2533 e-2232-111X	175	84	0	0	-	-	0.024	2.0	1
114	Malaysian Polymer Journal	1823-7789	74	28	0	0	-	-	0.000	2.0	1
115	MANU Jurnal Pusat Penataran Ilmu & Bahasa	1511-1989	20	20	0	0	-	-	0.000	0.0	0
116	MATEMATIKA	0127-8274	95	36	1	1	0.011	0.028	0.000	3.8	2
117	Medical Journal of Malaysia	0300-5283	566	284	22	9	0.039	0.032	0.000	5.7	5
118	PERSPEKTIF Jurnal Sains Sosial dan Kemanusiaan	1985-496X	29	29	0	0	-	-	0.000	0.0	0
119	Pertanika Journal of Science & Technology	0128-7680 e-2231-8526	174	95	0	0	-	-	0.000	2.5	1
120	Pertanika Journal of Social Sciences & Humanities	0128-7702 e-2231-8534	275	183	11	3	0.040	0.016	0.000	1.5	2
121	Pertanika Journal of Tropical Agricultural Science	1511-3701 e-2231-8542	190	115	6	4	0.032	0.035	0.000	1.8	2
122	Sains Malaysiana	0126-6039	769	421	28	14	0.036	0.033	0.000	1.7	3
123	SEARCH Journal of the Southeast Asia Research Centre for Communications and Humanities	2229-872X	31	18	0	0	-	-	0.000	0.0	1
124	Sepilok Bulletin	1823-0067	44	14	8	1	0.182	0.071	0.000	3.7	3
125	TEAM Journal of Hospitality and Tourism	1823-4003	29	12	0	0	-	-	0.000	0.5	1
126	Terengganu International Management and Business Journal	2232-0741	20	20	0	0	-	-	0.000	0.0	0
127	Tropical Biomedicine	0127-5720	332	163	21	11	0.063	0.067	0.000	3.3	5
128	Tropical Life Sciences Research (formerly Journal of Bioscience)	1985-3718	92	32	5	2	0.054	0.063	0.000	2.4	2
129	WacanaSeni : Journal of Arts Discourse	1675-3410 e-2180-4311	22	14	1	0	0.045	-	0.000	0.5	1

Table 6.2: Summary Ranking of Malaysian Journals in *MyCite* by *h*-index 2013

No.	Journals	Total Articles	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	<i>h</i> -index
1	GEMA Online® Journal of Language Studies	248	145	101	60	41	0.414	0.406	6
2	International Food Research Journal	1,327	666	447	74	45	0.111	0.101	5
3	Tropical Biomedicine	555	332	163	21	11	0.063	0.067	5
4	Medical Journal of Malaysia	1,349	566	284	22	9	0.039	0.032	5
5	Malaysian Journal of Medical Sciences	461	203	93	13	4	0.064	0.043	4
6	Malaysian Journal of Library & Information Science	308	106	48	8	2	0.075	0.042	4
7	Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)	58	35	35	11	11	0.314	0.314	3
8	Bulletin of the Malaysian Mathematical Sciences Society	524	257	157	53	40	0.206	0.255	3
9	Jurnal Komunikasi, Malaysian Journal of Communication	116	67	47	9	7	0.134	0.149	3
10	Asian Academy of Management Journal of Accounting and Finance	105	63	30	8	3	0.127	0.100	3
11	3L: The Southeast Asian Journal of English Language Studies	208	112	83	12	8	0.107	0.096	3
12	Sepilok Bulletin	99	44	14	8	1	0.182	0.071	3
13	English Teacher	94	54	24	4	1	0.074	0.042	3
14	Journal of Engineering Science and Technology	347	229	120	7	5	0.031	0.042	3
15	Jurnal Bahasa	251	70	28	4	1	0.057	0.036	3
16	Jurnal Pengurusan	149	92	57	4	2	0.043	0.035	3
17	Sains Malaysiana	1,213	769	421	28	14	0.036	0.033	3
18	Journal of Oil Palm Research	344	163	79	13	2	0.080	0.025	3
19	Malaysian Journal of Microbiology	249	152	80	7	2	0.046	0.025	3
20	Journal of Tropical Forest Science	828	262	121	11	3	0.042	0.025	3
21	International Journal of Mechanical and Materials Engineering	252	211	93	5	2	0.024	0.022	3
22	Jurnal Pendidikan Malaysia	141	78	26	5	0	0.064	-	3
23	Malaysian Accounting Review	122	61	22	7	0	0.115	-	3
24	Malaysian Journal of Economic Studies	125	50	22	1	0	0.020	-	3
	38 titles								2
	55 titles								1
	12 titles								0

Out of the 129 titles, only 24 titles (18.7%) show immediacy index scores, comprising 10 journal titles from the AHSS and 14 titles in the STM disciplines. This indicates that in general, Malaysian journals do not perform well on immediacy index scores. Immediacy index score shows how quickly articles published in a journal get cited, inferring their immediate significance or the currency of topics covered. Immediacy scores would help identify the current trend in research and therefore could be used by journal editorials to focus publishing on certain topics. Most of the journal titles indicate low immediacy index scores of below 1.0. Scores for the cited half-life indicate the median age of articles cited for a journal. Malaysian journals indexed in *MyCite* shows cited half-life scores ranging from 0.5 to 8.4. For example *Jurnal Fizik Malaysia* obtains a score of 8.4 indicating that about 50.0% of citations received are mainly from articles published between 2008 and 2013. Another journal that has good cited half-life score of 6.2 is *Malaysian Journal of Pathology* indicating about half of citations obtained for this journal would be from articles published in the last 6 years. Libraries could use cited half-life scores to assist in making decisions about collection development or archiving a journal title.

6.2 Journals Indexed in *MyCite* Ranked by Impact Factor

Table 6.3 lists the 129 journal titles ranked by their yearly IF scores in 2013. The journal yearly IF is measured in accordance to the Thomson Reuter's derived Journal Impact Factor (JIF). The measure uses a 2-year publication window and is commonly used by other citation databases in the Asia-Pacific region. The JIF of a journal is a measure reflecting the average number of times articles from a journal published in the past two years have been cited in the calculated year (i.e. 2013). The 5-year IF is calculated similarly but instead uses a 5-year publication window. The Malaysian journals indexed in the *WoS* citation databases and *Scopus* comprise a very small number of journals published in Malaysia, and their performance at the international level can be gauged through these databases. However, there is no means of identifying their national impact. Indexation in *MyCite* provides this information. The yearly IF provides the national impact of a journal as it indicates the citations received from other Malaysian journals indexed in *MyCite*. Perhaps in future, aggregated scores from *WoS*, *Scopus* and *MyCite* could be used to determine the true impact of Malaysian journals.

Out of 129 journal titles indexed in *MyCite*, 70 titles (54.0%) show yearly IF scores. The other 59 journal titles do not show any yearly IF score. The latter situation occurs because none of the articles published are cited in the other Malaysian journals in the calculated years. Out of the 70 journal titles with yearly IF, 14 titles (10.8%) obtain yearly IF scores of between 0.1 and 0.4, 19 titles (14.7%) have IF scores of between 0.05 and 0.09 and 37 titles (28.7%) have IF scores of between 0.01 and 0.04. Generally, the IF scores obtained by the journals are low. This may be due to the citing behaviour of Malaysian authors. Malaysian authors seldom cite articles published in other Malaysian journals perhaps because of the non-accessibility of Malaysian journals. Before being indexed in *MyCite*, most of the articles published in Malaysian journals are not easily accessible to researchers across the country. Even though some journals are available on the Web, most are not searchable at the article level. Making journals available in *MyJournal* and reporting performances in *MyCite* allow all Malaysian journals indexed searchable on the Web, providing greater possibility for articles to be located, used and cited.

The top 10 journal titles ranked by yearly IF listed in Table 6.3 shows that journals in the fields of AHSS benefit most from being indexed in *MyCite*. Out of the top 10 titles, seven titles are in the AHSS. The yearly IF scores for Malaysian journals are all below 1.0, indicating relatively low citations. Out of the top 10 journal titles, only one title achieves indexation in both *WoS* and *Scopus*, and 4 titles are not covered in either citation databases. The *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS) is listed in quartile 1 and 2 in the *WoS* and *Scopus* databases respectively. However, BMMSS's IF is below 1.0, with 0.854 in *WoS*, 0.582 in *Scopus* and 0.255 in *MyCite*. This situation indicates that articles published in non-Malaysian journals are citing articles published in BMMSS more.

6.3 Journals in Science, Technology and Medicine by Impact Factor

Table 6.4 lists 58 journal titles in STM fields ranked by the yearly IF scores in 2013. Out of 58 titles, 35 titles (60.3%) show yearly IF scores and a higher number of journals (46 titles, 79.3%) have 5-year IF scores. In general, the journals in STM obtain yearly IF scores ranging from 0.018 and 0.370, which is low for these fields, when compared to the JIF and SJR scores obtained by STM journals in *WoS* and *Scopus*. This indicates that Malaysian researchers in the STM fields rarely cite each other's work. However, this situation will improve when more journals are made available in *MyCite* and *MyJournal*, which are currently available gratis on the Web and accessible from some library web portals.

Generally, the 58 titles that perform better for their 5-year IF indicate that articles published in these journals take a longer period to be cited. In some instances, even though the citations received are fair such as 74 (5-year) and 45 (2-year) for *International Food Research Journal*, the impact is reduced when the total articles published is too large, which is 666 titles in the 5-year and 447 in the 2-year productivity counts.

Among the top 20 journals listed in Table 6.4, there are higher representation from the fields of engineering and technology (9 titles), followed by the sciences (6) and medical related fields (5). The table also indicates that there are sufficient numbers of titles published in STM fields to support researchers' publication channel, which in turn should encourage mutual reference and citations. The reason for low citation counts may be due to some journals that have gained indexation in *WoS and Scopus* have increasingly reduced their acceptance of Malaysian-based articles to maintain their international status and coverage by the universal citation databases.

Table 6.3: Journals Indexed in *MyCite* Ranked by Yearly Impact Factor

No.	Journals	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	h-index
1	GEMA Online® Journal of Language Studies	145	101	60	41	0.414	0.406	6
2	Malaysian Journal of Civil Engineering	81	27	12	10	0.148	0.370	2
3	JATI: Journal of Southeast Asian Studies	77	33	16	11	0.208	0.333	2
4	Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)	35	35	11	11	0.314	0.314	3
5	Bulletin of the Malaysian Mathematical Sciences Society	257	157	53	40	0.206	0.255	3
6	Malaysian Journal of Learning & Instruction	36	15	8	3	0.222	0.200	2
7	Education in Medicine Journal	47	41	10	8	0.213	0.195	2
8	International Journal of Automotive and Mechanical Engineering	65	46	19	7	0.292	0.152	2
9	Jurnal Komunikasi, Malaysian Journal of Communication	67	47	9	7	0.134	0.149	3
10	Asian Journal of Accounting and Governance	21	16	2	2	0.095	0.125	1
11	Journal of Telecommunication, Electronic and Computer Engineering	71	41	6	5	0.085	0.122	2
12	Asia-Pacific Management Accounting Journal	36	19	3	2	0.083	0.105	2
13	International Food Research Journal	666	447	74	45	0.111	0.101	5
14	Asian Academy of Management Journal of Accounting and Finance	63	30	8	3	0.127	0.100	3
15	3L :The Southeast Asian Journal of English Language Studies	112	83	12	8	0.107	0.096	3
16	Malaysian Journal of ELT Research	40	21	4	2	0.100	0.095	1
17	Malaysian Journal of Computer Science	68	32	6	3	0.088	0.094	2
18	Institutions and Economies (formerly International Journal of Institutions and Economies)	53	43	5	4	0.094	0.093	2
19	ASEAN Journal of Psychiatry	116	48	8	4	0.069	0.083	2
20	Jurnal Teknologi (Sains dan Kejuruteraan)	228	140	29	11	0.127	0.079	2
21	Malaysian Family Physician	111	39	3	3	0.027	0.077	2
22	Journal of Design + Built	57	27	6	2	0.105	0.074	2
23	Jurnal Ekonomi Malaysia	68	42	7	3	0.103	0.071	2
24	Sepilok Bulletin	44	14	8	1	0.182	0.071	3
25	AKADEMIKA: Jurnal Sains Kemasyarakatan dan Kemanusiaan	137	72	9	5	0.066	0.069	2
26	Tropical Biomedicine	332	163	21	11	0.063	0.067	5
27	Asian Academy of Management Journal	66	31	4	2	0.061	0.065	1
28	Economic and Technology Management Review	43	16	2	1	0.047	0.063	1
29	Journal of Building Performance	27	16	1	1	0.037	0.063	1
30	Tropical Life Sciences Research (formerly Journal of Bioscience)	92	32	5	2	0.054	0.063	2

Table 6.3: Journals Indexed in MyCite Ranked by Yearly Impact Factor (cont.)

No.	Journals	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	h-index
31	Defence S&T Technical Bulletin	50	33	2	2	0.040	0.061	1
32	Kajian Malaysia	54	38	3	2	0.056	0.053	2
33	Malaysian Journal of Soil Science	45	19	1	1	0.022	0.053	1
34	International Journal of Economics and Management	108	42	14	2	0.130	0.048	2
35	Journal of Information and Communication Technology	41	21	5	1	0.122	0.048	1
36	Malaysian Journal of Mathematical Sciences	108	44	4	2	0.037	0.045	1
37	Intellectual Discourse	55	23	1	1	0.018	0.043	1
38	Jurnal Pendidikan Sains & Matematik Malaysia	23	23	1	1	0.043	0.043	1
39	Malaysian Journal of Medical Sciences	203	93	13	4	0.064	0.043	4
40	English Teacher	54	24	4	1	0.074	0.042	3
41	Journal of Engineering Science and Technology	229	120	7	5	0.031	0.042	3
42	Malaysian Journal of Library & Information Science	106	48	8	2	0.075	0.042	4
43	Asian Journal of Environment-Behaviour Studies	69	49	4	2	0.058	0.041	2
44	International Journal on Quranic Research	26	26	1	1	0.038	0.038	1
45	Journal of Technical Education and Training	52	26	2	1	0.038	0.038	1
46	Jurnal Pengajian Media Malaysia	65	26	3	1	0.046	0.038	2
47	Jurnal Bahasa	70	28	4	1	0.057	0.036	3
48	Jurnal Syariah	111	28	13	1	0.117	0.036	2
49	Jurnal Pengurusan	92	57	4	2	0.043	0.035	3
50	Pertanika Journal of Tropical Agricultural Science	190	115	6	4	0.032	0.035	2
51	Sains Malaysiana	769	421	28	14	0.036	0.033	3
52	Medical Journal of Malaysia	566	284	22	9	0.039	0.032	5
53	International Journal of Sustainable Construction Engineering and Technology	53	34	3	1	0.057	0.029	1
54	ASEAN Journal of Teaching & Learning in Higher Education	59	35	1	1	0.017	0.029	1
55	International Journal of Banking and Finance	73	35	2	1	0.027	0.029	1
56	MATEMATIKA	95	36	1	1	0.011	0.028	2
57	Journal of Human Capital Development	81	37	4	1	0.049	0.027	1
58	Journal of Oil Palm Research	163	79	13	2	0.080	0.025	3
59	Jurnal Linguistik	59	40	1	1	0.017	0.025	1
60	Malaysian Journal of Microbiology	152	80	7	2	0.046	0.025	3
61	Journal of Tropical Forest Science	262	121	11	3	0.042	0.025	3
62	Malaysian Journal of Psychiatry	114	41	3	1	0.026	0.024	2
63	International e-Journal of Science, Medicine & Education	79	44	3	1	0.038	0.023	2
64	International Medical Journal Malaysia	115	44	4	1	0.035	0.023	2
65	Malaysian Journal of Pathology	112	45	4	1	0.036	0.022	2
66	International Journal of Mechanical and Materials Engineering	211	93	5	2	0.024	0.022	3
67	Journal of ASIAN Behavioural Studies	49	49	1	1	0.020	0.020	1
68	Journal of Tropical Agriculture and Food Science	102	56	2	1	0.020	0.018	1
69	Pertanika Journal of Social Sciences & Humanities	275	183	11	3	0.040	0.016	2

Table 6.3: Journals Indexed in *MyCite* Ranked by Yearly Impact Factor (cont.)

No.	Journals	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	h-index
70	Geografia: Malaysian Journal of Society & Space	216	165	2	2	0.009	0.012	2
71	Al-Bayan : Journal of al-Quran and al-Hadith	51	22	0	0	-	-	1
72	Archives of Orofacial Sciences	67	33	1	0	0.015	-	2
73	Asian Journal of Business and Accounting	53	21	1	0	0.019	-	2
74	Asia-Pacific Journal of Molecular Biology and Biotechnology	131	39	5	0	0.038	-	2
75	Asiatic : IIUM Journal of English Language and Literature	148	59	2	0	0.014	-	1
76	ESTEEM Academic Journal	100	30	0	0	-	-	1
77	IIUM Engineering Journal	149	114	2	0	0.013	-	1
78	IIUM Law Journal	62	23	0	0	-	-	1
79	International Journal of Asia-Pacific Studies	54	27	0	0	-	-	1
80	International Journal of Business and Society	79	40	1	0	0.013	-	1
81	International Journal of Economics, Management and Accounting (formerly IIUM Journal of Economics and Management)	20	20	0	0	-	-	0
82	International Journal of Integrated Engineering	92	38	0	0	-	-	1
83	International Journal of West Asian Studies	36	24	0	0	-	-	1
84	Islamiyyat The International Journal of Islamic Studies	30	23	0	0	-	-	0
85	JEBAT : Malaysian Journal of History, Politics and Strategic Studies	50	32	2	0	0.040	-	2
86	Journal of Agrobiotechnology	22	14	2	0	0.091	-	0
87	Journal of Al-Tamaddun	61	28	0	0	-	-	1
88	Journal of Construction in Developing Countries	61	31	3	0	0.049	-	1
89	Journal of Design and Built Environment (UM)	47	22	0	0	-	-	1
90	Journal of Governance and Development (formerly known as Jurnal Rekayasa)	20	14	0	0	-	-	0
91	Journal of International Studies	42	18	0	0	-	-	1
92	Journal of Mechanical Engineering and Technology	47	26	0	0	-	-	1
93	Journal of Modern Languages	19	10	0	0	-	-	1
94	Journal of Physical Science	87	32	0	0	-	-	1
95	Journal of Research, Policy & Practice of Teachers and Teacher Education	20	20	0	0	-	-	0
96	Journal of Surveying, Construction and Property	29	23	0	0	-	-	0
97	Journal of Tourism, Hospitality & Culinary Arts	78	41	0	0	-	-	1
98	JUMMEC	70	17	2	0	0.029	-	1
99	Jurnal al-Hikmah	23	23	0	0	-	-	0
100	Jurnal Fiqh	51	18	0	0	-	-	1
101	Jurnal Fizik Malaysia	42	7	0	0	-	-	1
102	Jurnal Intelek	65	49	0	0	-	-	1
103	Jurnal Kemanusiaan	78	34	0	0	-	-	2

Table 6.3: Journals Indexed in MyCite Ranked by Yearly Impact Factor (cont.)

No.	Journals	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	h-index
104	Jurnal Pendidikan Malaysia (Malaysian Journal of Education) (formerly Jurnal Pendidikan)	78	26	5	0	0.064	-	3
105	Jurnal SainsKesihatan Malaysia	87	37	2	0	0.023	-	2
106	Jurnal Undang-Undang dan Masyarakat (Malaysian Journal of Law and Society)	64	24	0	0	-	-	1
107	Kemanusiaan :The Asian Journal of Humanities (formerly Jurnal Ilmu Kemanusiaan)	34	19	1	0	0.029	-	0
108	Labuan Bulletin of International Business & Finance	23	8	0	0	-	-	1
109	Labuan e-Journal of Muamalat and Society	27	8	0	0	-	-	1
110	Malaysian Accounting Review	61	22	7	0	0.115	-	3
111	Malaysian Applied Biology (formerly Malaysian Agricultural Research)	99	37	2	0	0.020	-	2
112	Malaysian Journal of Analytical Sciences	205	80	4	0	0.020	-	2
113	Malaysian Journal of Chemistry	45	13	1	0	0.022	-	1
114	Malaysian Journal of Distance Education	63	27	0	0	-	-	1
115	Malaysian Journal of Economic Studies	50	22	1	0	0.020	-	3
116	Malaysian Journal of Pharmaceutical Science	38	8	0	0	-	-	1
117	Malaysian Journal of Sport Science and Recreation	32	10	0	0	-	-	0
118	Malaysian Journal of Veterinary Research	46	38	1	0	0.022	-	1
119	Malaysian Journal of Youth Studies	69	46	2	0	0.029	-	1
120	Malaysian Management Journal	29	10	0	0	-	-	2
121	Malaysian Orthopaedic Journal	175	84	0	0	-	-	1
122	Malaysian Polymer Journal	74	28	0	0	-	-	1
123	MANU Jurnal Pusat Penataran Ilmu & Bahasa	20	20	0	0	-	-	0
124	PERSPEKTIF Jurnal Sains Sosial dan Kemanusiaan	29	29	0	0	-	-	0
125	Pertanika Journal of Science & Technology	174	95	0	0	-	-	1
126	SEARCH Journal of the Southeast Asia Research Centre for Communications and Humanities	31	18	0	0	-	-	1
127	TEAM Journal of Hospitality and Tourism	29	12	0	0	-	-	1
128	Terengganu International Management and Business Journal	20	20	0	0	-	-	0
129	Wacana Seni : Journal of Arts Discourse	22	14	1	0	0.045	-	1

Table 6.4: Journals in Science, Technology, Engineering and Medicine Ranked by Yearly Impact Factor

No.	Journals	ISSN	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	h-index
1	Malaysian Journal of Civil Engineering	1823-7843	12	10	0.148	0.370	2
2	Bulletin of the Malaysian Mathematical Sciences Society	0126-6705	53	40	0.206	0.255	3
3	Education in Medicine Journal	2180-1932	10	8	0.213	0.195	2
4	International Journal of Automotive and Mechanical Engineering	2229-8649	19	7	0.292	0.152	2
5	Journal of Telecommunication, Electronic and Computer Engineering	2180-1843	6	5	0.085	0.122	2
6	International Food Research Journal	1985-4668	74	45	0.111	0.101	5
7	Malaysian Journal of Computer Science	0127-9084	6	3	0.088	0.094	2
8	ASEAN Journal of Psychiatry	2231-7805	8	4	0.069	0.083	2
9	Jurnal Teknologi (Sains dan Kejuruteraan)	0127-9696	29	11	0.127	0.079	2
10	Malaysian Family Physician	1985-2274	3	3	0.027	0.077	2
11	Journal of Design + Built	1985-6881	6	2	0.105	0.074	2
12	Sepilok Bulletin	1823-0067	8	1	0.182	0.071	3
13	Tropical Biomedicine	0127-5720	21	11	0.063	0.067	5
14	Journal of Building Performance	2180-2106	1	1	0.037	0.063	1
15	Tropical Life Sciences Research	1985-3718	5	2	0.054	0.063	2
16	Defence S & T Technical Bulletin	1985-6571	2	2	0.040	0.061	1
17	Malaysian Journal of Soil Science	1394-7990	1	1	0.022	0.053	1
18	Journal of Information and Communication Technology	1675-414X	5	1	0.122	0.048	1
19	Malaysian Journal of Mathematical Sciences	1823-8343	4	2	0.037	0.045	1
20	Malaysian Journal of Medical Sciences	1394-195X	13	4	0.064	0.043	4
21	Journal of Engineering Science and Technology	1823-4690	7	5	0.031	0.042	3
22	Pertanika Journal of Tropical Agricultural Science	1511-3701	6	4	0.032	0.035	2
23	Sains Malaysiana	0126-6039	28	14	0.036	0.033	3
24	Medical Journal of Malaysia	0300-5283	22	9	0.039	0.032	5
25	International Journal of Sustainable Construction Engineering and Technology	2180-3242	3	1	0.057	0.029	1
26	MATEMATIKA	0127-8274	1	1	0.011	0.028	2
27	Journal of Oil Palm Research	1511-2780	13	2	0.080	0.025	3
28	Malaysian Journal of Microbiology	1823-8262	7	2	0.046	0.025	3
29	Journal of Tropical Forest Science	0128-1283	11	3	0.042	0.025	3
30	Malaysian Journal of Psychiatry	0128-8628	3	1	0.026	0.024	2
31	International e-Journal of Science, Medicine & Education	2231-8194	3	1	0.038	0.023	2
32	International Medical Journal Malaysia	1823-4631	4	1	0.035	0.023	2
33	Malaysian Journal of Pathology	0126-8635	4	1	0.036	0.022	2
34	International Journal of Mechanical and Materials Engineering	1823-0334	5	2	0.024	0.022	3
35	Journal of Tropical Agriculture and Food Science	1394-9829	2	1	0.020	0.018	1
36	ESTEEM Academic Journal	1675-7939	0	0	-	-	1
37	IJUM Engineering Journal	1511-788X	2	0	0.013	-	1
38	International Journal of Integrated Engineering	2229-838X	0	0	-	-	1
39	Journal of Construction in Developing Countries	1823-6499	3	0	0.049	-	1
40	Journal of Design and Built Environment	1823-4208	0	0	-	-	1
41	Journal of Mechanical Engineering and Technology	2180-1053	0	0	-	-	1
42	Journal of Surveying, Construction and Property	1985-7527	0	0	-	-	0
43	Archives of Orofacial Sciences	1823-8602	1	0	0.015	-	2
44	JUMMEC	1823-7339	2	0	0.029	-	1
45	Jurnal Sains Kesihatan Malaysia	1675-8161	2	0	0.023	-	2
46	Malaysian Journal of Pharmaceutical Science	1675-7319	0	0	-	-	1
47	Malaysian Orthopaedic Journal	1985-2533	0	0	-	-	1
48	Asia-Pacific Journal of Molecular Biology and Biotechnology	0128-7451	5	0	0.038	-	2
49	Journal of Agrobiotechnology	2180-1983	2	0	0.091	-	0
50	Journal of Physical Science	1675-3402	0	0	-	-	1
51	Jurnal Fizik Malaysia	0128-0333	0	0	-	-	1
52	Malaysian Applied Biology	0126-8643	2	0	0.020	-	2
53	Malaysian Journal of Analytical Sciences	1394-2506	4	0	0.020	-	2
54	Malaysian Journal of Chemistry	1511-2292	1	0	0.022	-	1
55	Malaysian Journal of Veterinary Research	2180-3897	1	0	0.022	-	1
56	Malaysian Polymer Journal	1823-7789	0	0	-	-	1
57	Pertanika Journal of Science & Technology	0128-7680	0	0	-	-	1
58	Malaysian Journal of Sport Science and Recreation	1823-3198	0	0	-	-	0

6.4 Journals in the Arts, Humanities, Social Sciences by Impact Factor

Table 6.5 lists 71 journal titles in the AHSS. This situation indicates that journals in this field, has taken advantage of *MyCite* and *MyJournal* to increase their visibility and accessibility. Malaysian journals in the AHSS field have found it more difficult to gain indexation in the *WoS* citation databases. In the AHSS field, only *Malaysian Journal of Library & Information Science* and *Al-Shajarah* have gained indexation in *WoS*. However, more titles are being indexed in *Scopus*, which by far cover more AHSS journals in its database. Even though more AHSS journals (71) are indexed in *MyCite* only 35 titles show yearly IF. The yearly IF and 5-yearly IF scores are low and none achieve above 0.5 scores. Even though articles are being cited in the 2-year and 5-year windows, the IF scores dropped because of the volume of articles published. For example, *GEMA Online® Journal of Language Studies* published 101 articles in the 2-year window. This situation suggests that publishing more articles will not guaranty improvement in the impact of a journal. Journal editors should control the quality and number of articles they publish.

Table 6.5: Journals in Arts, Humanities and Social Sciences Ranked by Yearly Impact Factor

No.	Journals	ISSN	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	h-index
1	GEMA Online® Journal of Language Studies	1675-8021	145	101	60	41	0.414	0.406	6
2	JATI : Journal of Southeast Asian Studies	1823-4127	77	33	16	11	0.208	0.333	2
3	Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)	2180-4842	35	35	11	11	0.314	0.314	3
4	Malaysian Journal of Learning & Instruction	1675-8110	36	15	8	3	0.222	0.200	2
5	Jurnal Komunikasi, Malaysian Journal of Communication	0128-0496	67	47	9	7	0.134	0.149	3
6	Asian Journal of Accounting and Governance	2180-3838	21	16	2	2	0.095	0.125	1
7	Asia-Pacific Management Accounting Journal	1675-3194	36	19	3	2	0.083	0.105	2
8	Asian Academy of Management Journal of Accounting and Finance	1823-4992	63	30	8	3	0.127	0.100	3
9	3L :The Southeast Asian Journal of English Language Studies	0128-5157	112	83	12	8	0.107	0.096	3
10	Malaysian Journal of ELT Research	1511-8002	40	21	4	2	0.100	0.095	1
11	Institutions and Economies (formerly International Journal of Institutions and Economies)	2232-1640	53	43	5	4	0.094	0.093	2
12	Jurnal Ekonomi Malaysia	0126-1962	68	42	7	3	0.103	0.071	2
13	Akademika: Jurnal Sains Kemasyarakatan dan Kemanusiaan	0126-5008	137	72	9	5	0.066	0.069	2
14	Asian Academy of Management Journal	1394-2603	66	31	4	2	0.061	0.065	1
15	Economic and Technology Management Review	1985-6571	43	16	2	1	0.047	0.063	1
16	Kajian Malaysia (Journal of Malaysian Studies)	0127-4082	54	38	3	2	0.056	0.053	2
17	International Journal of Economics and Management	1823-836X	108	42	14	2	0.130	0.048	2
18	Intellectual Discourse	0128-4878	55	23	1	1	0.018	0.043	1
19	Jurnal Pendidikan Sains & Matematik Malaysia	2232-0393	23	23	1	1	0.043	0.043	1
20	English Teacher	0128-7729	54	24	4	1	0.074	0.042	3
21	Malaysian Journal of Library & Information Science	1394-6234	106	48	8	2	0.075	0.042	4
22	Asian Journal of Environment-Behaviour Studies	1394-0384	69	49	4	2	0.058	0.041	2
23	International Journal on Quranic Research	2180-4893	26	26	1	1	0.038	0.038	1
24	Journal of Technical Education and Training	2229-8932	52	26	2	1	0.038	0.038	1
25	Jurnal Pengajian Media Malaysia	1511-2284	65	26	3	1	0.046	0.038	2

Table 6.5: Journals in Arts, Humanities and Social Sciences Ranked by Yearly Impact Factor (cont.)

No.	Journals	ISSN	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	h-index
26	Jurnal Bahasa	1511-9084	70	28	4	1	0.057	0.036	3
27	Jurnal Syariah	0128-6730	111	28	13	1	0.117	0.036	2
28	Jurnal Pengurusan	0127-2713	92	57	4	2	0.043	0.035	3
29	ASEAN Journal of Teaching & Learning in Higher Education	1985-5826	59	35	1	1	0.017	0.029	1
30	International Journal of Banking and Finance	1675-7227	73	35	2	1	0.027	0.029	1
31	Journal of Human Capital Development	1985-7012	81	37	4	1	0.049	0.027	1
32	Jurnal Linguistik	1823-9242	59	40	1	1	0.017	0.025	1
33	Journal of ASIAN Behavioural Studies	2180-4567	49	49	1	1	0.020	0.020	1
34	Pertanika Journal of Social Sciences & Humanities	0128-7702	275	183	11	3	0.040	0.016	2
35	Geografia: Malaysian Journal of Society & Space	2180-2491	216	165	2	2	0.009	0.012	2
36	Al-Bayan: Journal of al-Quran and al-Hadith	2232-1950	51	22	0	0	-	-	1
37	Asiatic: IJUM Journal of English Language and Literature	1985-3016	148	59	2	0	0.014	-	1
38	International Journal of Asia-Pacific Studies	1823-6243	54	27	0	0	-	-	1
39	Islamiyyat The International Journal of Islamic Studies	0216-5636	30	23	0	0	-	-	0
40	JEBAT: Malaysian Journal of History, Politics and Strategic Studies	0126-5644	50	32	2	0	0.040	-	2
41	Journal of Al-Tamaddun	1823-7517	61	28	0	0	-	-	1
42	Journal of Modern Languages	1675-526X	19	10	0	0	-	-	1
43	Jurnal al-Hikmah	1985-6822	23	23	0	0	-	-	0
44	Jurnal Fiqh	1823-089X	51	18	0	0	-	-	1
45	Jurnal Kemanusiaan	1675-1930	78	34	0	0	-	-	2
46	Kemanusiaan :The Asian Journal of Humanities (formerly Jurnal Ilmu Kemanusiaan)	1394-9330	34	19	1	0	0.029	-	0
47	MANU Jurnal Pusat Penataran Ilmu & Bahasa	1511-1989	20	20	0	0	-	-	0
48	PERSPEKTIF Jurnal Sains Sosial dan Kemanusiaan	1985-496X	29	29	0	0	-	-	0
49	SEARCH Journal of the Southeast Asia Research Centre for Communications and Humanities	2229-872X	31	18	0	0	-	-	1
50	Wacana Seni : Journal of Arts Discourse	1675-3410	22	14	1	0	0.045	-	1
51	Asian Journal of Business and Accounting	1985-4064	53	21	1	0	0.019	-	2
52	IJUM Law Journal	0128-2530	62	23	0	0	-	-	1
53	International Journal of Business and Society	1511-6670	79	40	1	0	0.013	-	1
54	International Journal of Economics, Management and Accounting (formerly IJUM Journal of Economics and Management)	2229-8649	20	20	0	0	-	-	0
55	International Journal of West Asian Studies	2229-8924	36	24	0	0	-	-	1
56	Journal of Governance and Development (formerly known as Jurnal RekaYasa)	2289-2311	20	14	0	0	-	-	0
57	Journal of International Studies	1823-691X	42	18	0	0	-	-	1
58	Journal of Research, Policy & Practice of Teachers and Teacher Education	2232-0458	20	20	0	0	-	-	0
59	Journal of Tourism, Hospitality & Culinary Arts	1985-8914	78	41	0	0	-	-	1
60	Jurnal Intelek	2231-7716	65	49	0	0	-	-	1
61	Jurnal Pendidikan Malaysia (Malaysian Journal of Education) (formerly Jurnal Pendidikan)	0126-6020	78	26	5	0	0.064	-	3
62	Jurnal Undang-Undang dan Masyarakat (Malaysian Journal of Law and Society)	1394-7729	64	24	0	0	-	-	1
63	Labuan Bulletin of International Business & Finance	1985-482X	23	8	0	0	-	-	1

Table 6.5: Journals in Arts, Humanities and Social Sciences Ranked by Yearly Impact Factor (cont.)

No.	Journals	ISSN	Total Articles (5 Yrs)	Total Articles (2 Yrs)	Total Citations (5 Yrs)	Total Citations (2 Yrs)	5-Year Impact Factor	Yearly Impact Factor	h-index
64	Labuan e-Journal of Muamalat and Society	1985-482X	27	8	0	0	-	-	1
65	Malaysian Accounting Review	1675-4077	61	22	7	0	0.115	-	3
66	Malaysian Journal of Distance Education	1511-6433	63	27	0	0	-	-	1
67	Malaysian Journal of Economic Studies	1511-4554	50	22	1	0	0.020	-	3
68	Malaysian Journal of Youth Studies	2180-1649	69	46	2	0	0.029	-	1
69	Malaysian Management Journal	0128-6226	29	10	0	0	-	-	2
70	TEAM Journal of Hospitality and Tourism	1823-4003	29	12	0	0	-	-	1
71	Terengganu International Management and Business Journal	2332-0741	20	20	0	0	-	-	0

6.5 Foreign Authors who Contribute to Malaysian Journals

A total of 82,646 authors from 146 countries contribute articles to scholarly journals published in Malaysia (Table 6.6). As expected, Malaysian authors are the highest contributors totaling 61,696 (74.7%). It is observed that foreign authors are also contributors as either single or joint authors. These instances may be the result of the following relations between the authors; foreign students and Malaysian supervisors, Malaysian students and foreign supervisors and foreign individuals or members of research teams. In general, a total of 20,950 (25.3%) foreign authors contribute to Malaysian journals. Figure 6.2 shows the top ten countries contributing to Malaysian journals and the number of contributing authors respectively.

A total of 14,103 authors come from the Asian continent. Authors from India are the highest contributors totaling 4,263. The other three Asian countries that contribute over 1,000 authors are Iran (1,453 authors), Indonesia (1,426), and Thailand (1,267). There is also an increase in contributions of authors from China (849) and Japan (797). The other Asian contributors come from 36 other countries.

From the African continent there are a total of 2,106 authors. The African countries that contribute more than 100 authors are Nigeria (962), Egypt (285), Algeria (157) and Ghana (109). The other contributors come from 30 other African countries. A total of 2,083 authors who publish in Malaysian journals come from European countries. The European countries that contribute more than 50 authors are the United Kingdom (979), France (162), Germany (130), Italy (116), Spain (91), Netherlands (88) and Belgium (71).

Under the category Oceania, there are 1,243 authors contributing. The highest contributing authors come from Australia (1,036) and New Zealand (189). A total of 1,088 North American authors contribute articles to Malaysian journals, with the highest contributors from the United States (727), Canada (146), and Mexico (98). The other authors are from 11 other North American countries. South America contributes 327 authors who published in Malaysian journals, with the main contributors being Brazil (236) and rest came from Venezuela, Argentina, Ecuador, Columbia, Uruguay and Chile.

Table 6.6: Foreign Authors Contributing to Malaysian Journals

Continent/ Country	No. of Authors	Continent/ Country	No. of Authors	Continent/ Country	No. of Authors	Continent/ Country	No. of Authors
ASIA	14,103	AFRICA	2,106	Romania	40	N. AMERICA	1,088
India	4,263	Nigeria	962	Ireland	39	United States	727
Iran	1,453	Egypt	285	Austria	39	Canada	146
Indonesia	1,426	Algeria	157	Sweden	36	Mexico	98
Thailand	1,267	Ghana	109	Poland	31	Cuba	30
China	849	Sudan	81	Denmark	24	Costa Rica	19
Japan	797	Tunisia	79	Greece	23	Trinidad and Tobago	18
Bangladesh	779	South Africa	67	Portugal	21	Jamaica	13
Singapore	515	Kenya	60	Russia	20	Honduras	9
Pakistan	424	Morocco	35	Switzerland	18	Grenada	8
Turkey	322	Libya	34	Abkhazia	17	Aruba	6
Saudi Arabia	285	Tanzania	33	Czech Republic	14	Anguilla	5
Philippines	232	Tanzania	33	Finland	14	Panama	5
Korea, South	220	Botswana	30	Croatia	12	Guatemala	3
Taiwan	193	Ivory Coast	23	Bosnia & Herz.	10	Nicaragua	1
Iraq	165	Togo	20	Slovakia	9	S.AMERICA	327
Vietnam	131	Ethiopia	19	Iceland	9	Brazil	236
Sri Lanka	103	Benin	16	Norway	8	Venezuela	29
Hong Kong	98	Zimbabwe	15	Azerbaijan	8	Argentina	22
Brunei	86	Uganda	14	Latvia	8	Ecuador	13
Oman	84	Rwanda	12	Hungary	7	Colombia	12
Jordan	81	Burkina Faso	11	Cyprus	6	Uruguay	8
United Arab Em.	53	Congo	11	Slovenia	6	Chile	7
Yemen	47	Cameroon	9	Serbia	4	TOTAL	
Kuwait	34	Zambia	6	Bulgaria	4	(minus Malaysia)	20,950
Nepal	33	Mali	3	Montenegro	3	MALAYSIA	61,696
Palestine	32	Swaziland	3	Macedonia	3	TOTAL	
Myanmar	20	Mauritania	2	Estonia	3	(plus Malaysia)	82,646
Uzbekistan	16	Mozambique	2	Armenia	3		
Bahrain	14	Namibia	2	Ukraine	2		
Kazakhstan	13	Madagascar	1	Albania	2		
Qatar	11	Somalia	1	Faroe Islands	1		
Syria	11	Sierra Leone	1	Gibraltar	1		
Lebanon	9	Gabon	1	Belarus	1		
Macau	8	Niger	1	OCEANIA	1,243		
Cambodia	6	Mauritius	1	Australia	1,036		
Laos	5	EUROPE	2,083	New Zealand	189		
Korea, North	4	United Kingdom	979	Fiji	9		
Maldives	4	France	162	Christmas Isl.	4		
Israel	4	Germany	130	Papua N.G.	3		
Mongolia	3	Italy	116	Palau	1		
PBhutan	2	Spain	91	Micronesia	1		
Kyrgyzstan	1	Netherlands	88				
		Belgium	71				

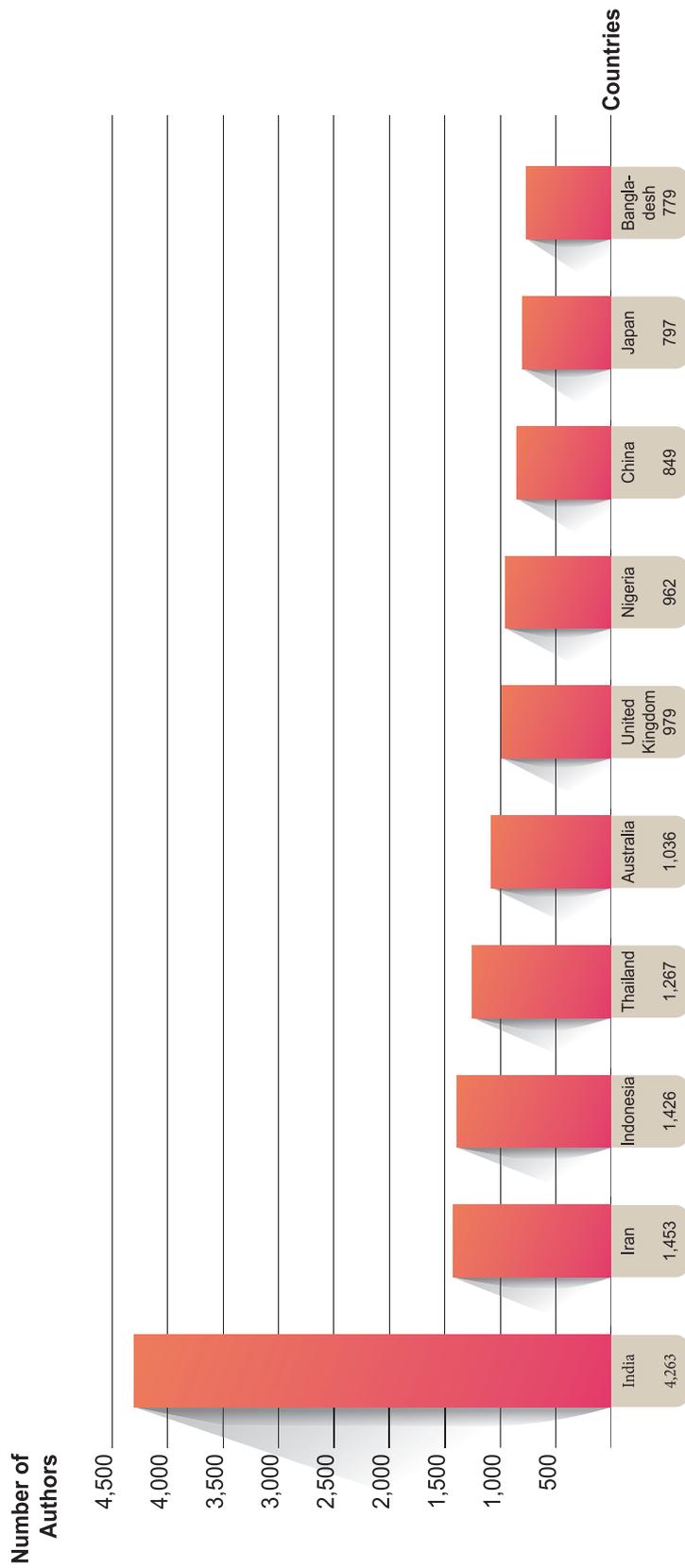


Figure 6.2: The Top Ten Countries Contributing to Malaysian Journals and the Number of Contributing Authors

There is evidence that foreign authors are publishing their works in Malaysian journals. The data from authors' affiliation and country is used to measure foreign contributors. However, it should be noted that the true picture is often masked when foreign supervisees enrolled in Malaysian universities are required to use their current university's affiliation in Malaysia and this situation dilutes instances of foreign contributions.

Table 6.7 gives a summary of contributors by the world's major regions and from the Asean countries. Most of the foreign authors that published in Malaysian journals comprise single or joint authors and are mainly from the Asian continent (14,103, 67.3%), Africa (2,106, 10.1%) and European countries (2,083, 9.9%). Even though the contributions from foreign authors to Malaysian journals are comparatively small, there is an increase contribution from the Asian and African countries. This infers that authors from these regions are using Malaysian journals to publish their research findings. Therefore, some Malaysian journals are international in terms of representing researches from the Asian region. The increase of access and visibility through *MyCite* and *MyJournal* would provide better chances of gaining indexation in the *WoS* and *Scopus* database over time.

Table 6.7: Foreign Authors Contributing Articles to Malaysian Journals by World's Region and Asean Countries (Excluding Malaysia)

Continent/Country	No. of Authors	Percent
Asia	14,103	67.3
Africa	2,106	10.1
Europe	2,083	9.9
Oceania	1,243	5.9
N.America	1,088	5.2
S.America	327	1.6
TOTAL	20,950	100.0
ASEAN Country	No. of Authors	Percent
Indonesia	1,426	38.7
Thailand	1,267	34.4
Singapore	515	14.0
Philippines	232	6.3
Vietnam	131	3.6
Brunei	86	2.3
Myanmar (Burma)	20	0.5
Cambodia	6	0.2
Laos	5	0.1
TOTAL	3,688	100.0

6.6 Productive Authors Ranked by Total Publications and Total Citations

A total of 82,646 authors contribute articles to scholarly journals published in Malaysia. Table 6.8 indicates the top twenty most productive authors. The 20 productive authors are ranked by the number of articles they published in Malaysian journals captured from *MyCite*. There is a shift in the list of productive authors compared to the 2012 report. Four new authors appear in the 2013 list, which was not in the 2012 report, they are: Nor Hashimah Jalaludin (50 articles), Zaharani Ahmad (44 articles), Saedah Siraj (34 articles) and Rahman M.M. (33 articles). Whilst in the 2012 report, these authors, Abdul Samad Hadi (29 articles), Zainal Ariffin Ahmad (27 articles), Katiman Rostam (27 articles) and Saidur R (25 articles) are not listed in 2013. This may be due to the increase number of article cut off point, which are 33 articles in 2013 compared to 25 in 2012. Radu S or Son R remains the highest contributor increasing from 59 articles in 2012 to 80 in the 2013. In fact all authors listed in both 2012 and 2013 show an increase in publications, indicating that they remain active authors. In terms of institutions in the top most productive authors the highest number come from Universiti Kebangsaan Malaysia (9 authors), followed by Universiti Putra Malaysia (5 authors), University of Malaya and Universiti Teknologi MARA (2 authors each), Universiti Sains Malaysia and the Institute of Medical Research (1 author each).

Table 6.9 indicates the top twenty authors who obtained high citations extracted from *MyCite*. Most authors who received high citations in 2012 are still listed in the 2013 list. For most authors listed their citation count has slightly increased compared to figures listed in the 2012 performance report. Radu S has increased his citation count from 33 in 2012 to 37 in 2013 and ranked on top of the total citation received list. There are 4 new authors in the 2013 list, and they are Zaharani Ahmad (29 citations), Nor Hashimah Jalaludin (25 citations), Rahman M.M. (24 citations), and Lee H.L. (20 citations), and all except Lee are affiliated to Universiti Kebangsaan Malaysia. Overall the number of citations garnered by Malaysian authors is relatively low even though the cut off point for the 2013 top 20 authors list has increased to 20 citations compared to 17 in 2012.

Table 6.8: Top Twenty Most Active Authors Ranked by Total Publications in *MyCite*

No.	Authors	Total Publications	Total Citations	h-index	Affiliation
1	Radu, S.	80	37	5	Univ. Putra Malaysia
2	Yap, C.K.	75	13	2	Univ. Putra Malaysia
3	Lee, H.L.	61	20	2	Inst. for Medical Research
4	Tan, Soon Guan	57	14	2	Univ. Putra Malaysia
5	Abdul Halim Shaari	52	0	0	Univ. Putra Malaysia
6	Nor Hashimah Jalaluddin	50	25	3	Univ. Kebangsaan Malaysia
7	Zainab, A.N.	50	21	3	Univ. of Malaya
8	Zaharani Ahmad	44	29	3	Univ. Kebangsaan Malaysia
9	Abdul Aziz Jemain	44	5	1	Univ. Kebangsaan Malaysia
10	Zaini Hamzah	43	8	2	Univ. Teknologi MARA
11	Abdullah, S.	42	9	2	Univ. Kebangsaan Malaysia
12	Mohd Fuad Mat Jali	41	12	3	Univ. Kebangsaan Malaysia
13	Jamaluddin Md. Jahi	41	5	1	Univ. Kebangsaan Malaysia
14	Abu Hassan Shaari Mohd Nor	37	6	1	Univ. Kebangsaan Malaysia
15	Zamri Mahamod	36	18	3	Univ. Kebangsaan Malaysia
16	Sherina Mohd Sidik	35	31	3	Univ. Putra Malaysia
17	Saedah Siraj	34	2	1	Univ. of Malaya
18	Ahmad Saat	34	6	2	Univ. Teknologi MARA
19	Rahman, M.M.	33	24	5	Univ. Kebangsaan Malaysia
20	Muhamad Saiful Bahri Yusoff	33	17	2	Univ. Sains Malaysia

Table 6.9: Top Twenty Authors Ranked by Total Citations in *MyCite*

No.	Authors	Total Citations	Total Publications	h-index	Affiliation
1	Radu, S.	37	80	5	Univ. Putra Malaysia
2	Zalilah Mohd Shariff	36	27	4	Univ. Putra Malaysia
3	Saidur, R.	32	31	4	Univ. of Malaya
4	Ismail, M.N.	32	16	5	Univ. Kebangsaan Malaysia
5	Sherina Mohd Sidik	31	35	3	Univ. Putra Malaysia
6	Zawiah, H.	31	10	4	Univ. Kebangsaan Malaysia
7	Zaharani Ahmad	29	44	3	Univ. Kebangsaan Malaysia
8	Masjuki, H.H.	29	26	3	Univ. of Malaya
9	Nor Hashimah Jalaluddin	25	50	3	Univ. Kebangsaan Malaysia
10	Rahman, M.M.	24	33	5	Univ. Kebangsaan Malaysia
11	Nishibuchi, M.	24	23	4	Univ. Tunku Abdul Rahman
12	Hasanuzzaman, M.	24	11	3	Univ. of Malaya
13	Chee, S.S.	23	6	3	Univ. Kebangsaan Malaysia
14	Ng, K.K.	23	4	3	Kelloggs Asia M.
15	Zainab, A.N.	21	50	3	Univ. of Malaya
16	Cheah, Y.K.	21	23	4	Univ. Putra Malaysia
17	Tunung, R.	21	23	4	Univ. Putra Malaysia
18	Lee, H.L.	20	61	2	Inst. for Medical Research
19	Ghazali, F.M.	20	13	4	Univ. Putra Malaysia
20	Chai, L.C.	20	18	3	Univ. Putra Malaysia

6.7 Productive Authors Ranked by Total Publications by Grouped Fields

Tables 6.10 and 6.11 list authors ranked by total publication counts in *MyCite* and by two grouped fields, STM and AHSS. Table 6.10 lists twenty authors in the STM field ranked by total publications in 2013. Twelve of the authors in the STM list are also listed among the 20 active authors in Table 6.8, while the rest did not make the list due to the cut off total publication of 33. An author with high publications count, does not necessarily perform as well in the total citation list. For example, Abdul Halim Shaari contributed 50 publications, which has yet to garner any citations. In terms of affiliation status, the active authors mostly come from the research universities, Universiti Putra Malaysia (5), University of Malaya (4), Universiti Kebangsaan Malaysia (3) and Universiti Sains Malaysia (2), inferring that these research-intensive universities support more scholarly journals that can be used by their researchers to channel their research articles.

Table 6.10: Top Twenty Authors in STM Ranked by Total Publications in 2013

No.	Authors	Total Publications	Total Citations	h-index	Affiliation
1	Radu, S.	80	37	5	Univ. Putra Malaysia
2	Yap, C.K.	75	13	2	Univ. Putra Malaysia
3	Lee, H.L.	61	20	2	Inst. for Medical Research
4	Tan, Soon Guan	57	14	2	Univ. Putra Malaysia
5	Abdul Halim Shaari	52	0	0	Univ. Putra Malaysia
6	Abdul Aziz Jemain	44	5	1	Univ. Kebangsaan Malaysia
7	ZainiHamzah	43	8	2	Univ. Teknologi MARA
8	Abdullah, S.	42	9	2	Univ. Kebangsaan Malaysia
9	Sherina Mohd Sidik	35	31	3	Univ. Putra Malaysia
10	Ahmad Saat	34	6	2	Univ. Teknologi MARA
11	Rahman, M.M.	33	24	5	Univ. Kebangsaan Malaysia
12	Muhamad Saiful Bahri Yusoff	33	17	2	Univ. Sains Malaysia
13	Zainal Ariffin Ahmad	32	1	1	Univ. Sains Malaysia

Table 6.10: Top Twenty Authors in STM Ranked by Total Publications in 2013 (cont.)

No.	Authors	Total Publications	Total Citations	h-index	Affiliation
14	Saidur, R.	31	32	4	Univ. of Malaya
15	Ruzairi Abdul Rahim	28	2	1	Univ. Teknologi MARA
16	Choo, Yuen May	28	4	2	Malay. Palm Oil Board
17	Chandrawathani, P.	27	6	2	Veterinary Research Inst.
18	Agamuthu, P.	27	6	1	Univ. of Malaya
19	Masjuki, H.H.	26	29	3	Univ. of Malaya
20	Abdullah, B.J.J.	25	5	1	Univ. of Malaya

Table 6.11: Top Twenty Authors in AHSS Ranked by Total Publications in 2013

No.	Authors	Total Publications	Total Citations	h-index	Affiliation
1	Nor Hashimah Jalaluddin	50	25	3	Univ. Kebangsaan Malaysia
2	Zainab, A.N.	50	21	3	Univ. of Malaya
3	Zaharani Ahmad	44	29	3	Univ. Kebangsaan Malaysia
4	Mohd Fuad Mat Jali	41	12	3	Univ. Kebangsaan Malaysia
5	Zamri Mahamod	36	18	3	Univ. Kebangsaan Malaysia
6	Saedah Siraj	34	2	1	Univ. of Malaya
7	Katiman Rosman	31	7	2	Univ. Kebangsaan Malaysia
8	Mohammad Raduan Mohd Ariff	28	3	1	Univ. of Malaya
9	Junaidi Awang Besar	28	10	3	Univ. Kebangsaan Malaysia
10	Mohd Yusof Hussain	26	3	1	Univ. Kebangsaan Malaysia
11	Abu Hassan Shaari Mohd Nor	25	2	1	Univ. Kebangsaan Malaysia
12	Faridah Ibrahim	24	2	1	Univ. Kebangsaan Malaysia
13	Novel Lyndon	21	1	1	Univ. Kebangsaan Malaysia
14	Zulkefly Abdul Karim	21	3	1	Univ. Kebangsaan Malaysia
15	Amriah Buang	20	2	1	Univ. Kebangsaan Malaysia
16	Rahmah Ismail	20	2	2	Univ. Kebangsaan Malaysia
17	Abrizah Abdullah	19	15	2	Univ. of Malaya
18	Ruzy Suliza Hashim	19	4	2	Univ. Kebangsaan Malaysia
19	Hanafi Hussin	19	3	1	Univ. of Malaya
20	Sanep Ahmad	18	6	1	Univ. Kebangsaan Malaysia

Table 6.11 lists twenty authors in the AHSS field ranked by total publications in 2013. It is observed that the authors who published 34 or more articles have also made it into Table 6.8, while the rest contribute between 18 and 31 publications. The active authors in the AHSS publish less number of articles compared to authors in the STM field. The number of citations garnered from published works is relatively low, inferring perhaps it takes longer for published works in this field to be cited. All 20 authors are affiliated to Universiti Kebangsaan Malaysia (15) and University of Malaya (5), inferring the strength of research in the AHSS fields as well as the higher number of journals published in these fields by these two research-designated universities.

6.8 Productive Institutions Ranked by Total Publications

To improve the standard of research, Malaysian public institutions are subjected to performance evaluation, and one of the outcome used is the number of research publications produced as well as citations accrued from the publications. Often, judgments are based on publications published and citations received from a pool of journals indexed by citation databases such as Thomson Reuter's *Web of Science* and Elsevier's *Scopus*. Both Thomson Reuters and Elsevier are selective in their journal coverage as for example the *WoS* covers only over 8,000 journal titles compared to an estimated number of 28,000 active scholarly journals

published globally, which are responsible for producing between 1.8 and 1.9 million articles per year and showing a growth rate of by 3.0% and 3.5% yearly (Ware and Mabe 2012). Data generated from *MyCite* allows institutions to gauge their national performance.

Table 6.12 indicates that the universities dominated in total articles published, especially the research-designated universities, which occupies the top 4 places. Universiti Kebangsaan Malaysia tops the list (4,954 articles, 713 citations, h-index 7), followed by University of Malaya (3,257 articles, 357 citations, h-index 4), Universiti Putra Malaysia (2,753 articles, 391 citations, h-index 6) and Universiti Sains Malaysia (2,275 articles, 286 citations, h-index 6). Authors from the private universities are also increasing their publications in Malaysian journals, such as International Medical University (289 articles, 36 citations), Universiti Teknologi PETRONAS (275 articles, 16 citations), Universiti Tenaga Nasional (128 articles, 16 citations), Universiti Tunku Abdul Rahman (122 articles, 14 citations), Multimedia University (101 articles, 7 citations), Monash University (89 articles, 8 citations), Taylor's University (84 articles, 6 citations), and Universiti Tun Abdul Razak (56 articles, 7 citations).

Table 6.12: Productive Institutions Ranked by Total Articles in *MyCite*, 2000-2013

No.	Authors	Total Articles	Total Citations	h-index
1	Universiti Kebangsaan Malaysia	4,954	713	7
2	Universiti of Malaya	3,257	357	4
3	Universiti Putra Malaysia	2,753	391	6
4	Universiti Sains Malaysia	2,275	286	6
5	Universiti Teknologi MARA	1,605	167	4
6	Universiti Teknologi Malaysia	1,336	88	3
7	International Islamic University Malaysia	873	111	5
8	Universiti Utara Malaysia	596	57	2
9	Universiti Malaysia Sabah	477	49	2
10	Universiti Malaysia Sarawak	428	43	3
11	Universiti Malaysia Terengganu	331	33	2
12	International Medical University	289	36	2
13	Malaysian Palm Oil Board	288	63	3
14	Universiti Teknologi PETRONAS	275	16	2
15	Universiti Pendidikan Sultan Idris	264	25	2
16	Universiti Teknikal Malaysia Melaka	236	11	2
17	Universiti Tun Hussein Onn Malaysia	276	13	2
18	Institute for Medical Research	209	73	5
19	Malaysian Nuclear Agency	201	13	2
20	Forest Research Institute Malaysia	174	32	2
21	Hospital Kuala Lumpur	169	14	2
22	Universiti Malaysia Perlis	168	5	1
23	Universiti Sultan Zainal Abidin	197	19	2
24	Universiti Malaysia Pahang	143	21	3
25	Kementerian Kesihatan Malaysia	134	66	5
26	Universiti Tenaga Nasional	128	16	2
27	Universiti Tunku Abdul Rahman	122	14	2
28	Institut Penyelidikan dan Kemajuan Pertanian Malaysia	215	15	1
29	Hospital Universiti Kebangsaan Malaysia	112	15	2
30	Universiti Sains Islam Malaysia	110	7	1
31	Multimedia University	101	7	1
32	Universiti Kuala Lumpur	97	3	1
33	Monash University	89	8	1
34	Taylor's University	84	6	2
35	Hospital Umum Sarawak	78	3	1
36	Forest Research Centre	69	27	3
37	Hospital Tengku Ampuan Afzan	64	6	1
38	University of Nottingham Malaysia Campus	60	4	1
39	Universiti Tun Abdul Razak	56	7	2

Table 6.12: Productive Institutions Ranked by Total Articles in MyCite, 2000-2013 (cont.)

No.	Authors	Total Articles	Total Citations	h-index
40	SIRIM Bhd	55	7	2
41	Veterinary Research Institute	51	8	2
42	Hospital Pulau Pinang	50	0	0
43	Science & Technology Research Institute for Defence	49	3	1
44	Fisheries Research Institute	43	3	1
45	Universiti Pertahanan Nasional Malaysia	40	3	1
46	UCSI University	40	4	1
47	Hospital Sultanah Aminah	36	6	1
48	Penang Medical College	34	5	2
49	Universiti Malaysia Kelantan	33	8	1
50	Jabatan Perkhidmatan Awam	32	3	1

The government research agencies are also active publishers, exemplified by the Malaysian Palm Oil Board (288 articles, 63 citations, *h*-index 3), Institute for Medical Research, Kuala Lumpur (209 articles, 73 citations *h*-index 5), Malaysian Nuclear Agency (201 articles, 13 citations, *h*-index 2), Forest Research Institute Malaysia (174 articles, 32 citations, *h*-index 2), Ministry of Health or Kementerian Kesihatan Malaysia (134 articles, 66 citations, *h*-index 5), Institut Penyelidikan dan Kemajuan Pertanian Malaysia (MARDI) (215 articles, 15 citations, *h*-index 1), Forest Research Centre (69 articles, 27 citations, *h*-index 3), SIRIM Bhd. (55 articles, 4 citations), Fisheries Research Institute (43 articles, 3 citations), and Jabatan Perkhidmatan Awam (32 articles, 3 citations). The doctors at the government hospitals are also active authors and affiliated to Hospital Kuala Lumpur (169 articles, 14 citations), Hospital Universiti Kebangsaan Malaysia (112 articles, 15 citations), Hospital Tengku Ampuan Afzan, Pahang (64 articles, 6 citations), Hospital Pulau Pinang (50 articles, 5 citations), Hospital Umum Sarawak (78 articles, 3 citations), and Hospital Sultanah Aminah (36 articles, no citations).

6.9 Highly-cited Papers

In order to identify the certain characteristics of papers that receive high citations, citation data to each paper are analysed and the results are shown in Table 6.13 (for papers in the STM fields) and Table 6.14 (for papers in the AHSS fields). Data shows the articles that have been cited more than 5 times in MyCite and arranged in order of highest to lowest citations, which reveals a total of 20 papers in the STM fields and 16 papers in AHSS. The bibliographic details of the articles (number of authors, journals, and year of publication) are also presented. Papers with high citations in STM were mostly the results of collaborative works, with a high as 12 authors. In their capacity as joint authors, they have formed part of the teams that have produced papers of certain quality as reflected by the number of citations. In contrast, single-authorship dominates the papers with highest citations in AHSS (8 papers).

Two articles received the highest citation in STM field and were published in the *International Food Research Journal* and *Malaysian Journal of Medical Sciences*, with a citation count of 10 respectively. The article with the highest citation in AHSS field was published in *GEMA Online® Journal of Language Studies*, the journal, which has performed the best in MyCite 2013 in terms of yearly IF impact factor and *h*-index. This article received a citation count of 16. This situation confirms that articles in the AHSS receive higher citations compare to articles in the STM, indicating higher national impact.

Table 6.13: Papers in STM with the Highest Citations in 2013

No.	Authors	Journal (Year)	No. of Authors	Field	Citation Count
1	Biosafety of <i>Campylobacter jejuni</i> from raw vegetables consumed as ulam with reference to their resistance to antibiotics	International Food Research Journal (2008)	12	Sciences	10
2	Prevalence and Sources of Stress among Universiti Sains Malaysia Medical Students	Malaysian Journal of Medical Sciences (2010)	3	Medical & Health Sciences	10
3	Diabetes Control and Complications in Private Primary Healthcare in Malaysia	Medical Journal of Malaysia (2005)	1	Medical & Health Sciences	9
4	Distribution of Body Weight, Height and Body Mass Index in a National Sample of Malaysian Adults	Medical Journal of Malaysia (2000)	8	Medical & Health Sciences	9
5	Antioxidative activities of water extracts of some Malaysian herbs	International Food Research Journal (2007)	4	Sciences	9
6	Effects Of Variables On Natural Convective Heat Transfer Through V-Corrugated Vertical Plates	International Journal of Mechanical and Materials Engineering (2007)	4	Engineering & Technology	8
7	Quantification of <i>Listeria monocytogenes</i> in salad vegetables by MPN-PCR	International Food Research Journal (2010)	9	Sciences	8
8	A preliminary study of insect succession on a pig carcass in a palm oil plantation in Malaysia	Tropical Biomedicine (2007)	5	Medical & Health Sciences	7
9	Distribution and abundance of diurnal and nocturnal dipterous flies in the Federal Territory, Putrajaya	Tropical Biomedicine (2007)	7	Medical & Health Sciences	7
10	Psychological Stress Among Undergraduate Medical Students	Medical Journal of Malaysia (2004)	3	Medical & Health Sciences	7
11	An analysis Of energy Use, Energy Intensity And Emissions At The Industrial Sector Of Malaysia	International Journal of Mechanical and Materials Engineering (2007)	6	Engineering & Technology	6
12	A Comparison Of The Air Pollution Of Gasoline And Cng Driven Car For Malaysia	International Journal of Mechanical and Materials Engineering (2007)	3	Sciences	6
13	Diversity of <i>Fusarium</i> species in cultivated soils in Penang	Malaysian Journal of Microbiology (2007)	3	Health Sciences	6
14	Seasonal abundance of <i>Aedes albopictus</i> in selected urban and suburban areas in Penang, Malaysia	Tropical Biomedicine (2007)	3	Medical & Health Sciences	6
15	Physical and mental health problems of the elderly in a rural community of Sepang, Selangor	Tropical Biomedicine (2006)	7	Medical & Health Sciences	6
16	Prevalence and factors related to smoking among secondary school students in Kota Tinggi District, Johor, Malaysia	International Food Research Journal (2009)	5	Sciences	6
17	Optimisation of extraction conditions for phenolic compounds from lima purut (<i>Citrus hystrix</i>) peels	International Food Research Journal (2011)	10	Sciences	6
18	Prevalence and quantification of <i>Vibrio</i> species and <i>Vibrio parahaemolyticus</i> in freshwater fish at hypermarket level	Malaysian Journal of Psychiatry (1997)	7	Medical & Health Sciences	6
19	Depressive Symptoms Among Women After Abortion	Medical Journal of Malaysia (2010)	10	Medical & Health Sciences	6
20	Prevalence of Diabetes in the Malaysian National Health Morbidity Survey III 2006				

Table 6.14: Papers in AHSS with the Highest Citations in 2013

No.	Authors	Journal (Year)	No. of Authors	Field	Citation Count
1	Motivation to learn a foreign language in Malaysia	GEMA Online® Journal of Language Studies (2009)	2	Arts & Humanities	16
2	Struktur sin taksis frasa nama bahasa Bateq	GEMA Online® Journal of Language Studies (2009)	1	Arts & Humanities	10
3	Earnings management and board characteristics: evidence from Malaysia	Jurnal Pengurusan (2005)	3	Social Sciences	8
4	Enhancing academic literacy among tertiary learners: a Malaysian experience	3L :The Southeast Asian Journal of English Language Studies (2007)	1	Arts & Humanities	8
5	Reading academic text: awareness and experiences among university ESL learners	GEMA Online® Journal of Language Studies (2006)	1	Arts & Humanities	7
6	Sikap pelajar terhadap pembelajaran kemahiran lisan bahasa Arab di Universiti Teknologi MARA (UiTM)	GEMA Online® Journal of Language Studies (2010)	3	Arts & Humanities	7
7	Peluasan makna imbuhan Ber-: analisis semantik kognitif	GEMA Online® Journal of Language Studies (2010)	3	Arts & Humanities	7
8	Exploring english language learning and teaching in Malaysia	GEMA Online® Journal of Language Studies (2012)	3	Arts & Humanities	7
9	Malaysian Journal of Library and Information Science, 1996-2000: A bibliometric Study	Malaysian Journal of Library & Information Science (2009)	2	Social Sciences	6
10	Motivation and attitudes towards learning English: a study of Petroleum Engineering undergraduates at Hadhramout University of Sciences and Technology	GEMA Online® Journal of Language Studies (2009)	2	Arts & Humanities	6
11	Alignment and the syllable coda condition in Malay: an optimality account	GEMA Online® Journal of Language Studies (2004)	1	Arts & Humanities	6
12	The English language and its impact on identities of multilingual Malaysian undergraduates	GEMA Online® Journal of Language Studies (2010)	4	Arts & Humanities	6
13	An investigation of reading strategies employed by trainee teachers	GEMA Online® Journal of Language Studies (2007)	1	Arts & Humanities	6
14	Lingua franca di Sarawak: aplikasi teori pilihan bahasa	GEMA Online® Journal of Language Studies (2010)	1	Arts & Humanities	6
15	Permasalahan kemahiran membaca dan menulis Bahasa Melayu murid-murid sekolah rendah di luar bandar	Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)(2011)	1	Social Sciences	6
16	Investor demand, size effect and performance of Malaysian initial public offerings: evidence from post-1997 financial crisis	Jurnal Pengurusan (2007)	1	Social Sciences	6

It is apparent that papers which received high citations in the STM disciplines were published in Malaysian journals that are indexed in *Scopus*, with relatively moderate performance in *MyCite*. The STM articles with the highest citation in *MyCite* (Table 6.13 No. 1 and 2) receive a citation of 12 and 25 respectively in *Scopus* as at December 2014. This shows that an article that has a good impact at the national level is also cited well at the international level. Of the 20 articles with the highest citations in STM, 11 belonged to research in the medical and health sciences. A total of 16 out of 28 articles are published in the following Malaysian *Scopus*-indexed journals: *International Food Research Journal* (5 papers), *Tropical Biomedicine* and *Medical Journal of Malaysia* (4 papers each), *Malaysian Journal of Medical Sciences* (2 papers) and *Malaysian Journal of Microbiology* (1 paper). Table 6.13 presents these findings.

On the other hand, papers which received high citations in the AHSS disciplines were published in Malaysian journals with relatively high impact factor in *MyCite*, as well as indexed in *Scopus*. The AHSS article with the highest citation in *MyCite* (Table 6.14 No. 1) receives a citation of 18 in *Scopus* as at December 2014. This finding confirms that an article that has a good impact at the national level is also cited well at the international level. Of the 16 articles with the highest citations in AHSS, 12 belonged to articles in the arts and humanities. A total of 15 out of 16 articles are published in the following Malaysian *Scopus*-indexed journals: *GEMA Online® Journal of Language Studies* (11 papers), *Jurnal Pengurusan* (2 papers), *3L:*

The Southeast Asian Journal of English Language Studies and *Malaysian Journal of Library & Information Science* (1 paper each). Table 6.14 presents these findings.

6.10 Uncited Papers in *MyCite*

The scholarly journals indexed in *MyCite* generally have low IF scores as none attained score of above 1.0. This situation indicates that a large number of articles published in Malaysian journals are uncited. This section highlights the uncitedness pattern of Malaysian articles viewed by journals and fields of studies. Figure 6.3 shows the uncited articles by fields of study and the percentage uncited over the period 2000 to 2013. Out of the total of 20,970 articles published, 18,860 (89.9%) are uncited. Figure 6.3 also shows that papers in the fields of medicine and health sciences has the highest percentage of articles not cited (91.6%), closely followed by the fields of engineering and technology (91.1%), social sciences (90.0%), sciences (89.6%) and the arts and humanities (86.7%). This situation again confirms that articles in the AHSS receive higher citations compare to articles in the STM, indicating higher national impact. In general, articles in all fields take longer to be cited indicated by the lower uncited scores in the older articles.

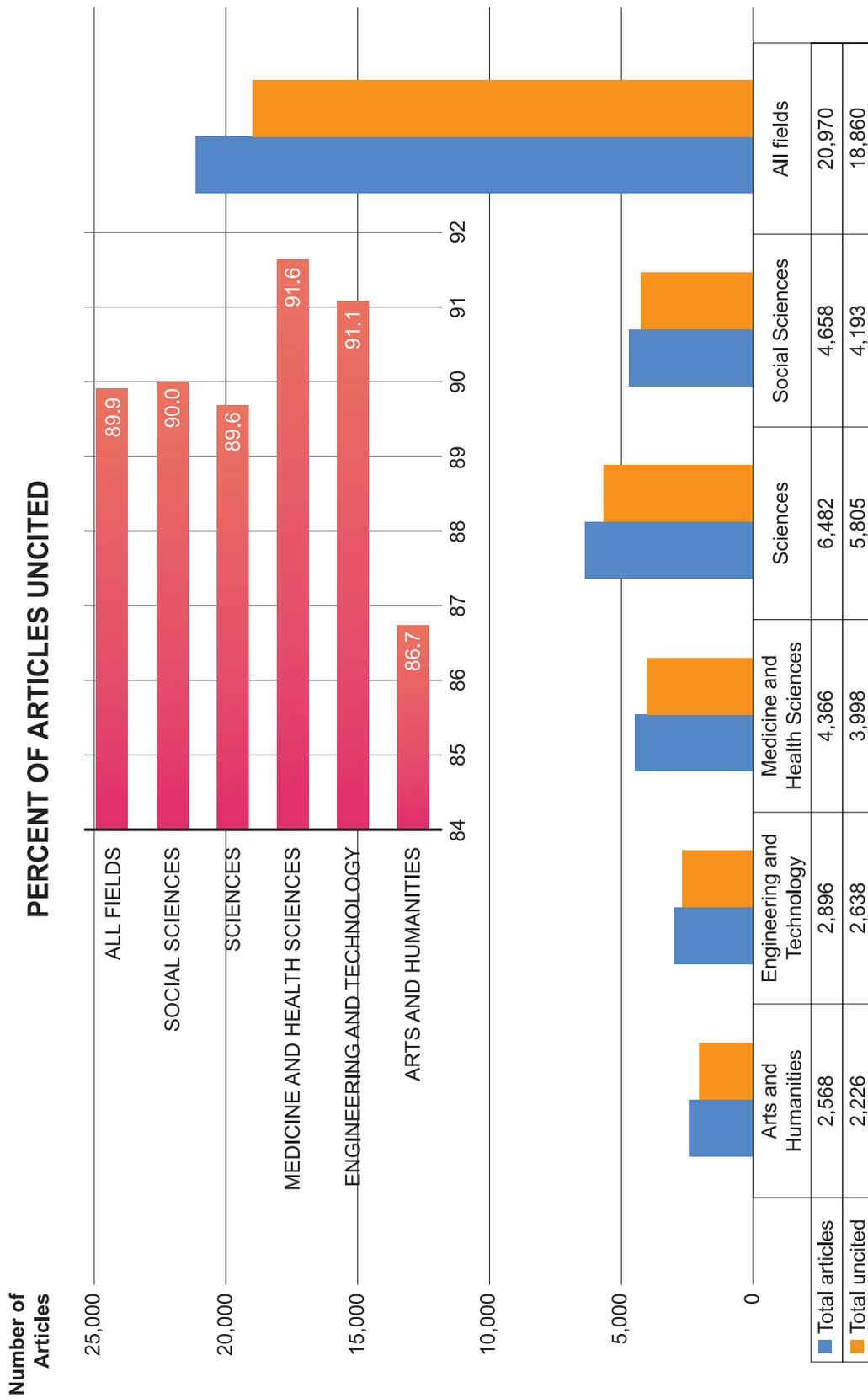


Figure 6.3: Uncited Articles by Fields of Study in MyCite, 2000-2013

Previous studies have indicated that uncitedness is perhaps the result of several factors. Uncited rate is discipline dependent and sensitive to specific citation windows (Hamilton 1990, 1991), is undiscovered when authors use unfamiliar keywords to the field or when publishing about topics which are peripherally covered by the publishing journals (Liang, Zhang and Rousseau 2015) and is dependent on the coverage size of journals in the citation database used for the study (Meho 2007; MacRoberts and Mac Roberts 2010). Uncitedness is expected to decrease as more journals are now easily accessible on the Web and this would certainly improve opportunity for readers to find articles (Lariviere, Archambault and Gingras 2008).

Tables 6.15 to 6.19 indicate the Malaysian journals listed by their main discipline and sorted by percentage of uncited articles. In these tables the journal that has been categorized under 2 or 3 disciplines has been listed under a single dominant discipline. There are 25 titles listed under Arts and Humanities. The journals that have low percent of uncited articles (51.0 to 74.0%) in the arts and humanities are, *GEMA Online® Journal of Language Studies* (lowest percent, 51.1%), *3L: The Southeast Asian Journal of English Language Studies* (72.4%) and *English Teacher* (74.7%). A total of 7 (28.0%) titles show uncitedness rate of 82.0 to 89.0% and 11 titles (44.0%) have uncitedness rate of 92.0 to 99.0%. There are 4 titles that do not receive any citation at all. Compared to the other fields, the journals in the arts and humanities are more cited and therefore have the lowest overall field percent of uncited articles (86.7%).

Table 6.15: Percent of Uncited Articles in the Arts and Humanities Fields, 2000-2013

No.	Journal	Total Articles	Total Uncited Articles	% Uncited Articles
1	GEMA Online® Journal of Language Studies	227	116	51.1
2	3L: The Southeast Asian Journal of English Language Studies	170	123	72.4
3	English Teacher	91	68	74.7
4	JATI: Journal of Southeast Asian Studies	180	148	82.2
5	Jurnal Linguistik	73	62	84.9
6	Jurnal Syariah	258	225	87.2
7	Jurnal Bahasa	244	215	88.1
8	Jurnal Kemanusiaan	111	99	89.2
9	Malaysian Journal of ELT Research	66	59	89.4
10	SEARCH Journal of the Southeast Asia Research Centre for Communications and Humanities	39	35	89.7
11	Kemanusiaan: The Asian Journal of Humanities (formerly Jurnal Ilmu Kemanusiaan)	42	39	92.9
12	JEBAT: Malaysian Journal of History, Politics and Strategic Studies	113	105	92.9
13	Journal of Al-Tamaddun	92	87	94.6
14	Intellectual Discourse	94	90	95.7
15	Journal of Modern Languages	24	23	95.8
16	International Journal of Asia-Pacific Studies	75	72	96.0
17	Wacana Seni: Journal of Arts Discourse	64	62	96.9
18	Jurnal Fiqh	88	86	97.7
19	International Journal on Quranic Research	44	43	97.7
20	Asiatic: IIUM Journal of English Language and Literature	196	193	98.5
21	Al-Bayan: Journal of al-Quran and al-Hadith	112	111	99.1
22	Jurnal al-Hikmah	36	36	100.0
23	MANU Jurnal Pusat Penataran Ilmu & Bahasa	29	29	100.0
24	Islamiyyat The International Journal of Islamic Studies	54	54	100.0
25	PERSPEKTIF Jurnal Sains Sosial dan Kemanusiaan	46	46	100.0
TOTAL		2,568	2,226	86.7

There are 46 journal titles listed under the discipline of social sciences (Table 6.16). The three titles (6.5%) that show lowest uncited articles are *Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)* (64.0%), *Malaysian Journal of Library & Information Science* (77.6%) and *Asian Journal of Business and Accounting* (79.4%). A total of 13 titles (28.3%) show uncitedness of between 81.0 and 89.0%, 28 titles (60.9%) show uncitedness of between 90.0 to 99.0% and two titles (4.3%) show 100% uncitedness.

There are 18 titles listed under engineering and technology (Table 6.17) and only two titles (10.5%) have uncitedness percentage score of between 62.0 and 71.0%, two titles show uncitedness of 88.0%, and the majority (13 titles) show of uncitedness of 91.0 to 99.0%. Only one title has 100% uncitedness score. The overall field percentage of uncitedness is 91.1% and only five titles that achieve lower than this score. A total of 15 titles are listed under medicine and health sciences (Table 6.18). About 11 titles (73.3%) under this field show uncitedness of 92.0 to 98.0% and four titles (26.6%) indicate 83.0 to 89.0% uncitedness. The overall percentage of uncitedness in this field is 91.6%.

Table 6.16: Percent of Uncited Articles in the Social Sciences Fields, 2000-2013

No.	Journal	Total Articles	Total Uncited Articles	% Uncited Articles
1	Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)	50	32	64.0
2	Malaysian Journal of Library & Information Science	241	187	77.6
3	Asian Journal of Business and Accounting	63	50	79.4
4	Jurnal Pendidikan Malaysia (Malaysian Journal of Education) (formerly Jurnal Pendidikan)	133	108	81.2
5	Jurnal Komunikasi, Malaysian Journal of Communication	104	85	81.7
6	International Journal of Economics and Management	153	128	83.7
7	Asian Academy of Management Journal of Accounting and Finance	105	88	83.8
8	Malaysian Journal of Learning & Instruction	76	64	84.2
9	Malaysian Accounting Review	122	103	84.4
10	Malaysian Journal of Economic Studies	110	94	85.5
11	Asia-Pacific Management Accounting Journal	62	53	85.5
12	Jurnal Ekonomi Malaysia	148	127	85.8
13	Geografia: Malaysian Journal of Society & Space	287	252	87.8
14	Jurnal Pengurusan	149	131	87.9
15	Economic and Technology Management Review	69	61	88.4
16	Labuan Bulletin of International Business & Finance	45	40	88.9
17	AKADEMIKA: Jurnal Sains Kemasyarakatan dan Kemanusiaan	170	153	90.0
18	Journal of Technical Education and Training	63	57	90.5
19	Kajian Malaysia (Journal of Malaysian Studies)	85	77	90.6
20	Asian Academy of Management Journal	105	96	91.4
21	ASEAN Journal of Teaching & Learning in Higher Education	70	64	91.4
22	Jurnal Pengajian Media Malaysia	117	107	91.5
23	Asian Journal of Environment-Behaviour Studies	99	91	91.9
24	International Journal of Banking and Finance	100	92	92.0
25	Malaysian Journal of Youth Studies	91	84	92.3
26	Asian Journal of Accounting and Governance	27	25	92.6
27	Institutions and Economies (formerly International Journal of Institutions & Economies)	70	65	92.9
28	Journal of Human Capital Development	101	94	93.1
29	International Journal of West Asian Studies	48	45	93.8
30	Pertanika Journal of Social Sciences & Humanities	443	417	94.1
31	Jurnal Pendidikan Sains & Matematik Malaysia	39	37	94.9
32	Malaysian Management Journal	81	77	95.1
33	Jurnal Undang-Undang dan Masyarakat (Malaysian Journal of Law and Society)	82	79	96.3
34	International Journal of Business and Society	137	132	96.4
35	Malaysian Journal of Distance Education	119	115	96.6
36	Terengganu International Management and Business Journal	30	29	96.7
37	Journal of Research, Policy & Practice of Teachers and Teacher Education	32	31	96.9
38	TEAM Journal of Hospitality and Tourism	66	64	97.0
39	Labuan e-Journal of Muamalat and Society	42	41	97.6
40	Journal of ASIAN Behavioural Studies	89	87	97.8
41	Journal of International Studies	77	76	98.7
42	IUM Law Journal	87	86	98.9
43	Journal of Tourism, Hospitality & Culinary Arts	90	89	98.9
44	Jurnal Intelekt	122	121	99.2
45	International Journal of Economics, Management and Accounting	28	28	100.0
46	Journal of Governance and Development (formerly known as Jurnal Rekrayasa)	31	31	100.0
TOTAL		4,658	4,193	90.0

Table 6.17: Percent of Uncited Articles in the Engineering and Technology Fields, 2000-2013

No.	Journal	Total Articles	Total Uncited Articles	% Uncited Articles
1	International Journal of Automotive and Mechanical Engineering	121	75	62.0
2	International Journal of Mechanical and Materials Engineering	252	179	71.0
3	Journal of Construction in Developing Countries	93	82	88.2
4	Malaysian Journal of Civil Engineering	179	159	88.8
5	Journal of Information and Communication Technology	100	91	91.0
6	Malaysian Journal of Computer Science	225	206	91.6
7	Journal of Engineering Science and Technology	347	318	91.6
8	Journal of Design + Built	69	64	92.8
9	International Journal of Sustainable Construction Engineering and Technology	72	67	93.1
10	Journal of Telecommunication, Electronic and Computer Engineering	85	80	94.1
11	Journal of Design and Built Environment	74	71	95.9
12	Jurnal Teknologi (Sains dan Kejuruteraan)	688	663	96.4
13	Journal of Mechanical Engineering and Technology	60	58	96.7
14	Journal of Building Performance	37	36	97.3
15	International Journal of Integrated Engineering	119	117	98.3
16	IIUM Engineering Journal	186	184	98.9
17	ESTEEM Academic Journal	155	154	99.4
18	Journal of Surveying, Construction and Property	34	34	100.0
TOTAL		2,896	2,638	91.1

Table 6.18: Percent of Uncited Articles in the Medicine and Health Sciences Fields, 2000-2013

No.	Journal	Total Articles	Total Uncited Articles	% Uncited Articles
1	JUMMEC	185	154	83.2
2	Tropical Biomedicine	533	468	87.8
3	ASEAN Journal of Psychiatry	161	143	88.8
4	Medical Journal of Malaysia	1,343	1,203	89.6
5	Malaysian Journal of Psychiatry	237	218	92.0
6	Malaysian Journal of Pathology	230	214	93.0
7	Jurnal Sains Kesihatan Malaysia	161	150	93.2
8	Malaysian Journal of Medical Sciences	466	439	94.2
9	Archives of Orofacial Sciences	105	99	94.3
10	Malaysian Journal of Pharmaceutical Science	91	86	94.5
11	Education in Medicine Journal	96	91	94.8
12	Malaysian Family Physician	186	177	95.2
13	International e-Journal of Science, Medicine & Education	108	103	95.4
14	International Medical Journal Malaysia	226	219	96.9
15	Malaysian Orthopaedic Journal	238	234	98.3
TOTAL		4,366	3,998	91.6

A total of 25 titles are listed under the discipline of the sciences (Table 6.19). Only one title, *Sepilok Bulletin* show uncitedness percentage of 65.7%, five titles have uncitedness score of 82.0 to 86.0% and the majority (18 titles) show uncitedness rate of 90.0 to 98.0%. Only one title has a 100% uncitedness rate. The general percentage of uncitedness in the field of the sciences is 89.6% and only four titles achieve lower percent score compared to the field score.

Table 6.19: Percent of Uncited Articles in the Sciences Fields, 2000-2013

No.	Journal	Total Articles	Total Uncited Articles	% Uncited Articles
1	Sepilok Bulletin	99	65	65.7
2	Journal of Oil Palm Research	344	285	82.8
3	International Food Research Journal	1,034	857	82.9
4	Defence S&T Technical Bulletin	60	50	83.3
5	Journal of Tropical Forest Science	467	402	86.1
6	Bulletin of the Malaysian Mathematical Sciences Society	524	454	86.6
7	Tropical Life Sciences Research (formerly Journal of Bioscience)	88	80	90.9
8	Asia-Pacific Journal of Molecular Biology and Biotechnology	248	226	91.1
9	Malaysian Journal of Analytical Sciences	370	338	91.4
10	Sains Malaysiana	1,126	1,029	91.4
11	MATEMATIKA	237	217	91.6
12	Malaysian Journal of Microbiology	237	219	92.4
13	Malaysian Journal of Mathematical Sciences	153	142	92.8
14	Malaysian Journal of Soil Science	61	57	93.4
15	Pertanika Journal of Tropical Agricultural Science	223	209	93.7
16	Malaysian Journal of Chemistry	73	69	94.5
17	Malaysian Polymer Journal	98	93	94.9
18	Malaysian Journal of Veterinary Research	66	63	95.5
19	Journal of Tropical Agriculture and Food Science	136	130	95.6
20	Journal of Physical Science	132	127	96.2
21	Journal of Agrobiotechnology	27	26	96.3
22	Malaysian Applied Biology (formerly Malaysian Agricultural Research)	166	160	96.4
23	Pertanika Journal of Science & Technology	232	229	98.7
24	Jurnal Fizik Malaysia	233	230	98.7
25	Malaysian Journal of Sport Science and Recreation	48	48	100.0
TOTAL		6,482	5,805	89.6

In summary, articles published in Malaysian journals in all fields show high percentage of uncitedness. However, this situation is expected to improve in time as more journals become accessible on the Web or alternatively available through the *MyJournal* platform. Tables 6.15 to 6.19 indicate that in the Malaysian context, national significance is evidenced by lower uncitedness percentage scores shown especially by journals in the fields of arts and humanities (overall, 86.7%) and in the sciences (89.6%).

6.11 International Collaboration indicated by Country Affiliations in *MyCite*

Funding bodies favour international collaborations between researchers as this situation is found to improve research outputs. In publication terms research collaboration is found to increase productivity (Lee and Bozeman 2005), and more likely to motivate members of research groups and improve research impact (Jeong and Choi 2014). Collaboration is often measured from the country affiliation of co-authorship of articles. For a paper that is written by 3 authors from Japan, 2 authors from Malaysia, 1 author from Korea, the country collaboration count would be 1 for Japan, 1 for Malaysia and 1 for Korea. Therefore, the count for total authors would be higher than count for country affiliations. Collaboration is higher in the STM fields, where single authorship is almost a rarity. There is an exponential increase of multi-authorship works globally, with the growth of regional collaboration networks such between China and Japan, South Korea and Taiwan (Leydesdorff and Wagner 2008; Adams 2012).

Table 6.20 shows the public universities that indulge in international collaboration as indicated by country affiliation information extracted from articles published in Malaysian journals that are indexed in *MyCite*. The figures for total collaborations have excluded counts where the country affiliation (of authors) is not indicated. This happens widely in Malaysian journals and should be an issue that journal publishers must be careful about. Malaysian public universities publish collaboratively with a total of 85 countries worldwide, while 13 countries indicated 30 or more collaboration. Malaysian universities collaborate most with the United Kingdom (307), followed by Indonesia (225), Japan (174), Australia (156), United States (110), Iran (94), India (85), Bangladesh (58), Saudi Arabia (53), New Zealand (35), Singapore and Thailand (34 each) and Iraq (30). The 5 research universities indicate to be active collaborators, with Universiti Kebangsaan Malaysia topping the list in terms of total collaborative works.

Table 6.21 shows the details of the total countries that the public universities collaborated with. With each university is indicated the number of countries (in parenthesis) the universities collaborated with. Among the four research universities in Malaysia that show active international collaboration, University of Malaya collaborated with 53 countries, followed by Universiti Putra Malaysia (45 countries), Universiti Kebangsaan Malaysia and Universiti Sains Malaysia (40 countries each). University of Malaya indicates collaborating with authors mainly from the United Kingdom (42 articles), Japan (30 articles), and India (28 articles). Universiti Kebangsaan Malaysia collaborated more with authors from Indonesia and the United Kingdom. Universiti Putra Malaysia shows active collaboration with authors from the United Kingdom, Iran and Japan. More than one third (23, 43.4%) of countries are one-time contributors (1 article).

It is noted that besides collaborators from the United Kingdom there seems to be evidence of geographical proximity in collaborating countries. Ponds, Van Oort and Franken (2007) found that collaboration and exchanges of knowledge are easier between countries with geographical proximity. This was earlier observed by Frame and Carpenter (1979) who found international authorships occur along geographical lines and infer that this factor would eventually decide with whom Malaysian researchers would be more comfortable to collaborate with. Also, the possibility of supervisor-student situations may be indicated by high collaboration with countries such as the United Kingdom and the United States. Katz and Martin (1997) observe that the pattern of collaboration may be subject dependent (Stefaniak 1982), shaped by funding requirements (Park et al. 2014) and the need to gain experience from more experienced foreign professionals (Lee 2000).

Table 6.20: University-International Collaboration Ranked by Total Country Contributions

Universities	United Kingdom	Indonesia	Japan	Australia	United States	Iran	India	Bangladesh	Saudi Arabia	New Zealand	Singapore	Thailand	Iraq	Rest, 72 countries	Grand Total
Univ. Kebangsaan Malaysia	56	69	24	26	19	19	2	4	6	7	3	1	10	89	335
Univ. Putra Malaysia	47	33	37	21	21	43	6	16	13	7	-	2	1	80	327
Univ. of Malaya	42	21	30	17	19	11	28	21	4	2	11	10	-	83	299
Univ. Sains Malaysia	24	28	15	22	15	5	21	2	6	5	5	10	5	59	222
Univ. Teknologi Malaysia	36	30	18	13	12	12	-	3	6	2	6	5	1	47	191
Univ. Teknologi Mara	20	4	13	27	4	2	1	-	2	6	2	2	2	20	105
International Islamic Univ. Malaysia	2	10	4	3	4	-	6	6	11	2	1	1	5	33	88
Univ. Malaysia Sabah	23	4	12	4	2	1	1	-	-	-	2	-	-	11	60
Univ. Utara Malaysia	15	7	-	4	-	-	1	1	-	1	1	-	2	8	40
Univ. Malaysia Sarawak	8	1	5	6	9	-	-	3	-	1	-	-	-	7	40
Univ. Malaysia Terengganu	6	5	3	1	1	-	8	-	2	-	1	2	-	5	34
Univ. Malaysia Pahang	5	1	2	3	-	-	10	1	1	-	1	-	3	3	30
Univ. Malaysia Perlis	4	4	1	2	1	-	1	-	2	-	-	1	1	6	23
Univ. Teknikal Malaysia Melaka	10	-	3	1	1	-	-	-	-	-	-	-	-	1	16
Univ. Pendidikan Sultan Idris	3	2	2	3	-	1	-	1	-	-	1	-	-	1	14
Univ. Sultan Zainal Abidin	1	2	5	3	2	-	-	-	-	-	-	-	-	2	12
Univ. Sains Islam Malaysia	4	1	-	3	-	-	-	-	-	-	-	-	-	2	10
Univ. Malaysia Kelantan	-	1	-	-	-	-	-	-	-	2	-	-	-	2	5
Univ. Pertahanan Nasional Malaysia	1	2	-	-	-	-	-	-	-	-	-	-	-	0	3
TOTAL	307	225	174	156	110	94	85	58	53	35	34	34	30	459	1854

Table 6.21: Detailed University-International Collaboration

No	Universities	International Collaborations (based on unique article id)			
		Country	No. of Articles	Country	No. of Articles
1	Univ. Kebangsaan Malaysia (40)	Indonesia	69	United Arab Emir.	3
		United Kingdom	56	Finland	2
		Australia	26	India	2
		Japan	24	Brazil	2
		Iran	19	Palestine	2
		United States	19	Turkey	2
		Iraq	10	Netherlands	2
		Romania	10	Canada	2
		New Zealand	7	Denmark	2
		Yemen	7	Anguilla	1
		Brunei	7	Hungary	1
		Libya	6	Bosnia & Herzegovina	1
		Saudi Arabia	6	Estonia	1
		Korea, South	6	Pakistan	1
		China	6	Taiwan	1
		Nigeria	5	Thailand	1
		Jordan	5	Belgium	1
		Sudan	4	Ireland	1
		Bangladesh	4	Argentina	1
		France	3	Switzerland	1
		Singapore	3		
Austria	3				
2	Univ. Putra Malaysia (45)	United Kingdom	47	Yemen	2
		Iran	43	Canada	2
		Japan	37	Germany	2
		Indonesia	33	Thailand	2
		United States	21	United Arab Emir.	2
		Australia	21	Palestine	2
		Bangladesh	16	Netherlands	2
		Saudi Arabia	13	Myanmar	1
		China	8	Mongolia	1
		New Zealand	7	Pakistan	1
		Nigeria	7	Egypt	1
		Sudan	7	Tanzania	1
		India	6	Sierra Leone	1
		Jamaica	6	France	1
		Korea, South	4	Philippines	1
		Jordan	4	Bulgaria	1
		Romania	4	Switzerland	1
		Vietnam	3	Turkey	1
		Belgium	3	Qatar	1
		Finland	2	Iraq	1
		Sri Lanka	2	Austria	1
Ecuador	2	Ghana	1		
Oman	2				
3	Univ. of Malaya (53)	United Kingdom	42	Jordan	2
		Japan	30	Sudan	2

Table 6.21: Detailed University-International Collaboration (cont.)

No	Universities	International Collaborations (based on unique article id)			
		Country	No. of Articles	Country	No. of Articles
		India	28	Vietnam	2
		Bangladesh	21	Canada	2
		Indonesia	21	Uganda	1
		United States	19	Myanmar	1
		Australia	17	Panama	1
		Iran	11	Brazil	1
		Singapore	11	Uzbekistan	1
		Thailand	10	United Arab Emir.	1
		Nigeria	6	Russia	1
		Sri Lanka	6	Zambia	1
		Taiwan	5	Egypt	1
		Yemen	5	Mexico	1
		Saudi Arabia	4	South Africa	1
		Ecuador	4	Macau	1
		Pakistan	4	Palestine	1
		Nepal	3	Sweden	1
		Philippines	3	Mongolia	1
		Hong Kong	3	Kuwait	1
		China	3	Mali	1
		Ireland	2	Qatar	1
		Brunei	2	Netherlands	1
		New Zealand	2	Poland	1
		Germany	2	Kenya	1
		Oman	2	Denmark	1
4	Univ. Sains Malaysia (40)	Indonesia	28	Egypt	2
		United Kingdom	24	Pakistan	2
		Australia	22	Canada	2
		India	21	Philippines	2
		United States	15	Cuba	2
		Japan	15	Sudan	2
		Thailand	10	Bangladesh	2
		Brunei	8	China	2
		Saudi Arabia	6	Ghana	1
		Singapore	5	Argentina	1
		Libya	5	Slovenia	1
		Iraq	5	Lebanon	1
		Iran	5	Germany	1
		New Zealand	5	Sweden	1
		Netherlands	4	Vietnam	1
		Yemen	4	Austria	1
		United Arab Emir.	4	Oman	1
		Mexico	3	Anguilla	1
		Romania	3	Uzbekistan	1
		Abkhazia	2	France	1
5	Univ. Teknologi Malaysia (34)	United Kingdom	36	New Zealand	2
		Indonesia	30	Yemen	2
		Japan	18	Netherlands	2
		Australia	13	Denmark	2
		Iran	12	Sudan	2

Table 6.21: Detailed University-International Collaboration (cont.)

No	Universities	International Collaborations (based on unique article id)			
		Country	No. of Articles	Country	No. of Articles
		United States	12	Spain	1
		Pakistan	7	Philippines	1
		Singapore	6	United Arab Emir.	1
		Saudi Arabia	6	Abkhazia	1
		Thailand	5	Sweden	1
		Turkey	5	Zimbabwe	1
		China	4	Egypt	1
		Nigeria	4	Jordan	1
		Bangladesh	3	Qatar	1
		Oman	3	Korea, South	1
		Canada	3	Iraq	1
		Libya	2	France	1
6	Univ.Teknologi MARA (29)	Australia	27	Tanzania	1
		United Kingdom	20	Algeria	1
		Japan	13	Oman	1
		New Zealand	6	Belgium	1
		Indonesia	4	Canada	1
		United States	4	Syria	1
		Germany	3	Yemen	1
		Pakistan	2	Sudan	1
		Iran	2	Libya	1
		Thailand	2	Finland	1
		Iraq	2	France	1
		Singapore	2	Ecuador	1
		Saudi Arabia	2	India	1
		Netherlands	1	Switzerland	1
		Macau	1		
7	International Islamic Univ. Malaysia (33)	Saudi Arabia	11	Thailand	1
		Indonesia	10	Sri Lanka	1
		Nigeria	6	Oman	1
		India	6	Norway	1
		Bangladesh	6	Uzbekistan	1
		Iraq	5	Singapore	1
		Pakistan	4	South Africa	1
		Japan	4	Sudan	1
		United States	4	Egypt	1
		Brunei	3	Philippines	1
		Australia	3	Ireland	1
		Yemen	2	Canada	1
		Jordan	2	China	1
		New Zealand	1	Romania	1
		Myanmar (Brunei)	1	United Arab Emirates	1
		Sweden	1		
8	Univ. Malaysia Sabah (15)	United Kingdom	23	Singapore	2
		Japan	12	Hungary	1
		Australia	4	Czech Republic	1
		Indonesia	4	Iran	1
		Korea, South	3	Norway	1

Table 6.21: Detailed University-International Collaboration (cont.)

No	Universities	International Collaborations (based on unique article id)			
		Country	No. of Articles	Country	No. of Articles
		Ecuador	2	Norway	1
		Vietnam	2	Philippines	1
		United States	2	India	1
9	Univ. Utara Malaysia (15)	United Kingdom	15	Canada	1
		Indonesia	7	New Zealand	1
		Australia	4	Sri Lanka	1
		Pakistan	2	India	1
		Iraq	2	Yemen	1
		Nigeria	1	Fiji	1
		Romania	1	Singapore	1
		Bangladesh	1		
10	Univ. Malaysia Sarawak (13)	United States	9	Lebanon	1
		United Kingdom	8	Denmark	1
		Australia	6	Cambodia	1
		Japan	5	New Zealand	1
		Bangladesh	3	Fiji	1
		Pakistan	2	Indonesia	1
		France	1		
11	Univ. Malaysia Terengganu (14)	India	8	United States	1
		United Kingdom	6	Denmark	1
		Indonesia	5	Italy	1
		Japan	3	Ecuador	1
		Thailand	2	Netherlands	1
		Saudi Arabia	2	Singapore	1
		Australia	1	Germany	1
12	Univ. Malaysia Pahang (12)	India	10	Bangladesh	1
		United Kingdom	5	Yemen	1
		Australia	3	Saudi Arabia	1
		Iraq	3	Taiwan	1
		Japan	2	Indonesia	1
		Singapore	1	Ireland	1
13	Univ. Malaysia Perlis (14)	Indonesia	4	Zimbabwe	1
		United Kingdom	4	United States	1
		Australia	2	India	1
		Saudi Arabia	2	Japan	1
		Norway	2	Algeria	1
		Iraq	1	Thailand	1
		Pakistan	1	Sudan	1
14	Univ. Teknikal Malaysia Melaka (5)	United Kingdom	10	Australia	1
		Japan	3	United States	1
		Hong Kong	1		
15	Universiti Pendidikan Sultan Idris (8)	United Kingdom	3	Korea, South	1
		Australia	3	Bangladesh	1
		Japan	2	Singapore	1
		Indonesia	2	Iran	1

Table 6.21: Detailed University-International Collaboration (cont.)

No	Universities	International Collaborations (based on unique article id)			
		Country	No. of Articles	Country	No. of Articles
16	Univ. Sultan Zainal Abidin (5)	Japan	5	United States	2
		Pakistan	2	United Kingdom	1
		Indonesia	2		
17	Univ. Sains Islam Malaysia (5)	United Kingdom	4	Jordan	1
		Australia	3	United Arab Emir.	1
		Indonesia	1		
18	Univ. Malaysia Kelantan (4)	New Zealand	2	United Arab Emir.	1
		Indonesia	1	Romania	1
19	Univ. Pertahanan Nasional Malaysia (2)	Indonesia	2	United Kingdom	2

6.12 International Collaboration by Journals and Fields of Studies

This section describes international collaboration status by journal titles in the five fields of studies. Against each journal title is indicated the total and percentage of articles with Malaysia as the country affiliation, as well as the total and percentage of articles affiliated to foreign countries. In the situation where the country affiliation of authors is not provided, the article is excluded from data analysis. Not providing the institutional or country affiliation of authors happened quite frequently in Malaysian journals and this situation disadvantaged the journal when measuring internationalization status.

All country affiliations, which are not Malaysia is categorized under "foreign" in Tables 6.22 to 6.26. In these tables those titles that show 40.0 to 100% of foreign country contributions indicate good internationalization status, and those with between 20.0 to 39.0% foreign contribution is regarded as having achieved a fair internationalization status. Those titles that indicate below 20.0% foreign contributions is regarded as exhibiting low internationalization characteristics. By this broad differentiation between the Malaysian and foreign country affiliation, it is possible to observe the degree of internationalization of a journal title. The term internationalization refers to a situation, where the geographical distribution of articles published reflect an international or regional dimension (Yamazaki and Zhang 1997; Wormell 1998). An international journal would reflect an entity comprising internationally contributed articles, which in turn are expected to be internationally or regionally consumed and cited. The analysis should answer the question, where does most of the intellectual output published in journals come from? In the context of this report the journals, which publish 40.0% or more of articles with foreign country affiliations is regarded as reflecting good degree of regional or international significance.

Out of the 25 journals listed under the arts and humanities, only 6 titles (24.0%) indicate active percentage of internationalization status of between 45.1 and 88.2% (Table 6.22) (titles that are boxed). Four of the six titles are also indexed in *Scopus* and/or the *WoS* (shown by *). There is evidence of collaboration based on geographical proximity as the foreign collaborators are mainly from India, Australia, Nigeria and Iran. Only *Jurnal al-Hikmah* publishes articles from Malaysia only. Those titles that indicate below 20.0% foreign contributions are regarded as exhibiting low internationalization characteristics.

Table 6.22: Journals in the Arts and Humanities Ranked by Percent of Foreign Collaborations

No.	Journals	Total Collaborations	Total Malaysian	Total Foreign	% Malaysian	% Foreign	Total Foreign Collaborators	Top 3 Foreign Collaborators
1	International Journal of Asia-Pacific Studies *	76	9	67	11.8	88.2	17	Australia, United States, Taiwan
2	Asiatic: IJUM Journal of English, Language and Literature *	170	22	148	12.9	87.1	19	India, Australia, United States
3	Journal of Modern Languages	26	11	15	42.3	57.7	11	United States, India, Japan
4	3L: Southeast Journal of English Language Studies *	149	66	83	44.3	55.7	24	Iran, India, Nigeria
5	Kemanusiaan: Asian Journal of Humanities *	42	23	19	54.8	45.2	10	Nigeria, Singapore, South Korea
6	Malaysian Journal of ELT Research	71	39	32	54.9	45.1	18	Singapore, Thailand, Australia
7	Wacana Seni: Journal of Arts Discourse	63	40	23	63.5	36.5	11	Philippines, Indonesia, United States
8	English Teacher	93	64	29	68.8	31.2	12	Singapore, Taiwan, Indonesia
9	International Journal on Quranic Research	24	17	7	70.8	29.2	5	Saudi Arabia, Qatar, Algeria
10	Intellectual Discourse	93	66	27	71.0	29.0	15	Nigeria, Japan, India
11	GEMA Online® Journal of Language Studies	246	185	61	61	24.8	23	Iran, Australia, Indonesia
12	JATI: Journal of Southeast Asian Studies	180	138	42	42	23.3	14	Philippines, Indonesia, Australia
13	SEARCH Journal of the Southeast Asia Research Centre for Communications and Humanities	40	31	9	9	22.5	9	New Zealand, United States, Egypt
14	Jebat: Malaysian Journal of History, Politics & Strategic Studies	61	48	13	78.6	21.3	8	Indonesia, Australia, Taiwan
15	Jurnal Bahasa	239	199	40	83.3	16.7	12	Indonesia, Singapore, United States
16	Al-Bayan: Journal of al-Quran al-Hadith	112	95	17	84.8	15.2	9	Canada, Iran, Turki
17	Jurnal Al-Tamaddun	92	78	14	84.8	15.2	9	Nigeria, Jordan, Indonesia
18	Jurnal Syariah	198	182	16	91.9	8.1	6	Indonesia, Nigeria, Thailand
19	PERSPEKTIF Jurnal Sains Sosial & Kemanusiaan	34	32	2	90.1	5.9	2	Sudan, Indonesia
20	Jurnal Kemanusiaan	114	108	6	94.7	5.3	4	United States, United Kingdom, Indonesia.
21	Jurnal Linguistik	75	71	4	94.7	5.3	3	United Kingdom, Indonesia, South Korea
22	Islamiyyat International Journal of Islamic Studies	54	52	2	96.3	3.7	2	Bangladesh, Indonesia
23	MANU Jurnal Pusat Penataran Ilmu & Bahasa	30	29	1	96.7	3.3	1	Indonesia
24	Jurnal Fiqh	74	73	1	98.6	1.4	1	Thailand
25	Jurnal al-Hikmah	16	16	0	100.0	0	0	-

* Indexed by Scopus and/or WoS

In the field of social sciences, all journals except one, show more or less percentage of international collaboration. This means that foreign social scientists from the East Asia, Asia-Pacific and Oceania region, such as Australia, New Zealand, Iran, Japan, India, Pakistan, and the Asean countries are using Malaysian journals as a channel to publish in. In general the top 10 titles listed in Table 6.23 show active international collaboration of between 44.4% and as high as 82.0%, and this group constitute about 21.7% of the 46 social science journals. The subject range of the top ten journals are mainly in economics, management, finance, education and library and information science. The *International Journal of Banking and Finance* shows very high foreign country contributions from 91 (82.0%) out of the 111 papers indexed in MyCite. The majority of the social science journals (29 titles, 63.1%) indicate from 10.9 to 39.0% foreign country contribution inferring a fair degree of internationalization status.

Table 6.23: Journals in the Social Sciences Ranked by Percent of Foreign Collaborations

No.	Journals	Total Collaborations	Total Malaysian	Total Foreign	% Malaysian	% Foreign	Total Foreign Collaborators	Top 3 Foreign Collaborators
1	International Journal of Banking and Finance	111	20	91	18.0	82.0	25	United States, Australia, United Kingdom
2	Institutions and Economies *	80	20	60	25.0	75.0	27	Australia, Japan, India
3	Malaysian Journal of Distance Education	121	44	77	36.4	63.6	34	India, Nigeria, Pakistan
4	Asia-Pacific Management Accounting Journal	75	29	46	38.7	61.3	16	Australia, Japan, New Zealand
5	Malaysian Journal of Library & Information Science *	272	107	165	39.3	60.7	29	India, Iran, Taiwan
6	Asian Academy of Management Journal*	127	60	67	47.2	52.8	24	Australia, India, United Kingdom
7	Asian Journal of Business and Accounting *	78	37	41	47.4	52.6	17	Indonesia, Australia, New Zealand
8	Asian Academy of Management Journal of Accounting and Finance *	123	61	62	49.6	50.4	21	Australia, India, New Zealand
9	Journal of Tourism, Hospitality & Culinary Arts	94	49	45	52.1	47.9	18	Thailand, Australia, Hong Kong
10	Journal of Technical Education and Training	63	35	28	55.6	44.4	18	Indonesia, India, Germany
11	Malaysian Journal of Economic Studies	122	74	48	60.7	39.3	18	United Kingdom, Australia, Japan
12	Asian Journal of Environment-Behaviour Studies	104	66	38	63.5	36.5	13	Indonesia, Japan, Egypt
13	Journal of Research, Policy & Practice of Teachers and Teacher Education	37	24	13	64.9	35.1	8	Australia, Singapore, Brunei
14	Journal of ASIAN Behavioural Studies	92	60	32	65.2	34.8	14	Thailand, Indonesia, Iran
15	International Journal of Economics, Management and Accounting	28	19	9	67.9	32.1	6	Pakistan, United Kingdom, United States
16	Journal of Governance and Development	32	22	10	68.8	31.3	3	Indonesia, Nigeria, Thailand
17	Labuan Bulletin of International Business & Finance	51	36	15	70.6	29.4	9	Hong Kong, Singapore, Philippines
18	Malaysian Accounting Review	141	100	41	70.9	29.1	13	Australia, United Kingdom, New Zealand
19	International Journal of Economics and Management	177	128	49	72.3	27.7	18	India, United Kingdom, Indonesia
20	Geografia: Malaysian Journal of Society & Space	307	234	73	76.2	23.8	21	Indonesia, Nigeria, Iran
21	International Journal of Business and Society	150	116	34	77.3	22.7	16	Australia, New Zealand, India
22	Asian Journal of Accounting and Governance	31	24	7	77.4	22.6	6	Indonesia, United Kingdom, Thailand
23	ASEAN Journal of Teaching & Learning in Higher Education	69	54	15	78.3	21.7	9	Spain, Nigeria, Iran
24	Pertanika Journal of Social Sciences & Humanities	478	375	103	78.5	21.5	26	India, Australia, Iran
25	IJUM Law Journal	89	70	19	78.7	21.3	9	Nigeria, United States, India
26	Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)	48	38	10	79.2	20.8	2	Brunei, Indonesia, Thailand, Australia, Jordan
27	TEAM Journal of Hospitality and Tourism	70	56	14	80.0	20.0	9	Singapore, Australia,
28	Kajian Malaysia	88	71	17	80.7	19.3	5	United Kingdom
29	International Journal of West Asian Studies	52	42	10	80.8	19.2	10	Sudan, Palestine, Egypt
30	Malaysian Management Journal	88	73	15	83.0	17.0	10	United Kingdom, Bangladesh, Indonesia
31	Malaysian Journal of Learning & Instruction	80	67	13	83.8	16.3	8	United Kingdom, Australia, Taiwan
32	Jurnal Pendidikan Malaysia	107	90	17	84.1	15.9	9	Indonesia, Oman, Nigeria
33	Terengganu International Management and Business Journal	32	27	5	84.4	15.6	4	Pakistan, Philippines, Bangladesh
34	Journal of International Studies	33	28	5	84.8	15.2	5	Australia, Egypt, United Kingdom
35	Journal of Human Capital Development	106	90	16	84.9	15.1	12	Japan, Indonesia, Poland
36	Jurnal Pengurusan	159	137	22	86.2	13.8	8	Indonesia, United Kingdom, United States
37	Jurnal Komunikasi	105	91	14	86.7	13.3	8	Indonesia, Nigeria, India
38	Jurnal Ekonomi Malaysia	149	130	19	87.2	12.8	10	Indonesia, Japan, United Kingdom

* Indexed by Scopus and/or WoS

Table 6.23: Journals in the Social Sciences Ranked by Percent of Foreign Collaborations (cont.)

No.	Journals	Total Collaborations	Total Malaysian	Total Foreign	% Malaysian	% Foreign	Total Foreign Collaborators	Top 3 Foreign Collaborators
39	Jurnal Undang-Undang dan Masyarakat	83	74	9	89.2	10.8	5	Indonesia, Australia, Nigeria
40	Jurnal Pendidikan Sains & Matematik Malaysia	41	37	4	90.2	9.8	2	Indonesia, Oman
41	AKADEMIKA: Jurnal Sains Kemasyarakatan dan Kemanusiaan	172	156	16	90.7	9.3	14	Singapore, Australia, Brunei
42	Jurnal Pengajian Media Malaysia	106	98	8	92.5	7.5	7	United States, Nigeria, Iran
43	Jurnal Intelek	123	116	7	94.3	5.7	5	India, Australia, France
44	Malaysian Journal of Youth Studies	92	89	3	96.7	3.3	2	United Kingdom, New Zealand
45	Labuan e-Journal of Muamalat and Society	43	42	1	97.7	2.3	1	Indonesia
46	Economic and Technology Management Review	69	69	0	100.0	0.0	0	None

The percentage of international contributions in the field of engineering and technology is high with about eight out of the 18 titles (44.4%) showing a range of 40.6 to as high as 83.0% foreign collaboration. Table 6.24 shows that out of the eight titles listed in the top ten, four are also indexed in *Scopus* and/or the *WoS*. The *Journal of Construction in Developing Countries* published by the Engineering Faculty at the Universiti Sains Malaysia shows 83.0% foreign contributions (93 of 112 articles) and the main country collaborators are Nigeria, Thailand and Iran. About half (9, 50.0%) of the journals in the engineering and technology fields show between 14.0 and up to 26.0% contributions from foreign countries.

Table 6.24: Journals in the Engineering and Technology Ranked by Percent of Foreign Collaborations

No.	Journals	Total Collaborations	Total Malaysian	Total Foreign	% Malaysian	% Foreign	Total Foreign Collaborators	Top 3 Foreign Collaborators
1	Journal of Construction in Developing Countries *	112	19	93	17.0	83.0	31	Nigeria, Thailand, Australia
2	Journal of Building Performance	37	14	23	37.8	62.2	2	Nigeria, India
3	Journal of Engineering Science and Technology *	397	165	232	41.6	58.4	40	India, Nigeria, Iraq
4	Malaysian Journal of Computer Science *	219	111	108	50.7	49.3	25	India, Bangladesh, United Kingdom
5	International Journal of Sustainable Construction Engineering and Technology	76	40	36	52.6	47.4	13	Nigeria, United Kingdom, India
6	IJUM Engineering Journal	224	128	96	57.1	42.9	26	India, Saudi Arabia, Pakistan
7	Journal of Mechanical Engineering and Technology	65	38	27	58.5	41.5	11	India, United Kingdom, Iran
8	International Journal of Mechanical and Materials Engineering *	286	170	116	59.4	40.6	19	India, Bangladesh, Indonesia
9	Malaysian Journal of Civil Engineering	182	118	64	64.8	35.2	23	Indonesia, United Kingdom, Japan
10	Journal of Design and Built Environment	83	61	22	73.5	26.5	12	India, Nigeria, Bangla
11	International Journal of Automotive and Mechanical Engineering	149	111	38	74.5	25.5	12	United Kingdom, Indonesia, India
12	Journal of Telecommunication, Electronic and Computer Engineering	98	73	25	74.5	25.5	11	United Kingdom, Iran, Iraq
13	International Journal of Integrated Engineering	149	111	38	74.5	25.5	12	United Kingdom, Indonesia, India
14	Journal of Information and Communication Technology	108	81	27	75.0	25.0	10	United Kingdom, India, Nigeria
15	Journal of Surveying, Construction and Property	36	28	8	77.8	22.2	3	United Kingdom, Nigeria, Netherlands
16	Jurnal Teknologi (Sains dan Kejuruteraan)	755	623	132	82.5	17.5	34	Indonesia, United Kingdom, Iran
17	Journal of Design + Built	71	61	10	85.9	14.1	8	Nigeria, Iran, Indonesia
18	ESTEEM Academic Journal	97	96	1	99.0	1.0	1	United Kingdom

* Indexed by *Scopus* and/or *WoS*

Out of the 15 titles in the field of medical and health sciences field, four (26.7%) titles indicate 45.3 to 67.5% foreign country contributions (Table 6.25). Out of the four titles only *Tropical Biomedicine* is indexed by both the *WoS* and *Scopus*. Nearly half (7, 46.6%) of the journals in this field show foreign country contributions ranging from 13.2 to 36.3%. The country contributions are mainly from the East Asia and Asia-Pacific region such as India and her neighbouring countries, the Middle Eastern and Asean countries. It is suspected that lesser foreign contributions may be due to keen competitions from abounding regional and global journals in this field.

Table 6.25: Journals in the Medical and Health Sciences Ranked by Percent of Foreign Collaborations

No.	Journals	Total Collaborations	Total Malaysian	Total Foreign	% Malaysian	% Foreign	Total Foreign Collaborators	Top 3 Foreign Collaborators
1	Malaysian Journal of Pharmaceutical Science	83	27	56	32.5	67.5	13	India, Bangladesh, Indonesia
2	Education in Medicine Journal	103	39	64	37.9	62.1	20	India, Saudi Arabia, Nepal
3	Tropical Biomedicine *	631	319	312	50.6	49.5	47	India, Iran, Thailand
4	ASEAN Journal of Psychiatry	170	93	77	54.7	45.3	15	Thailand, Singapore, India
5	Malaysian Orthopaedic Journal	245	156	89	63.7	36.3	21	India, Singapore, Indonesia
6	Archives of Orofacial Sciences	122	80	42	65.6	34.4	14	India, United Kingdom, Australia
7	International Medical Journal Malaysia	244	166	78	68.0	32.0	21	Iran, India, Iraq
8	Malaysian Journal of Medical Sciences	481	351	130	73.0	27.0	24	India, Iran, Nigeria
9	Malaysian Journal of Pathology	176	136	40	77.3	22.7	20	India, Singapore, Australia
10	Malaysian Journal of Psychiatry	175	141	34	80.6	19.4	10	India, Australia, Iran
11	Medical Journal of Malaysia	985	855	130	86.8	13.2	26	Singapore, India, Iran
12	Jurnal Sains Kesihatan Malaysia	168	154	14	91.7	8.3	10	United Kingdom, Indonesia, China
13	International e-Journal of Science, Medicine & Education	110	102	8	92.7	7.3	3	India, Indonesia, United Kingdom
14	JUMMEC	126	115	9	91.3	7.1	9	United Kingdom, Saudi Arabia, Brunei
15	Malaysian Family Physician	190	182	8	95.8	4.2	5	Australia, China, Singapore

* Indexed both in *Scopus* and *WoS*

A total of eight out of the 25 journal titles (32.0%) in the field of sciences show high foreign country contributions in the range of 43.8 to as high as 89.8% (Table 6.26). Out of the eight titles, five journals are also indexed in *Scopus* and/or *WoS*. The impressive foreign country contributions are indicated especially by *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS), which show 89.8% foreign country contributions. It is indicated that out of the 481 contributions, only 49 come from Malaysia. This situation of high foreign country contributions are also indicated by *Journal of Tropical Forest Science* (76.4% foreign contributions) and *Malaysian Journal of Microbiology* (71.5% foreign contributions). This situation probably indicates that these Malaysian journals do not depend on contributions from Malaysia to sustain their publication productivity and is being used by scientists from the Asiatic regions to publish their research results. The top eight journals show evidence of internationalization in their contents and readership.

Table 6.26: Journals in the Sciences Ranked by Percent of Foreign Collaborations

No.	Journals	Total Collaborations	Total Malaysian	Total Foreign	% Malaysian	% Foreign	Total Foreign Collaborators	Top 3 Foreign Collaborators
1	Bulletin of the Malaysian Mathematical Sciences Society *	481	49	432	10.2	89.8	50	China, Iran, India
2	Journal of Tropical Forest Science *	594	140	454	23.6	76.4	58	India, China, United States
3	Malaysian Journal of Microbiology *	246	70	176	28.5	71.5	27	Nigeria, India, Egypt
4	International Food Research Journal *	1,176	418	758	35.5	64.5	64	India, Thailand, Indonesia
5	Malaysian Polymer Journal	109	40	69	36.7	63.3	20	India, Iraq, Greece
6	Asia-Pacific Journal of Molecular Biology and Biotechnology *	220	91	129	41.4	58.6	34	India, United Kingdom, United States
7	Malaysian Journal of Sport Science and Recreation	48	26	22	54.2	45.8	7	Australia, Canada, New Zealand
8	MATEMATIKA	130	73	57	56.2	43.8	24	India, Indonesia, Iran
9	Journal of Physical Science	157	95	62	60.5	39.5	17	India, Indonesia, Iraq
10	Malaysian Journal of Soil Science	72	45	27	62.5	37.5	16	Bangladesh, India, Nigeria
11	Malaysian Journal of Chemistry	78	49	29	62.8	37.2	13	India, Japan, Bangladesh
12	Tropical Life Sciences Research (formerly Journal of Bioscience)	104	67	37	64.4	35.6	13	India, Indonesia, United States
13	Malaysian Journal of Mathematical Sciences	172	114	58	66.3	33.7	19	Turkey, Uzbekistan, Indonesia
14	Jurnal Fizik Malaysia	81	62	19	76.5	23.5	9	Nigeria, Botswana, United Kingdom
15	Malaysian Applied Biology (formerly Malaysian Agricultural Research)	181	140	41	77.4	22.7	14	Iran, India, United States, United States, Indonesia,
16	Journal of Oil Palm Research	378	299	79	79.1	20.9	23	United Kingdom
17	Sepilok Bulletin	109	87	22	79.8	20.2	7	Indonesia, United Kingdom, Japan
18	Pertanika Journal of Tropical Agricultural Science	251	202	49	80.5	19.5	21	Nigeria, India, United Kingdom
19	Pertanika Journal of Science & Technology	269	218	51	81.0	19.0	20	India, Iran, Indonesia
20	Sains Malaysiana	1,222	993	229	81.3	18.7	47	Japan, United Kingdom, Indonesia
21	Journal of Agrobiotechnology	33	27	6	81.8	18.2	4	United Kingdom, Saudi Arabia, United States
22	Journal of Tropical Agriculture and Food Science	159	132	27	83.0	17.0	10	United Kingdom, India, Australia
23	Defence S&T Technical Bulletin	60	51	9	85.0	15.0	4	Italy, United Kingdom, Australia
24	Malaysian Journal of Analytical Sciences	388	342	46	88.1	11.9	16	India, Indonesia, Iran
25	Malaysian Journal of Veterinary Research	55	54	1	98.2	1.8	1	Thailand

* Indexed by Scopus and/or WoS

In summary, among the 129 Malaysian journals indexed in *MyCite* there are fairly equal distributions of active, fairly active and less active foreign country contributions. A total of 36 titles (28.0%) show a range of 40.0 to 89.0% active foreign country contributions, followed by 47 titles (35.7%) with foreign country contributions of 20.0 to 39.0%, and 26 titles (20.2%) with 10.0 to 19.0% foreign country contributions. The journals that have high percentage of foreign country contributions show evidence of internationalization in terms of their content. This pattern can be used by journal editors to back-up their request for indexation in the universal citation databases that requires that the journals they index should be international rather than national in content and readership.

7.0 • DISCUSSION, CONCLUSION AND RECOMMENDATION

This final section summarizes and discusses the main findings on the performance of Malaysian journals for 2013 at the national and international level. The performance at the international level is gauged through the global citation databases, *Web of Science* and *Scopus*. The performance at the national level is gauged through *MyCite*, which aims to cover all scholarly journals published by Malaysian institutions and agencies. It provides a set of recommendations that need to be addressed by a range of sectors and stakeholders of Malaysian scholarly publications if they are to achieve their objective of improving the visibility and quality of Malaysian journals, as well as enriching the national heritage of research content.

7.1 Summary and Discussion

The Malaysian Citation Centre (MCC) established by the Ministry of Education on 15th February 2011, has a monumental task of controlling the bibliographic and citation information about Malaysian journals. MCC's main role is to collate, monitor, coordinate and improve Malaysian journal publications, as well as produces and disseminates bibliometrics reports on the performance of these journals. Where ever possible, MCC provides access to all journals' contents on the Web through its journal management hosting system, *MyJournal*. *MyJournal* essentially assumes the role of a backup system for Malaysian journals so that information about their contents could be searched and accessed on a single platform. With the control of bibliographic and citation information, MCC is accountable to report on the publication and citation performance of Malaysian journals. As a result a citation database named *MyCite* is developed. Through *MyCite*, MCC could generate yearly report on the journals publication productivity, the citations they garner, and report on other performance indices such as journals' impact factor (IF), h-indexes, cited half-life and immediacy index, which also form the basis of the Institute of Scientific Information (ISI) journal indicators. Through *My Journal* and *MyCite* the Ministry of Education aspires that MCC would help internationalize Malaysian journal publications, making their contents accessible globally and indexed locally.

MyCite was launched on 22 May 2012 and is the youngest citation database in the Asia-Pacific region, compared to China, which established their *Chinese Science Citation Database* as early as 1989 and the *Chinese Social Science Database* in 1997. Taiwan too saw the importance of controlling their scientific bibliographic information as they started their *Taiwan Science Citation Index* in 1996 and followed by their humanities and social sciences citation databases in 1999. Thailand started their *Thai Journal Citation Index* in 2001. Through *MyJournal* and *MyCite*, MCC has increased the awareness of scholarly journal publishers to good publishing practices. For example, the performance report is provided only for the journals that have maintained their publication currency and met *MyCite* requirements for the calculation of bibliometric indices. This yearly report has helped to improve the publication quality of scholarly journals in Malaysia, as publishers are made aware of their journal's national impact in terms of productivity and citation. The performance of scholarly journals that suffer from publication lags is not reported as it is impossible to calculate their 2-year or 5-year productivity and citation counts. However, their h-index is provided. The information provided by *MyCite* and *MyJournal* could be used by future bibliometric researchers to assess the performance between journals in the various subject fields or device new algorithm to take into account international and national indices to measure the true impact of Malaysian journals.

The number of Malaysian journals which have gained indexation in the universal citation databases are small. The number of journals indexed in the *Web of Science (WoS)* is 12 and this number has not changed since the MCC's 2012 report (Malaysian Citation Centre 2013). The Bulletin of the *Malaysian Mathematical Sciences Society* (BMMSS), performed very well in the field of mathematics with an IF of 0.860, ranking 65 out of 299 titles in this subject category and listed in quartile 1. The *WoS* is more likely to index journals that are (a) published by professional or academic societies or government research institutions; (b) current in publishing their issues over the latest five years or longer; (c) accessible both in print and on the Web; and (d) showing impact in their respective fields through citation counts. The journals that have longevity are more likely to score high h-index. The number of Malaysian journal titles covered in *Scopus* increased from 53 titles in 2011 to 76 titles in 2013. The Malaysian journals in the arts, humanities and social sciences gain better indexation in *Scopus* and some are performing well in terms of impact and quartile ranking. Overall a total of 12 (15.8%) out of the 76 titles listed achieved quartile 1 or/and 2 ranking in *Scopus*. The universities publish the majority of the Malaysian journals indexed in *Scopus* (51 titles, 67.1%). In *Scopus* journal impact is measured by the SCImago Journal Ranking (SJR). Overall, none of the Malaysian journals attain an SJR score of 1.0 or above, indicating their low citation capacity. *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS) attains the highest SJR score of 0.582. In summary, the international or regional impact of Malaysian journals is known through indexation in *WoS* and/or *Scopus* and gaining indexation in both citation databases would be the ideal situation. However, it is also important to

know their national impact and this can only be known through indexation in *MyCite*. In this context it is necessary that MCC should index all Malaysian journal titles regardless of whether the titles are already covered by *WoS* and/or *Scopus*.

By the end of 2013, a total of 294 titles have been either completely or incompletely covered in *MyCite*. Even though more titles are covered in *MyJournal*, the performance of some titles cannot be reported due to the failure of these journals to meet *MyCite* journal selection criteria especially on timeliness and availability/ accessibility factors. This explains why a total of 25 journals reported in the 2012 report are not included in the current report. A total of 129 (44.2%) journals have been completely covered from 2008 to 2013, and only the publication and performance of these journals that are completely indexed for five year duration is reported in this report. Journals are increasingly becoming online but in the context of Malaysia, such initiatives are yet to gain momentum as many of the journals still do not have online presence, since only 12 (9.3%) have gone fully electronic. Many of these journals are still published in print format (76, 58.9%), whereas 41 (31.8%) are published in hybrid print/electronic. This seems to infer why problems of accessibility exist. The majority of these journals are published either in the English Language (72, 55.8%), or in both English and Malay (47, 36.4%). Based on publication frequency, most journals are published biannually (73, 56.6%), or annually (27, 20.9%). Only one is published with 12 issues per year i.e. *Sains Malaysiana*, which is a *WoS*-indexed journal. There are more titles published in the AHSS (71, 55.0%) compared to the STM fields (58, 45.0%). There are more journals in the social sciences fields that have been successful in getting indexation status in *MyCite*, which indicates the ability of social sciences journals to be timely and having a healthy pool of submissions. Universities are the main publishers of Malaysian scholarly journals, followed by professional societies and government agencies. Although in developed nations, the most common publishers are commercial in nature, in Malaysia however, most authoritative journal publishers are still either educational or non-profit organizations.

The performance of the journals indexed in *MyCite* is based on two main bibliometric indicators i.e. publication productivity and citation impact. The citation data provide the journal performance activity in 2-year and 5-year windows, using ISI-based journal metrics namely yearly IF and 5-year IF, immediacy index, cited half-life and h-index. Malaysian researchers behaviorally do not cite their colleague's article, which are published in Malaysian journals. It is assumed that this may be due to the non-accessibility of articles, especially those published in journals not indexed by *WoS* or *Scopus*. This problem of accessibility and visibility of scholarly journals is highlighted by Kielig and Goncalves (2007) who observed that journals in psychiatry published in Brazil experience improved submission rate and a gentle rise in impact scores only after gaining indexation in *WoS* or *Medline*. In the Malaysian context, even though some journals are available on the Web, most are not searchable at the article level. This non-citing behaviour of Malaysian researchers has resulted in low yearly and 5-yearly IF scores of below 1.0 in *MyCite*. Also, only 70 journals out of the 129 titles indexed in *MyCite* show yearly IF scores between 0.01 and 0.4. The impact scores show that journals in the arts and social sciences benefit most from being indexed in *MyCite*. The national significance of journals in the AHSS fields in Malaysia is seen even though they are poorly covered by international citation databases. *GEMA Online® Journal of Language Studies* published by Universiti Kebangsaan Malaysia obtained the highest yearly IF score of 0.406 and 5-yearly IF score of 0.414 in *MyCite*. This journal performs equally well in *Scopus*. *JATI: Journal of Southeast Asian Studies*, published by Universiti of Malaya, achieves a yearly IF score of 0.333 and a 5-yearly IF score of 0.208. This journal is not indexed in either *WoS* or *Scopus* and *MyCite* has helped show that JATI has attained national impact. The importance of highlighting national impact is also indicated by science-based journals, which is also not indexed by *WoS* or *Scopus*. *Malaysian Journal of Civil Engineering* published by Universiti Teknologi Malaysia, shows yearly and 5 yearly impact in *MyCite*. The impact and ranking of these journals may be used in conjunction with journal publication information as evidence for scholars to show the likelihood of national impact of the journal they publish in. In summary, Malaysian scholarly journal should allow their issues to be indexed in *MyCite* so that the national impact of these journal can be gauged.

Scholarly journal publishers could also use the impact information together with the h-index scores to show the significance of their journals at the national level. H-index is regarded as a fair measure of journals' current and future impact as it is not constrained by specific 2-year or 5-year publication and citation windows. It takes into account all articles published by journals together with the citations received. As a result, journals that publish more articles or gain longer years of coverage by *MyCite* tend to perform better in their h-index scores, evidenced by the 24 Malaysian journals, which have h-indices of 3 and above. *GEMA Online® Journal of Language Studies*, has the highest h-index score of 6, followed by *International Food Research Journal*, *Tropical Biomedicine* and *Medical Journal of Malaysia*, with a h-index of 5 respectively. Malaysian scholarly journal publishers should give priority to making the full-text of journal articles available online or submitting complete or past issues of their journals either as print or softcopies to MCC because to do so would help show their impact or h-index scores. However, journal publishers should control the volume of articles published since the publication of high number of articles could adversely affect the journals IF scores.

In general, Malaysian journals score low on the immediacy index as out of the 129 journals, only 24 titles show immediacy index scores. Immediacy index is a measure of how quickly articles in a journal get cited upon publication. Therefore, an article published in a journal that makes the former accessible online immediately upon publication could indicate a higher chance of getting early citation. Immediacy scores also help indicate the topics that gets early citations, which can be used by publishers to strategize on giving priorities to articles covering certain hot topics to improve citations to the articles published in the journal.

Even though relatively few Malaysian journals gain indexation in *Scopus* and fewer still in *WoS*, international authors are using Malaysian journals as channels to publish their articles. The majority of foreign authors who publish in the 129 journals are single or joint authors and come from the Asian and African continent (14,103 and 2,106 authors respectively). International diversity of contributing authors is important in showing the international status of Malaysian journals as it is an expected characteristic of journals indexed by *WoS* or *Scopus*. In the context of Malaysian journals, their content or composition of articles should reflect internationalization in terms of representing researches in the Asia Pacific region. It is observed that once a journal gained an international image, the contribution from the country's own nationals will decrease and articles from foreign authors would increase (Tompkins, Ko and Donovan 2001; Wang, Wang and Welden 2007). The increase in foreign submissions will also solve Malaysian journals' problem of getting enough articles to sustain regularity in publication pattern. Zainab (2008) observed the decrease of Malaysian articles being published in the *Bulletin of the Malaysian Mathematical Sciences Society* (BMMSS), as the journal becomes more international. She observed that in some issues BMMSS did not publish any Malaysian articles. Tompkins, Ko and Donovan (2001) referred to this situation as the marginalisation of national contributions in preference for foreign articles. In summary, access through *MyCite* would help expose Malaysian scholarly articles over the Web to the world scholarly community and indirectly increase submissions from regional researchers. This is especially important for Malaysian journals in the field of AHSS, which have less chances of getting indexed in universal citation databases, but are detrimental channels in documenting historical, social and literary research in Malaysia.

A total of 82,646 authors contribute articles to scholarly journals published in Malaysia, however, only the top twenty authors in terms of total articles, total citations received are shown in Section 6 of this report. It should be noted that the ranking is limited as to date *MyCite* covers only 129 journals. There is a shift in the list of most productive and cited authors compared to the 2012 report. Four new authors appear in the 2013 top productive list, which was not in the 2012 report, Nor Hashimah Jalaludin, Zaharani Ahmad, Rahman M.M. (all three are also listed in the top cited list) and Saedah Siraj. The cut off points for the top 20 lists showing total publications and total citation show an increase for both counts. Radu S or Son R from UPM remains the highest contributor publishing in Malaysian journals as well as receiving the highest citation. All authors listed in both the 2012 and 2013 reports show an increase in publications and citations, indicating that they remain active and impactful authors in Malaysia. The active authors in the AHSS publish less

number of articles compared to authors in the STM field. Overall, the number of citations garnered from published works is relatively low, inferring perhaps it takes longer for published works in Malaysian journals to be cited. In the AHSS field the top 20 authors are affiliated to Universiti Kebangsaan Malaysia (15) and Universiti of Malaya (5), inferring the strength of research in the AHSS fields as well as the higher number of journals published in these fields by the two universities.

The universities dominate in total articles published in Malaysian journals indexed in *MyCite*, especially from the research-designated universities, such as Universiti Kebangsaan Malaysia (4,954), followed by University of Malaya (3,257), Universiti Putra Malaysia (2,753) and Universiti Sains Malaysia (2,275). Authors from the private universities are also increasing their publications in Malaysian journals seen through high number of articles published by faculties from International Medical University (289), Universiti Teknologi PETRONAS (275), Universiti Tenaga Nasional (128), Universiti Tunku Abdul Rahman (122), Multimedia University (101), Monash University (89), Taylor’s University (84), and Universiti Tun Abdul Razak (56). Equally active article contributors are researchers from the government research agencies exemplified by the Malaysian Palm Oil Board (288), Institute for Medical Research, Kuala Lumpur (209 articles), Malaysian Nuclear Agency (201), Forest Research Institute Malaysia (174), Ministry of Health or Kementerian Kesihatan Malaysia (134), Malaysian Agricultural and Research Institute Malaysia (MARDI) (215), Forest Research Centre (69), SIRIM Bhd. (55), Fisheries Research Institute (43), and Jabatan Perkhidmatan Awam (32). There are also contributions from doctors at the government hospitals who are active authors and they are affiliated to Hospital Kuala Lumpur (169 articles), Hospital Universiti Kebangsaan Malaysia (112), Hospital Tengku Ampuan Afzan, Pahang (64), Hospital Pulau Pinang (50), Hospital Umum Sarawak (78), and Hospital Sultanah Aminah (36). Figure 7.1 shows that the public higher educational institutions lead immensely in terms of productivity and citations compared to the private higher educational institutions and the government agencies.

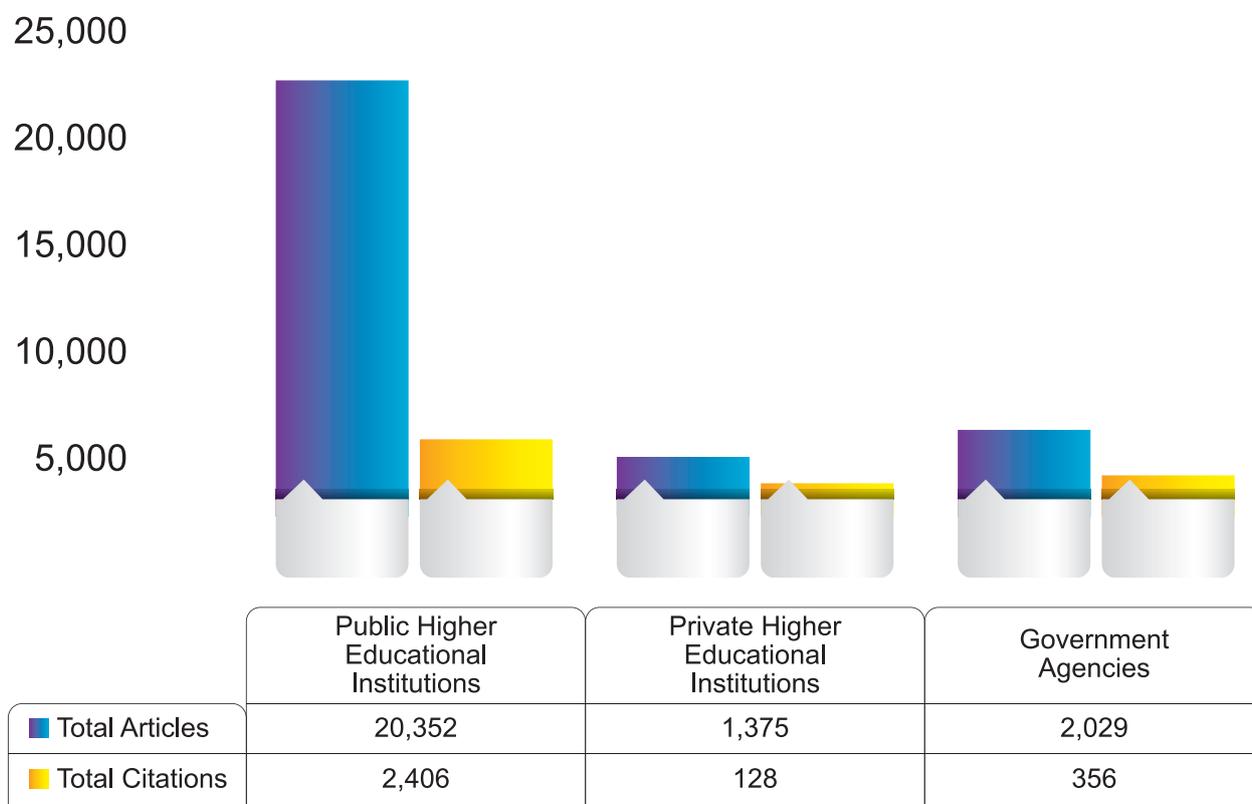


Figure 7.1: Productivity and Citations by Types of Institutions

In general, scholarly journals indexed in *MyCite* show low IF scores indicating that a large number of articles published in Malaysian journals are uncited. Journal articles, which received high citations were published in Malaysian journals with relatively high or moderate impact factor in *MyCite*, as well as indexed in *Scopus*. This finding confirms that an article that has a good impact at the national level is also cited well at the international level. Out of the total 20,970 articles published in the 129 journals indexed in *MyCite*, a total of 18,860 (89.9%) are uncited. The field of arts and humanities has the lowest percentage of uncited papers (86.7%) that is lower than the overall percentage for the 129 journals, which is 89.9%. This situation confirms that articles in the AHSS in *MyCite* receive higher citations compared to articles in the STM, indicating their higher national impact. This is interesting as other studies using the Thomson Reuters's *WoS* citation databases found the reverse (Hamilton 1990, 1991; Meho 2007). The phenomenon of uncitedness may also be country dependent. Garg and Kumar (2014) analysed 35,640 papers published by Indian scientists in journals indexed in Science Citation Index Expanded (SCIE) and found that 17.5% (6,231) remain uncited during 2008 to 2013 and the highest proportion of uncited papers are in journals published from India, Singapore, Romania and Japan which, incidentally also have low IF. However, Lariviere et al. (2008) found that the share of uncited papers has decreased across disciplines with the exception of the arts and humanities. They reasoned that this was probably due of the small number of journals covered in the Thomson Reuters citation databases. In the Malaysian context, there is a real need to find out the percentage of uncitedness at article and subject field levels to discover age effect on uncitedness using data from all universal as well national citation databases. In summary, there is a need to study the citation behaviour of authors publishing in Malaysian journals, which may reveal the reasons for uncitedness. Issues such as discipline behaviour, the length of citation windows, the size of journals available in a particular field, length and age of references used and the keywords used by authors needed to be factored to understand cited and uncitedness of articles published in journals.

Universities in Malaysia encourage their academic staff to establish international research collaboration. Faculty members are motivated to collaborate because they benefit from increase access to research funding that can be used to fund graduate students and research facilities (Lee 2000; Luo et al. 2013). International collaboration is indicated by co-authorship pattern in Malaysian journals and especially active among the four research-designated universities, University of Malaya (53 countries), Universiti Putra Malaysia (45 countries), Universiti Kebangsaan Malaysia (42 countries) and Universiti Sains Malaysia (40 countries). The collaborative research network seems to be based on regional proximity, especially with neighbouring countries such as Indonesia, Australia, Japan and India. This is expected as, knowledge exchanges are easier by geographical proximity. Another factor contributive to the collaborative network is the supervisor-student or student-supervisor situations (Katz and Martin 1997), especially with countries such as the United Kingdom, Australia, India and Iran. For example, from the 20 Malaysian universities listed in the collaborative table (Table 6.18), United Kingdom and Australia feature high among 14 (70.0%) universities. International research collaboration is expected to increase especially from the research universities because of the drive from the government and the internationalization of knowledge. Successful access to funding of graduate students and research facilities has become increasingly dependent on the degree of research collaboration indicated by research projects. However, it should be noted that the increasing practice of foreign students and faculties using Malaysian universities as their affiliation status may diffuse the international collaboration effect of articles submitted to Malaysian journals.

Through broad differentiation between the Malaysian and foreign country affiliation of authors publishing in Malaysian journals, it is possible to observe the degree of internationalization of journal titles. In this context all country affiliations, which are not Malaysian is categorized under "foreign". The term international refers to a situation where the geographical distribution of articles published reflects an international or regional dimension. An international journal would reflect an entity comprising internationally contributed articles, which in turn are expected to be internationally or regionally consumed and cited. The analysis should answer the question, where does most of the intellectual output published in journals come from? In the context of this report the journals, which publish 40.0% or more of articles with foreign country affiliations is regarded as reflecting some degree of regional or international significance. Among the 129 Malaysian

journals indexed in *MyCite*, there are fairly equal distributions of active, fairly active and less active contributions of authors from foreign countries. When viewed in general, a total of 36 titles (28.0%) show a range of 40.0 to 89.0% active foreign country contributions, followed by 47 titles (35.7%) with fairly active foreign country contributions of 20.0 to 39.0%, and 26 titles (20.2%) with 10.0 to 19.0% less active foreign country contributions. When viewed by broad fields, the status of active internationalization as indicated by above 40.0% contributions from foreign authors is indicated by the engineering and technology fields (44.4%, 8 out of 18 titles) (Table 6.24), followed by the sciences with 32.0% (8 out of 25 titles, Table 6.26). The journals which have high percentage of foreign country contributions show evidence of internationalization in terms of their content. Information about the extent of internationalization is important for journals as universal citation databases such as *WoS* and *Scopus* require evidence of the international or regional standing of a journal before they make decisions on indexation. This data from *MyCite* can therefore, be used by journal editors to backup their requests for indexation. Some thought could also be put forward to Malaysian journal publishers about the possibility of changing the language of publication to English as studies has shown improvements in internationalization through such initiative. Dinkel et al. (2004) found that the internationalization of German journals in psychology improve by changing the publication language to English from 14.6% to 52.7% increase rate of articles from foreign authors.

7.2 Conclusion and Recommendation

This report has shown that productivity and citation are only one of the measures for describing the performance and impact of Malaysian journals indexed in *MyCite*. This is however limited to only 129 journals that have been completely covered for the duration of six years, 2008 to 2013. Citation measures, can provide very useful insights into scholarly research and its communication, however they are facilitated by the richness of the citation database indexing the scholarly journals. Impact factors, as one citation measure, are useful in establishing the influence journals have within the literature of a discipline. Nevertheless, they are not a direct measure of quality and must be used with considerable care. For these 129 journals, it is possible to gauge not only the citation and IF of each title, but also the performance at both the meso (institution) and micro (author) levels. MCC hopes that this report will motivate more journal publishers to request for indexation in order to improve the visibility of the journals they publish, as well as support the government's aspiration to improve Malaysian university ranking by improving the quality of Malaysian scholarly journals, and enriching the national heritage of research content.

Based on the data provided by citation databases of the *WoS* and *Scopus* as well as *MyCite*, the following recommendations are put forward:

- (a) *MyCite* needs to expand its indexation coverage on the pool of Malaysian journals especially those indexed by *WoS* and *Scopus*, and those which are not. This would mean the need for financial support to cover those Malaysian journals that require subscriptions. Only through complete coverage of these journals can both the international, as well as national impact be made known, and with this information the true impact of each journal title could be calculated. This information could indicate how well public monies, which are distributed through the various agencies are spent on financing the publications of the journals.
- (b) More efforts could extend to the aggressive coverage of journals published by professional and academic associations and societies as citation databases especially *WoS* seems to prefer indexing journals that have a wider and ready scholarly readership. Indexation of these journals would increase the visibility of these journals and the information provided about their performance could be used by the journal editors when requesting for indexation in future.
- (c) MCC could assume the role of the main provocateur of encouraging Malaysian scholarly journal publishers to use *MyJournal* as an alternative platform through which their journals could be accessed and indexed in *MyCite* as a database that could report on their performance. This would ensure the sustainability and continuous accessibility of Malaysian journals on the web, as these databases have the national support from the Ministry of Education.

- (d) Efforts to improve the use and access to the contents of Malaysian journals could increase by collaborating and requesting all public and institutional libraries to link to *MyJurnal* and *MyCite* from their library or information service web portals. The use of both these databases could be included in library's user education programmes at both undergraduate and postgraduate levels to increase awareness of Malaysian scholarly content, which in turn would increase the possibility of use and citation and reduce uncitedness. Ultimately, through awareness made by the libraries, information centres and MCC itself, the habit of Malaysian authors of not referencing or citing Malaysian sources could be gradually changed.
- (e) At the regional level, MCC could increase participation and contribution to both the *Asean Citation Index* database, initiated by Thailand as well as the *Islamic World Science Citation* database based in Shiraz, Iran. These initiatives could open the contents of Malaysian journals to the Asean and Islamic World scholarly community. These efforts would in turn help increase use and citations.
- (f) From the findings of this report, MCC could increase programmes and workshops in increasing awareness among scholarly journal publishers on the importance of knowing about the performance of their journals in the national context and focusing on possible strategies on how to improve impact, such as by emphasizing on quality rather than quantity of articles they publish, controlling the number of articles published per issue, maintaining a good balance between international and domestic contributions in each issue and the use of *MyJurnal* and *MyCite* as alternative routes to ensure continuous accessibility on the web.

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Zainab, A.N., Sanni, S.A., Edzan, N.N. & Koh, A.P. (2012b) Auditing scholarly journals published in Malaysia and assessing their visibility. *Malaysian Journal of Library & Information Science*, 17 (1), 67- 94.

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9. APPENDICES

Appendix 1: A List of Articles Related to Bibliometrics and Malaysia in the *Web of Science*

No.	Articles	Citations
1	Bibliometric studies on single journals: a review. By: Anyi, KWU, Zainab, AN, Anuar, NB Malaysian Journal of Library & Information Science 14 (1) 2009: 17-55.	8
2	Malaysia's Computer Science research productivity based on publications in the Web of Science, 2000-2010. By: Abrizah, A., Wee MC Malaysian Journal of Library & Information Science 16 (1) 2011: 109-124.	6
3	Publication productivity of Malaysian authors and institutions in LIS. By: Yazit, N, Zainab AN Malaysian Journal of Library & Information Science 12 (2) 2007: 35-55.	5
4	Bibliometric evaluation of agricultural literature published in Malaysia. By Nasir, AM, Hassan H, Hamid KA et al Scientometrics 29 (2) 1995: 191-217.	5
5	Scientific output and its relationship to knowledge economy: an analysis of ASEAN countries. By: Nguyen TV, Pham, LT Scientometrics, 89 (1) 2011: 107-117.	4
6	Evaluating the influence of a medical journal using Google Scholar. By: Sanni SA, Zainab AN Learned Publishing 24 (2) 2011: 145-154.	4
7	Bibliometric analysis of journal articles published by Southeast Asian chemical engineering researchers. By: Yin CY Malaysian Journal of Library & Information Science 14 (3) 2009: 1-13.	4
8	Auditing scholarly journals published in Malaysia and assessing their visibility. By Zainab AN, Sanni SA, Edzan NN et al Malaysian Journal of Library & Information Science 17 (1) 2012: 65-92.	3
9	Biomedical and health sciences publication productivity from Malaysia. By: Zainal, H, Zainab AN Health Information and Libraries Journal 28 (3) 2011: 216-225.	3
10	Google scholar as a source for citation and impact for a non-ISI indexed medical journal. By Sanni, SA, Zainab AN Malaysian Journal of Library & Information Science 15 (3) 2010: 35-51.	3
11	Scientific and technical information impetus for development in Southeast Asia. By: Abdullah S. International Forum on Information and documentation 20 (2) 1995: 3-13.	3
12	Computer science research in Malaysia: a bibliometric analysis. By Bakri, A, Willet, P. Aslib Proceedings 63 (2-3) 2011: 321-335.	2
13	Trend and impact of international collaboration in clinical medical papers published in Malaysia. By: Low, WY, Ng, KH, Kabir, MA et al Scientometrics 98 (2) 2014: 1521-1533.	1
14	Scientometric assessment of engineering in Malaysian universities. By: Tahira, M, Alias, RA, Bakri, A. Scientometrics 96 (3) 2013 : 866-879.	1
15	Patterns of co-authorship and research in Malaysia. By: Cheng, MY, Hen KW, Tan, HP et al Aslib Proceedings 65 (6) 2013: 659-574.	1
16	A bibliometric study on the worldwide research productivity of scientists in <i>Elae guineensis</i> Jacq and <i>Elaeis olei</i> . By: Abrizah A, Kiran A, Ermanmanesh M et al Journal of Oil Palm Research 24 2012: 1459-1472.	1
17	Analysis of academic research performance from publication in the field of computer science. By: Wang, HC, Pang, CY, Huang, JY Malaysian Journal of Library & Information Science 17 (2) 2012: 51-70.	1
18	Measuring the influence of a journal using impact and diffusion factors. By Sanni, SA, Zainab AN Malaysian Journal of Library & Information Science 16 (2) 2011: 127-140.	1
19	Evaluating the growth pattern and relative performance in Nipah virus research By Sanni, SA, Safahieh H, Zainab AN et al Malaysian Journal of Library & Information Science 18 (2) 2013: 14-24.	0

A List of Articles Related to Bibliometrics and Malaysia in the *Web of Science* (cont.)

No.	Articles	Citations
20	Adding value to scholarly journals through a citation indexing system. By Zainab AN, Abrizah, A, Raj RG Program – Electronic library and Information Systems 47 (3) 2013: 239-262	0
21	International contribution to Nipah virus research 1999-2010. By Safahieh H, Sanni, SA, Zainab AN Malaysian Journal of Library & Information Science 17 (3) : 35-47.	0

Sum of times cite: 56, Citing without self-citations: 45, Average citations per item: 2.67, h-index: 4

Appendix 2: A List of Articles and Citations on Bibliometrics Retrieved from *MyCite* as at 2014

No.	Articles	Citations
1	Tiew, Wai Sin; Abrizah, A.; Kiran, K. Malaysian Journal of Library and Information Science, 1996-2000: A bibliometric Study Malaysian Journal of Library & Information Science, Volume 6, No. 1, 2001	6
2	Biswas, Bidhan Ch. ; Roy, Amit ; Sen, B.K Economic botany: a bibliometric study Malaysian Journal of Library & Information Science, Volume 12, No. 1, 2007	5
3	Gu, Y.; Zainab, A.N. Publication Productivity of Malaysian Researchers in the Field of Computer Science and Information Technology Malaysian Journal of Library & Information Science, Volume 6, No. 1, 2001	4
4	Norhazwani Yazit; Zainab, A.N. Publication productivity of Malaysian authors and institutions in LIS Malaysian Journal of Library & Information Science, Volume 12, No. 2, 2007	4
5	Bakeri, Aryati; Willet, Peter The Malaysian Journal of Library and Information Science 2001-2006: A bibliometric study Malaysian Journal of Library & Information Science, Volume 13, No. 1, 2008	4
6	Sanni, S.A.; Zainab, A.N. Google Scholar as a source for citation and impact analysis for a non-ISI indexed medical journal Malaysian Journal of Library & Information Science, Volume 15, No. 3, 2010	4
7	Koganuramah, M.M.; Mallikarjun Angadi; Kademani, B.S. Bibliometric Dimension of Innovation Communication Productivity of Tata Institute of Social Sciences Malaysian Journal of Library & Information Science, Volume 7, No. 1, 2002	3
8	Tiew, Wai Sin Single Journal Bibliometric Studies: a Review Malaysian Journal of Library & Information Science, Volume 2, No. 2, 1997	3
9	Tiew, Wai Sin Authorship characteristics in sekitar perpustakaan 1994-2003: a bibliometric study Malaysian Journal of Library & Information Science, Volume 11, No. 1, 2006	3
10	Anyi, Kevin Wan Utap ; Zainab, A.N.; Anuar, N.B. Bibliometric studies on single journals: a review Malaysian Journal of Library & Information Science, Volume 14, No. 1, 2009	3
11	Khan, Shamsul Islam M.; Zayed Ahmed, S.M.; Munshi, Md. Nasir Uddin; Akhter, Nilufar Bibliometric studies on single journals: a review Malaysian Journal of Library & Information Science, Volume 14, No. 1, 2009	2
12	Abdoulaye, Kaba Research trends in the humanities: an analysis of masters theses at the International Islamic University Malaysia Malaysian Journal of Library & Information Science, Volume 9, No. 1, 2004	2
13	Kademani, B.S.; Kumar, Vijai ; Surwase, Ganesh ; Sagar, Anil ; Mohan, Lalit ; Gadero, C.R.; Kumar, Anil; Kalyane, V.L. ; Prakashan, E.R. Scientometric dimensions of innovation communication productivity of the chemistry division at Bhabha Atomic Research Centre Malaysian Journal of Library & Information Science, Volume 10, No. 1, 2005	2

A List of Articles and Citations on Bibliometrics Retrieved from *MyCite* as at 2014 (cont.)

No.	Articles	Citations
14	Zainab, A.N. Internationalization of Malaysian Mathematical and Computer Science Journals Malaysian Journal of Library & Information Science, Volume 13, No. 1, 2008	2
15	Aryati Bakri; Willett, Peter The Malaysian Journal of Computer Science: a Bibliometric Study Malaysian Journal of Library & Information Science, Volume 14, No.2, 2009	2
16	Zainab A.N.; Anyi, K.W.U.; Nor Badrul Anuar A single journal study: Malaysian Journal of Computer Science Malaysian Journal of Computer Science, Volume 22, No. 1, 2009	2
17	Vimala, V.; Reddy, V. Pulla Authorship Pattern and Collaborative Research in the Field of Zoology Malaysian Journal of Library & Information Science, Volume 1, No. 2, 1996	2
18	Tiew, Wai Sin; Kiran, Kaur Citation Analysis of Journal of Natural Rubber Research, 1988-1997 Malaysian Journal of Library & Information Science, Volume 5, No. 2, 2000	1
19	Kademani, B.S.; Kalyane, V.L.; Kumar, Vijay Scientometric Portrait of Nobel Laureate Ahmed Hassan Zewail Malaysian Journal of Library & Information Science, Volume 6, No. 2, 2001	1
20	Tiew, Wai Sin; Sen, B.K. Acknowledgement Patterns in Research Articles: a Bibliometric Study based on Journal of Natural Rubber Research 1986-1997 Malaysian Journal of Library & Information Science, Volume 7, No. 1, 2002	1
21	Zainab, A.N.; Goi, Sook Sze Characteristics of Citations Used by Humanities Researchers Malaysian Journal of Library & Information Science, Volume 2, No. 2, 1997	1
22	Anwar, Mumtaz Ali Nigella Sativa: a bibliometric study of the literature on Habbat Al-Barakah Malaysian Journal of Library & Information Science, Volume 10, No. 1, 2005	1
23	Anwar, Mumtaz Ali Phoenix Dactylifera L: a bibliometric study of the literature on date palm Malaysian Journal of Library & Information Science, Volume 11, No. 2, 2006	1
24	Yin, Chun-Yang Bibliometric analysis of journal articles published by Southeast Asian chemical engineering researchers Malaysian Journal of Library & Information Science, Volume 14, No.3, 2009	1
25	Tsay, Ming-Yueh; Lin, Yi-Jen Scientometric analysis of transport phenomenon literature, 1900-2007 Malaysian Journal of Library & Information Science, Volume 14, No.3, 2009	1
26	Sagar, Anil; Kademani, B.S.; Garg, R.G.; Kumar, Vijai Scientometric mapping of Tsunami publications: a citation based study Malaysian Journal of Library & Information Science, Volume 15, No. 1, 2010	1
27	Zainab, A. N.; Sanni, S.A.; Edzan, N.N.; Koh, A.P. Auditing scholarly journals published in Malaysia and assessing their visibility Malaysian Journal of Library & Information Science, Volume 17, No. 1, 2012	1
28	Tiew, Wai Sin Khoo Kay Kim, Professor of Malaysian History: a Bio-bibliometric Study Malaysian Journal of Library & Information Science, Volume 4, No. 2, 1999	0
29	Tiew, Wai Sin Characteristics of Self-Citation in Journal of Natural Rubber Research 1988-1997: a Ten-Year Bibliometric Study Malaysian Journal of Library & Information Science, Volume 5, No. 1, 2000	0
30	Kalyane, V.L.; V.K. Madan; Vijai Kumar Reference curve for Indian role model scientist Malaysian Journal of Library & Information Science, Volume 6, No. 1, 2001	0

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48	Sagar, Anil ; Kalyane, V.L. ; Prakasan, E.R.; Garg, R.G.; Kumar, Vijai Scientometric highlights on science and technology related review articles affiliated to India Malaysian Journal of Library & Information Science, Volume 14, No.2, 2009	0
49	Raihanah Abdullah; Asmak Ab Rahman Fifteen years of Jurnal Syariah (1993-2007): a bibliometric study Malaysian Journal of Library & Information Science, Volume 14, No.3, 2009	0
50	Baradar, Roya ; Tajdaran, Mansour ; Musavi, Seyed-Majid ; Abedi, Hoda Mapping the Iranian ISI papers on Nanoscience and Nanotechnology: a citation analysis approach Malaysian Journal of Library & Information Science, Volume 14, No.3, 2009	0
51	Mishra, Paras N. ; Panda, Krushna C.; Goswami, Nani G. Citation analysis and research impact of National Metallurgical Laboratory, India during 1972-2007: a case study Malaysian Journal of Library & Information Science, Volume 15, No. 1, 2010	0
52	Kademani, B.S.; Kalyane, V.L. Outstandingly Cited And Most Significant Publications Of R. Chidambaram, A Nuclear Physicist Malaysian Journal of Library & Information Science, Volume 1, No. 1, 1996	0
53	Mohd Faris Hassan; Sen, B.K.; Che Azlan Taib Library and Information Science Literature and Lotka's Law Malaysian Journal of Library & Information Science, Volume 1, No. 2, 1996	0
54	Sen, B.K.; Zainab, A.N. Scientific Periodicals In The University Of Malaya Library - A Bibliometric Evaluation Malaysian Journal of Library & Information Science, Volume 1, No. 2, 1996	0
55	Yang, Yu Hsiang; Tsaih, Rua Huan An investigation of research on evolution of altruism using informetric methods and the growing hierarchical self-organizing map Malaysian Journal of Library & Information Science, Volume 15, No. 3, 2010.	0
56	Varaprasad, S.J.D.; Sahoo, Sidhartha; Madhusudhan, S. Research contributions of J.S.Yadav to chemical sciences: a scientometric study Malaysian Journal of Library & Information Science, Volume 15, No. 2, 2010	0
57	Sombatsompop, Narongrit; Markpin, Teerasak; Ratchatahirun, Preeyanuch; Yochai, Wutthisit; Ittiritmeechai, Santi; Premkamolnetr, Nongyao; Wongkaew, Chatree Research productivity and impact of ASEAN countries and universities in the field of energy and fuel Malaysian Journal of Library & Information Science, Volume 16, No. 1, 2011.	0
58	Abrizah, A.; Wee, Mee Chin Malaysia s Computer Science research productivity based on publications in the Web of Science, 2000-2010 Malaysian Journal of Library & Information Science, Volume 16, No. 1, 2011.	0
59	Wang, Ming-Huang; Fu, Hui-Zhen; Ho, Yuh-Shan Comparison of universities' scientific performance using bibliometric indicators Malaysian Journal of Library & Information Science, Volume 16, No. 2, 2011	0
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61	Sanni, S.A.; Zainab, A.N. Measuring the influence of a journal using impact and diffusion factors Malaysian Journal of Library & Information Science, Volume 16, No. 2, 2011	0
62	Graf, Arndt Beyond 2020: Malay and Indonesian in a new linguistic world order Kemanusiaan : The Asian Journal of Humanities (formerly Jurnal Ilmu Kemanusiaan), Volume 18, No. 1, 2011	0
63	Sanni, S.A.; Zainab, A.N. Publication productivity and citation analysis of the Medical Journal of Malaysia: 2004 – 2008 Medical Journal of Malaysia, Volume 67, No. 1, 2012	0
64	Upadhye, Rekha P.; Kademani, B.S.; Mohan, Lalit ; Bhanumurthy, K. Research and citation impact of publications of the Nuclear Physics Division at Bhabha Atomic Research Centre Malaysian Journal of Library & Information Science, Volume 17, No. 2, 2012	0

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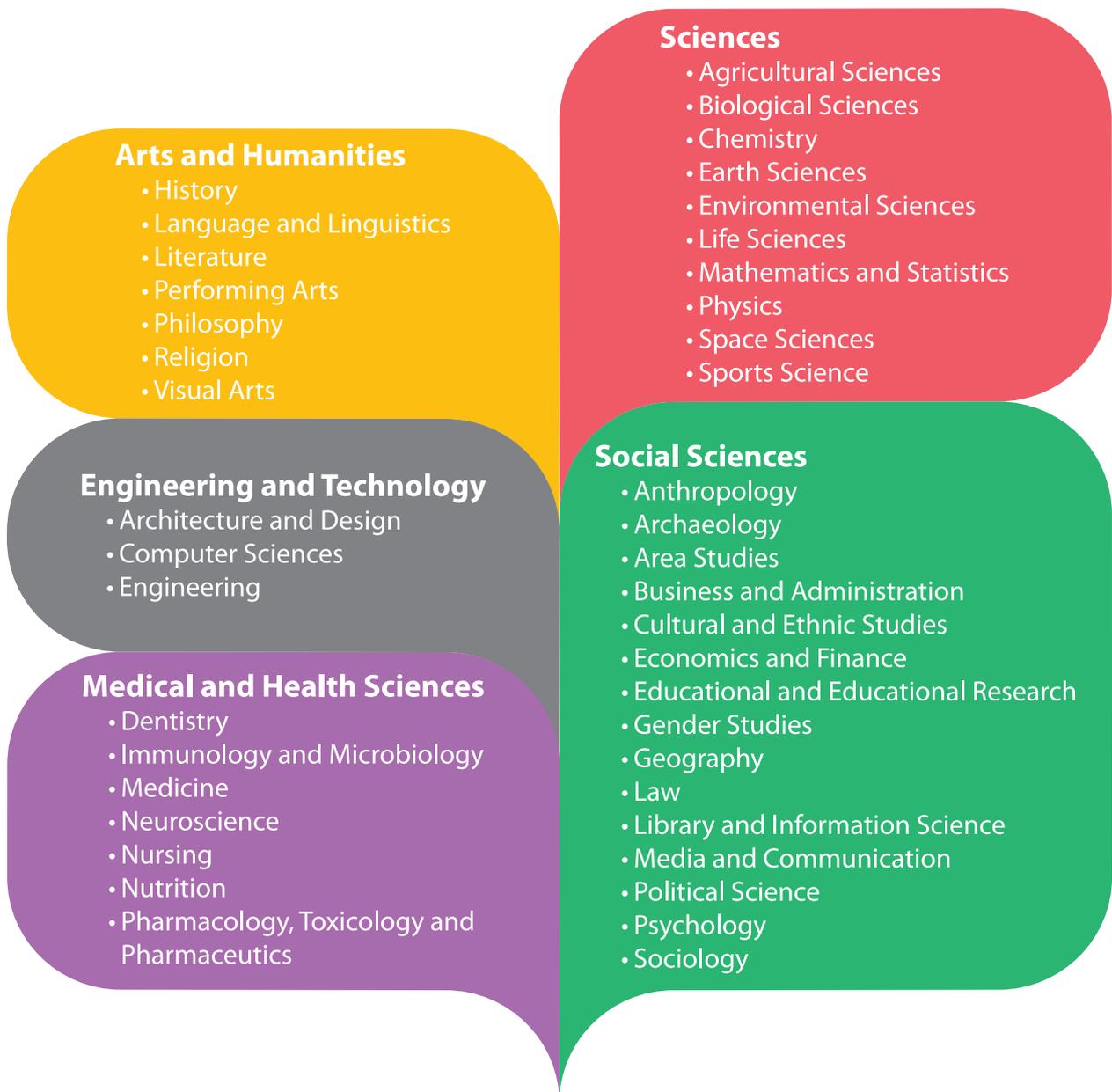
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49	Raihanah Abdullah; Asmak Ab Rahman Fifteen years of Jurnal Syariah (1993-2007): a bibliometric study Malaysian Journal of Library & Information Science, Volume 14, No.3, 2009	0
50	Baradar, Roya ; Tajdaran, Mansour ; Musavi, Seyed-Majid ; Abedi, Hoda Mapping the Iranian ISI papers on Nanoscience and Nanotechnology: a citation analysis approach Malaysian Journal of Library & Information Science, Volume 14, No.3, 2009	0
51	Mishra, Paras N. ; Panda, Krushna C.; Goswami, Nani G. Citation analysis and research impact of National Metallurgical Laboratory, India during 1972-2007: a case study Malaysian Journal of Library & Information Science, Volume 15, No. 1, 2010	0
52	Kademani, B.S.; Kalyane, V.L. Outstandingly Cited And Most Significant Publications Of R. Chidambaram, A Nuclear Physicist Malaysian Journal of Library & Information Science, Volume 1, No. 1, 1996	0
53	Mohd Faris Hassan; Sen, B.K.; Che Azlan Taib Library and Information Science Literature and Lotka's Law Malaysian Journal of Library & Information Science, Volume 1, No. 2, 1996	0
54	Sen, B.K.; Zainab, A.N. Scientific Periodicals In The University Of Malaya Library - A Bibliometric Evaluation Malaysian Journal of Library & Information Science, Volume 1, No. 2, 1996	0
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66	Safahieh, H. ; Sanni, S.A. ; Zainab, A.N. International contribution to Nipah virus research 1999-2010 Malaysian Journal of Library & Information Science, Volume 17, No. 3, 2012	0
67	Koganuramath, M.M.; Angadi, Mallikarjun; Kademani, B.S.; Kalyane, V.L.; Jange, Suresh Physics Nobel Laureate Wolfgang Ketterle: a scientometric portrait Malaysian Journal of Library & Information Science, Volume 9, No. 2, 2004	0
68	Nasimah Badaruddin Sekitar Perpustakaan 2004-2005: a bibliometric study using citation analysis Sekitar Perpustakaan, Volume 40, 2010	0
69	Sanni, S.A.; Safahieh, H.; Zainab, A.N.; Abrizah, A.; Raj, R.G. Evaluating the growth pattern and relative performance in Nipah virus research from 1999 to 2010 Malaysian Journal of Library & Information Science, Volume 18, No. 2, 2013	0
70	Chuang, Kun-Yang; Wang, Ming-Huang; Ho, Yuh-Shan High-impact papers published in journals listed in the field of chemical engineering Malaysian Journal of Library & Information Science, Volume 18, No. 2, 2013	0
71	Tiew, Wai Sin A bibliometric study of authorship characteristics in "Kekal Abadi, University of Malaya Library Bulletin 1995 - 2004" Kekal Abadi, Volume 26, No. 1, 2008	0
72	Harvinder Kaur Bibliometrics study of Malayan Law Journal articles Kekal Abadi, Volume 24, No. 1 & 2, 2005	0
73	Zainab, A.N.; Goi Sook Sze Information needs and use of humanities researchers: a bibliometric analysis and review of literature. Kekal Abadi, Volume 16, No. 3, 1997	0
74	Zainab, A.N. Malay literary prize winners: a study of the awards, the organizers and the authorship patterns. Kekal Abadi, Volume 14, No. 1, 1995	0
75	Sanni, S.A. ; Zainab, A.N.; Raj, R.G.; Abrizah, A. Measuring journal diffusion using periodic citation counts Malaysian Journal of Library & Information Science, Volume 19, No. 1, 2014	0
76	Liu Gui-Feng; Sun Hua-Ping; Song Xin-Ping Visualizing and mapping the research on patents in information science and management science Malaysian Journal of Library & Information Science, Volume 19, No. 1, 2014	0
77	Mohd Faiz Hilmi; Yanti Mustapha Eleven years (1999–2009) of the Malaysian journal of distance education: a bibliometric study Malaysian Journal of Distance Education, Volume 15, No. 1, 2013	0
78	Abrizah, A.; Kiran, K.; Erfanmanesh, M.; Zohoorian-Fooladi, N.; Zainab, A.N. A bibliometric study on the worldwide research productivity of scientists in <i>Eaeis guineensis</i> Jacq. and <i>Elaeis oleifera</i> Journal of Oil Palm Research, Vol. 24, No. 3 December 2012	0

Appendix 3: Fields of Categorization Used in MyCite

The subject categorization used in *MyCite* is simplified mainly due to the small number of journals published in Malaysia and over-categorization could result in non-representation of any journals. *Web of Science* however, identifies a wider spectrum of subject categories within its large database. In order to standardise the analysis of publications, the subject categories were regrouped to reflect the main faculties which are in place at the various Malaysian public universities. The various subject categories in the *Web of Science* were mapped into five broad field categories and used in *MyCite*.



Appendix 4:
Malaysian Journals Covered In MyJurnal 2013

No.	Journal Title	ISSN/E-ISSN	Publisher
1	3L :The Southeast Asian Journal of English Language Studies	0128-5157	Universiti Kebangsaan Malaysia
2	AESEAP Journal	0125-8737	The Association for Engineering Education in South East Asia, East Asia and the Pacific, University of Malaya
3	AFKAR : Journal of Aqidah and Islamic Thought	1511-8819	University of Malaya
4	AKADEMIKA : Jurnal Sains Kemasyarakatan dan Kemanusiaan	0126-5008	Universiti Kebangsaan Malaysia
5	Al-Bayan : Journal of al-Quran and al-Hadith	2232-1950 e-2232-1969	University of Malaya
6	ALAM CIPTA : International Journal of Sustainable Tropical Design Research and Practice	1823-7231	Universiti Putra Malaysia
7	Annals of Dentistry	0128-7532	University of Malaya
8	Applied Mathematics and Computational Intelligence	2289-1315 e-2289-1323	Universiti Malaysia Perlis
9	Archives of Orofacial Sciences	1823-8602 e-2231-7163	Universiti Sains Malaysia
10	ARKIVIS Buletin Arkib Negara Malaysia	2289-229X	Arkib Negara Malaysia
11	ASEAN Journal of Psychiatry	2231-7805 e-2231-7791	ASEAN Federation of Psychiatry and Mental Health, Universiti Kebangsaan Malaysia Medical Center
12	ASEAN Journal of Teaching & Learning in Higher Education	1985-5826	Universiti Kebangsaan Malaysia
13	ASEAN Journal on Science & Technology for Development	0217-5460	ASEAN Committee on Science and Technology
14	Asia Pacific Journal of Educators and Education (formerly Jurnal Pendidik dan Pendidikan)	2180-3463	Universiti Sains Malaysia
15	Asia-Pacific Journal of Information Technology and Multimedia (formerly Journal of Information Technology and Multimedia)	2289-2192	Universiti Kebangsaan Malaysia
16	Asia-Pacific Journal of Innovation in Hospitality and Tourism	2289-1471	Taylor's University
17	Asia-Pacific Journal of Molecular Biology and Biotechnology	0128-7451	Malaysian Society for Molecular Biology and Biotechnology
18	Asia-Pacific Journal of Molecular Medicine	e-2232-0326	Universiti Kebangsaan Malaysia, Medical Molecular Biology Institute
19	Asia-Pacific Management Accounting Journal	1675-3194	Asia-Pacific Management Accounting Association, Universiti Teknologi MARA
20	Asian Academy of Management Journal	1394-2603 e-2180-4184	Universiti Sains Malaysia
21	Asian Academy of Management Journal of Accounting and Finance	1823-4992 e-2180-4192	Universiti Sains Malaysia
22	Asian Journal of Accounting and Governance	2180-3838	Universiti Kebangsaan Malaysia and the Malaysian Accountancy Research and Education Foundation
23	Asian Journal of Business and Accounting	1985-4064 e-2180-3137	University of Malaya
24	Asian Journal of English Language and Pedagogy (formerly English Language Journal)	1823-6820	Universiti Pendidikan Sultan Idris
25	Asian Journal of Environment-Behaviour Studies	1394-0384	Universiti Teknologi MARA
26	Asian Journal of University Education	1823-7797	Universiti Teknologi MARA
27	Asiatic : IIUM Journal of English Language and Literature	1985-3016	International Islamic University Malaysia
28	ASM Science Journal	1823-6782	Academy of Sciences Malaysia
29	Biomedical Imaging and Intervention Journal	1823-5530	University of Malaya
30	Borneo Journal of Resource Science and Technology	229-9769	Universiti Malaysia Sarawak
31	Borneo Research Journal	1985-5443	University of Malaya
32	Borneo Science (The Journal of Science and Technology)	1394-4339 e-2231-9085	Universiti Malaysia Sabah
33	Built Environment Journal	1675-5022	Universiti Teknologi MARA
34	Buletin Nuklear Malaysia	1394-5610	Malaysian Nuclear Society
35	Buletin Persatuan Genetik Malaysia	1394-5750	Persatuan Genetik Malaysia
36	Bulletin of the Geological Society of Malaysia	0126-6187	Geological Society of Malaysia
37	Bulletin of the Malaysian Mathematical Sciences Society	0126-6705	Malaysian Mathematical Sciences Society and Universiti Sains Malaysia

Malaysian Journals Covered In MyJournal 2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
38	CREAM : Current Research in Malaysia (Penyelidikan Terkini di Malaysia)	2231-8305 e-2289-5191	Kementerian Pendidikan Malaysia
39	Defence S&T Technical Bulletin	1985-6571	Science & Technology Research Institute for Defence, Ministry of Defence, Malaysia
40	e-Bangi : Journal of Social Sciences and Humanities	1823-884x	Universiti Kebangsaan Malaysia
41	Economic and Technology Management Review	1823-8149	Malaysian Agricultural Research and Development Institute
42	Education in Medicine Journal	2180-1932	Universiti Sains Malaysia
43	Electronic Physician	2008-5842	Mehr Publishing Group Sdn. Bhd
44	Elektrika: Journal of Electrical Engineering	0128-4428	Universiti Teknologi Malaysia
45	Engineering e-Transaction	1823-6379	University of Malaya
46	English Language Journal (currently Asian Journal of English Language and Pedagogy)	1823-6820	Universiti Perguruan Sultan Idris
47	English Teacher	0128-7729	Malaysian English Language Teaching Association
48	ESP Malaysia	0128-732X e-2289-3199	Universiti Teknologi Malaysia
49	ESTEEM Academic Journal	1675-7939 e-2289-4934	Universiti Teknologi MARA
50	Gading Business and Management Journal	0128-5599	Universiti Teknologi MARA
51	GEMA Online® Journal of Language Studies	1675-8021	Universiti Kebangsaan Malaysia
52	Geografia: Malaysian Journal of Society & Space	2180-2491	Universiti Kebangsaan Malaysia
53	Geoinformation Science Journal	1511-9491	Universiti Teknologi Malaysia
54	GETview: Global Engineers and Technologist Review	e-2231-9700	GETview, Universiti Teknikal Malaysia Melaka
55	Global Journal Al-Thaqafah	2232-0474 e-2232-0482	Kolej Universiti Islam Sultan Azlan Shah
56	IEM Journal	0126-513X	The Institution of Engineers Malaysia
57	IUM Engineering Journal	1511-788X e-2289-7860	International Islamic University Malaysia
58	IUM Journal of Economics & Management (currently International Journal of Economics, Management and Accounting)	1394-7680	International Islamic University Malaysia
59	IUM Law Journal	0128-2530	International Islamic University Malaysia
60	Institutions and Economies (formerly International Journal of Institutions and Economies)	2232-1640 e-2232-1349	University of Malaya
61	Intellectual Discourse	0128-4878 e-22895639	International Islamic University Malaysia
62	International Business Education Journal	1985-2126	Universiti Pendidikan Sultan Idris
63	International e-Journal of Science, Medicine & Education	2231-8194	International Medical University Malaysia
64	International Food Research Journal	1985-4668 2231-7546	Universiti Putra Malaysia
65	International Journal of Arts, Culture & Heritage	2289-3121	Akademi Seni Budaya dan Warisan Kebangsaan
66	International Journal of Asia-Pacific Studies	1823-6243	Universiti Sains Malaysia
67	International Journal of Automotive and Mechanical Engineering	2229-8649 e-2180-1606	Universiti Malaysia Pahang
68	International Journal of Banking and Finance	1675-7227	Universiti Utara Malaysia
69	International Journal of Biomass and Renewables	e-2289-1692	Universiti Teknologi PETRONAS
70	International Journal of Business and Society	1511-6670	Universiti Malaysia Sarawak
71	International Journal of Business and Technopreneurship	2231-7090 e-2232-1543	Universiti Malaysia Perlis
72	International Journal of Civil Engineering & Geo-Environmental	2180-2742	Universiti Malaysia Pahang
73	International Journal of Economics and Management	1823-836X	Universiti Putra Malaysia
74	International Journal of Economics, Management and Accounting (formerly IUM Journal of Economics and Management)	0128-006	International Islamic University Malaysia
75	International Journal of Institutions and Economies (currently Institutions and Economies)	1985-7276 e-2232-1632	University of Malaya
76	International Journal of Integrated Engineering	2229-838X	Universiti Tun Hussein Onn Malaysia
77	International Journal of Islamic Thought	2232-1314	Universiti Kebangsaan Malaysia and International Society of Muslim Philosophers and Theologians
78	International Journal of Management Studies (formerly Jurnal Analisis)	2232-1608 e-2180-2467	Universiti Utara Malaysia
79	International Journal of Mechanical and Materials Engineering	1823-0334	University of Malaya
80	International Journal of Nanoelectronics and Materials	1985-5761 e-1997-4434	Universiti Malaysia Perlis
81	International Journal of Property Sciences	1985-4633 e-2229-8568	University of Malaya
82	International Journal of Public Health Research	2232-0253 e-2232-0245	Pusat Perubatan Universiti Kebangsaan Malaysia

Malaysian Journals Covered In MyJournal 2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
83	International Journal of Renewable Energy Research (currently International Journal of Renewable Energy Resources)	2180-4931	University of Malaya
84	International Journal of Renewable Energy Resources (formerly International Journal of Renewable Energy Research)	2289-1846	University of Malaya
85	International Journal of Sustainable Construction Engineering and Technology	2180-3242	Universiti Tun Hussein Onn Malaysia and Concrete Society of Malaysia
86	International Journal of the Malay World and Civilisation (formerly SARI : Jurnal Alam dan Tamaddun Melayu)	e-2289-4268	Universiti Kebangsaan Malaysia
87	International Journal of West Asian Studies	2229-8924 e-2180-4788	Universiti Kebangsaan Malaysia
88	International Journal on Quranic Research	2180-4893	University of Malaya
89	International Medical Journal Malaysia	e-1823-4631	International Islamic University Malaysia
90	International Surveying Research Journal	2232-1309	Royal Institution of Surveyors Malaysia
91	Islamiyyat The International Journal of Islamic Studies	0216-5636	Universiti Kebangsaan Malaysia
92	Issues in Language Studies	e-2180-2726	Universiti Malaysia Sarawak
93	JATI : Journal of Southeast Asian Studies	1823-4127	University of Malaya
94	JEBAT : Malaysian Journal of History, Politics and Strategic Studies	0126-5644 e-2180-0251	Universiti Kebangsaan Malaysia
95	Journal for Information Systems Research and Practice		University of Malaya
96	Journal of Academia Universiti Teknologi MARA Negeri Sembilan	2232-1519	Universiti Teknologi MARA
97	Journal of Administrative Science	1675-1302	Universiti Teknologi MARA
98	Journal of Advanced Manufacturing Technology	1985-3157	Universiti Teknikal Malaysia Melaka
99	Journal of Agrobiotechnology	2180-1983	Universiti Sultan Zainal Abidin
100	Journal of Al-Tamaddun	1823-7517	University of Malaya
101	Journal of ASIAN Behavioural Studies	2180-4567	Universiti Teknologi MARA
102	Journal of Bioscience (currently Tropical Life Sciences Research)	0128-4541	Universiti Sains Malaysia
103	Journal of Building Performance	2180-2106	Universiti Kebangsaan Malaysia
104	Journal of Business and Social Development	2289-2915	Universiti Malaysia Terengganu
105	Journal of Construction in Developing Countries	1823-6499 e-2180-4222	Universiti Sains Malaysia
106	Journal of Creative Practices in Language Learning and Teaching	1823-464X	Universiti Teknologi MARA
107	Journal of Design + Built	1985-6881	Universiti Kebangsaan Malaysia
108	Journal of Design and Built Environment	1823-4208 e-2232-1500	University of Malaya
109	Journal of Emerging Economies and Islamic Research (formerly Economic Bulletin)	e-2289-2559	Universiti Teknologi MARA
110	Journal of Energy & Environment	1985-7462	Universiti Tenaga Nasional
111	Journal of Engineering and Technology	2180-3811	Universiti Teknikal Malaysia Melaka and Malaysian Technical Universities Network
112	Journal of Engineering Science and Technology	1823-4690	Taylor's University
113	Journal of Fundamental Sciences (currently Malaysian Journal of Fundamental and Applied Sciences)	1823-626X	Universiti Teknologi Malaysia
114	Journal of Governance and Development (formerly known as Jurnal Rekeyasa)	2289-2311	Universiti Utara Malaysia
115	Journal of Health Management	1823-5735	Kementerian Kesihatan Malaysia
116	Journal of Human Capital Development	1985-7012	Universiti Teknikal Malaysia Melaka
117	Journal of Information and Communication Technology	1675-414X e-2180-3862	Universiti Utara Malaysia
118	Journal of Information Technology and Multimedia (currently Asia-Pacific Journal of Information Technology and Multimedia)	1823-0113 e-1823-0113	Universiti Kebangsaan Malaysia
119	Journal of Interdisciplinary Research in Education	1985-9414	Taylor's University
120	Journal of International and Comparative Education	2232-1802 2289-2567	University of Malaya
121	Journal of International Studies	1823-691X	Universiti Utara Malaysia
122	Journal of Islam in Asia	1823-0970	International Islamic University Malaysia
123	Journal of Islamic Finance	2289-211X	International Islamic University Malaysia
124	Journal of Language and Communication	2289-649X	Universiti Putra Malaysia
125	Journal of Malaysian and Comparative Law	0126-6322	University of Malaya
126	Journal of Mechanical Engineering	1823-5514	Universiti Teknologi MARA
127	Journal of Mechanical Engineering and Sciences	e-2231-8380	Universiti Malaysia Pahang
128	Journal of Mechanical Engineering and Technology	2180-1053	Universiti Teknikal Malaysia Melaka
129	Journal of Media and Information Warfare	1675-1302	Universiti Teknologi MARA
130	Journal of Modern Languages	1675-526x	University of Malaya
131	Journal of Nuclear and Related Technologies	1823-0180	Malaysian Nuclear Society
132	Journal of Oil Palm Research	1511-2780	Malaysian Palm Oil Board

Malaysian Journals Covered In MyJournal 2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
133	Journal of Physical Science	1675-3402 e-2180-4230	Universiti Sains Malaysia
134	Journal of Problem-Based Learning		University of Malaya
135	Journal of Psychology and Human Development (Jurnal Psikologi dan Pembangunan Manusia)	2289-4322	Universiti Kebangsaan Malaysia
136	Journal of Quality Measurement and Analysis	1823-5670	Universiti Kebangsaan Malaysia
137	Journal of Research in Islamic Studies	e-2289-6821	University of Malaya
138	Journal of Research, Policy & Practice of Teachers and Teacher Education	2232-0458	Universiti Pendidikan Sultan Idris
139	Journal of Science and Technology	2229-8460	Universiti Tun Hussein Onn Malaysia
140	Journal of Science and Technology in the Tropics	1823-5034	Akademi Sains Malaysia and Confederation of Scientific & Technological Association in Malaysia
141	Journal of Special Needs Education	2231-9743	University of Malaya
142	Journal of Surgical Academia	e-2231-7481	Universiti Kebangsaan Malaysia
143	Journal of Surveying, Construction and Property	1985-7527	University of Malaya
144	Journal of Sustainability Science and Management	1823-8556 e-1823-8556	Universiti Malaysia Terengganu
145	Journal of Technical Education and Training	2229-8932	Universiti Tun Hussein Onn Malaysia
146	Journal of Techno-Social	2229-8940	Universiti Tun Hussein Onn Malaysia
147	Journal of Telecommunication, Electronic and Computer Engineering	2180-1843	Universiti Teknikal Malaysia Melaka
148	Journal of the Department of Statistics, Malaysia	1823-1667	Department of Statistics Malaysia
149	Journal of Tourism, Hospitality & Culinary Arts	1985-8914	Universiti Teknologi MARA
150	Journal of Tropical Agriculture and Food Science	1394-9829	Malaysian Agricultural Research and Development Institute
151	Journal of Tropical Biology and Conservation	1823-3902	Universiti Malaysia Sabah
152	Journal of Tropical Forest Science	0128-1283	Forest Research Institute Malaysia
153	JUMMEC	1823-7339 e-2289-392X	University of Malaya
154	Jurnal al-Hikmah	1985-6822	Universiti Kebangsaan Malaysia
155	Jurnal Antarabangsa Teknologi Maklumat	1675-2031 e-1675-2031	Universiti Kebangsaan Malaysia
156	Jurnal ASWARA	1985-2606	Akademi Seni Budaya dan Warisan Kebangsaan
157	Jurnal Bahasa	1511-9084	Dewan Bahasa dan Pustaka
158	Jurnal Biografi Malaysia, Journal of Malaysian Biographies	1823-4623	Arkib Negara Malaysia
159	Jurnal Ekonomi Malaysia	0126-1962	Universiti Kebangsaan Malaysia
160	Jurnal Filologi Melayu	0128-6048	Perpustakaan Negara Malaysia
161	Jurnal Fiqh	1823-089X e-2289-7518	University of Malaya
162	Jurnal Fizik Malaysia	0128-0333	Institut Fizik Malaysia
163	Jurnal Hadhari	1985-6830	Universiti Kebangsaan Malaysia
164	Jurnal Ilmu Kemanusiaan (currently Kemanusiaan The Asian Journal of Humanities)	1394-9330 e-2180-4257	Universiti Sains Malaysia
165	Jurnal Intelek	2231-7716	Universiti Teknologi MARA
166	Jurnal Islam dan Masyarakat Kontemporari	1985-7667	Universiti Sultan Zainal Abidin
167	Jurnal Kejuruteraan	1985-4625	Universiti Kebangsaan Malaysia
168	Jurnal Kemanusiaan	1675-1930	Universiti Teknologi Malaysia
169	Jurnal Komunikasi, Malaysian Journal of Communication	2289-151X e-2289-1528	Universiti Kebangsaan Malaysia
170	Jurnal Kurikulum & Pengajaran Asia Pasifik	e-2289-3008	University of Malaya
171	Jurnal Linguistik	1823-9242	Persatuan Linguistik Malaysia
172	Jurnal Pendidikan	0126-5261	University of Malaya
173	Jurnal Pendidikan (currently Jurnal Pendidikan Malaysia)	0126-6020	Universiti Kebangsaan Malaysia
174	Jurnal Pendidikan Bahasa Melayu (Malay Language Education Journal)	2180-4842	Universiti Kebangsaan Malaysia
175	Jurnal Pendidikan Bitara UPSI	1394-7176	Universiti Pendidikan Sultan Idris
176	Jurnal Pendidikan Malaysia (Malaysian Journal of Education) (formerly Jurnal Pendidikan)	2180-0782	Universiti Kebangsaan Malaysia
177	Jurnal Pendidikan Sains & Matematik Malaysia	2232-0393	Universiti Pendidikan Sultan Idris
178	Jurnal Pendidikan dan Pendidikan (currently Asia Pacific Journal of Educators and Education)	0126-7272	Universiti Sains Malaysia
179	Jurnal Pengajian Media Malaysia	1511-2284 e-2231-8143	University of Malaya
180	Jurnal Pengajian Melayu (Journal of Malay Studies)	1823-7622	University of Malaya
181	Jurnal Pengurusan	0127-2713	Universiti Kebangsaan Malaysia
182	Jurnal Pengurusan Awam	1675-3720	Jabatan Perkhidmatan Awam Malaysia
183	Jurnal Penyelidikan Pendidikan	1511-6530	Kementerian Pendidikan Malaysia

Malaysian Journals Covered In MyJournal 2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
184	Jurnal Personalia Pelajar	0128-273	Universiti Kebangsaan Malaysia
185	Jurnal PPM	1823-6308	Persatuan Pustakawan Malaysia
186	Jurnal Sains Kesihatan Malaysia	1675-8161	Universiti Kebangsaan Malaysia
		e-2289-4535	
187	Jurnal Sains Nuklear Malaysia	2232-0946	Malaysian Nuclear Agency
188	Jurnal Syariah	0128-6730	University of Malaya
189	Jurnal Teknologi (Sains dan Kejuruteraan)	0127-9696	Universiti Teknologi Malaysia
		e-2180-3722	
190	Jurnal Terjemahan Alam dan Tamadun Melayu (Journal of Translation Malay World and Civilisation)	2180-043X	Universiti Kebangsaan Malaysia
191	Jurnal Undang-Undang dan Masyarakat (Malaysian Journal of Law and Society)	1394-7729	Universiti Kebangsaan Malaysia
192	Jurnal Usuluddin	1394-3723	University of Malaya
193	Kajian Malaysia (Journal of Malaysian Studies)	0127-4082	Universiti Sains Malaysia
		e-2180-4273	
194	KANUN : Jurnal Undang-Undang Malaysia	0128-2670	Dewan Bahasa dan Pustaka
195	Kekal Abadi	0127-2578	University of Malaya
196	Kemanusiaan : The Asian Journal of Humanities (formerly Jurnal Ilmu Kemanusiaan)	1394-9330	Universiti Sains Malaysia
		e-2180-4257	
197	Labuan Bulletin of International Business & Finance	1675-7262	Universiti Malaysia Sabah
198	Labuan e-Journal of Muamalat and Society	1985-482X	Universiti Malaysia Sabah
199	Malay Literature	0128-1186	Dewan Bahasa dan Pustaka
200	Malaysia Dari Segi Sejarah (Malaysia In History)	1675-0594	Persatuan Sejarah Malaysia
201	Malaysian Accounting Review	1675-4077	Universiti Teknologi MARA and Malaysian Accountancy Research & Education Foundation
202	Malaysian Anti-Drugs Journal (Jurnal Antidadah Malaysia)	1985-1707	Agensi Anti dadah Kebangsaan
203	Malaysian Applied Biology (formerly Malaysian Agricultural Research)	0126-8643	Malaysian Society of Applied Biology
204	Malaysian Dental Journal	0126-8023	Malaysian Dental Association
205	Malaysian Family Physician	1985-207X	Academy of Family Physicians of Malaysia
		e-1985-2274	
206	Malaysian Fisheries Journal	1511-7286	Department of Fisheries Malaysia
207	Malaysian Journal of Analytical Sciences	1394-2506	Malaysian Society of Analytical Sciences
208	Malaysian Journal of Animal Science	1394-3227	Malaysian Society of Animal Production
209	Malaysian Journal of Biochemistry and Molecular Biology	1511-2616	Malaysian Society for Biochemistry and Molecular Biology
210	Malaysian Journal of Chemistry	1511-2292	Institut Kimia Malaysia
211	Malaysian Journal of Child Health (currently Malaysian Journal of Paediatrics and Child Health)	1394-0090	Malaysian Paediatrics Association
212	Malaysian Journal of Civil Engineering	1823-7843	Universiti Teknologi Malaysia
213	Malaysian Journal of Community Health	1675-1663	Pusat Perubatan Universiti Kebangsaan Malaysia
214	Malaysian Journal of Computer Science	0127-9084	University of Malaya
215	Malaysian Journal of Consumer and Family Economics	1511-2802	Malaysian Consumer and Family Economics Association
216	Malaysian Journal of Distance Education	1511-6433	Universiti Sains Malaysia
		e-2180-4265	
217	Malaysian Journal of Economic Studies	1511-4554	University of Malaya
218	Malaysian Journal of Educational Technology	1675-0292	Malaysian Educational Technology Association
219	Malaysian Journal of ELT Research	1511-8002	Malaysian English Language Teaching Association
220	Malaysian Journal of Environmental Management	1511-7855	Environmental Management Society Malaysia
221	Malaysian Journal of Fundamental and Applied Sciences	1823-626X	Universiti Teknologi Malaysia
		e-2289-599X	
222	Malaysian Journal of Learning & Instruction	1675-8110	Universiti Utara Malaysia
		e-2180-2483	
223	Malaysian Journal of Library & Information Science	1394-6234	University of Malaya
224	Malaysian Journal of Mathematical Sciences	1823-8343	Universiti Putra Malaysia
225	Malaysian Journal of Medical Sciences	1394-195X	Universiti Sains Malaysia
		e-2180-4303	
226	Malaysian Journal of Medicine and Health Sciences	1675-8544	Universiti Putra Malaysia
		e-1675-8544	
227	Malaysian Journal of Microbiology	1823-8262	Malaysian Society for Microbiology
		e-2231-7538	
228	Malaysian Journal of Nutrition	1394-035X	Nutrition Society of Malaysia
229	Malaysian Journal of Paediatrics and Child Health (formerly Malaysian Journal of Child Health)	1511 - 4511	Malaysian Paediatric Association
230	Malaysian Journal of Pathology	0126-8635	Academy of Medicine of Malaysia
231	Malaysian Journal of Pharmaceutical Science	1675-7319	Universiti Sains Malaysia
		e-2180-429X	

Malaysian Journals Covered In MyJournal 2013 (cont.)

No.	Journal Title	ISSN/E-ISSN	Publisher
232	Malaysian Journal of Psychiatry	2232-0385	Malaysian Psychiatric Association
233	Malaysian Journal of Public Health Medicine	1675-0306	Malaysian Public Health Physicians' Association
234	Malaysian Journal of Remote Sensing & GIS	1511-7049	Institution of Geospatial and Remote Sensing Malaysia
235	Malaysian Journal of Science	1394-3065 e-1394-3065	University of Malaya
236	Malaysian Journal of Science and Technology Studies	1675-8102 e-1675-8102	University of Malaya
237	Malaysian Journal of Social Administration	1675-3925	University of Malaya
238	Malaysian Journal of Soil Science	1394-7990	Malaysian Society of Soil Science
239	Malaysian Journal of Sport Science and Recreation	1823-3198	Universiti Teknologi MARA
240	Malaysian Journal of Veterinary Research	2180-3897	Department of Veterinary Services Malaysia
241	Malaysian Journal of Youth Studies	2180-1649	Kementerian Belia dan Sukan Malaysia
242	Malaysian Management Journal	0128-6226 e-2289-6651	Universiti Utara Malaysia
243	Malaysian Music Journal	2232-1020	Universiti Pendidikan Sultan Idris
244	Malaysian Online Journal of Educational Management	e-2289-4489	University of Malaya
245	Malaysian Online Journal of Educational Sciences	e-2289-3024	University of Malaya
246	Malaysian Online Journal of Educational Technology	e-2289-2990	University of Malaya
247	Malaysian Online Journal of Instructional Technology	1823-1144	Malaysian Educational Technology Association
248	Malaysian Orthopaedic Journal	1985-2533 e-2232-111X	Malaysian Orthopaedic Association
249	Malaysian Polymer Journal	1823-7789	Plastics and Rubber Institute of Malaysia
250	MALIM : Jurnal Pengajian Umum Asia Tenggara (SEA Journal of General Studies)	1511-8393 e-2289-5183	Universiti Kebangsaan Malaysia
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