A BIBLIOMETRIC STUDY OF THE LIBRARY PHILOSOPHY AND PRACTICE (E-JOURNAL) FOR THE PERIOD 2005-2014

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A BIBLIOMETRIC STUDY OF THE LIBRARY PHILOSOPHY AND PRACTICE (E-JOURNAL) FOR THE PERIOD 2005-2014

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Abstract

The present study reveals the bibliometric study of the E-Journal, Library Philosophy and Practice from 2005 to 2014. The study covers the growth of literature and authorship patterns of the journal. Further, it analyzes various other bibliometrics aspects such as authors’ degree of collaboration, geographical productivity in scholarly publications, subject wise distribution of articles and ranking pattern etc. For this study 1177 no. of articles was taken up for the evaluation. Necessary bibliometric measures are applied to analyze different publication parameters. In all with an average 117 articles were published each year. Single authorship is leading authorship trend but also two authored articles have shown good number of contribution with the 0.51 rate of degree of collaboration.

Keywords: Bibliometrics, Authorship Pattern, Author Productivity, geographical productivity etc.

1. Introduction

As this study is carried out on the basis of objectives, there is no need of any test or experiments and results will be derived on the basis of analysis and their interpretation in the E-Journal Library Philosophy and Practice from the period 2005 to 2014. Library Philosophy and Practice-
2. Literature Review

Sahu & Swain (2014) studied on two journal ‘Advances in Physics’ and ‘Annual Review of Astronomy and Astrophysics’ published from 2008 to 2013 reveals the impact factor and immediacy index as well as citation counts of individual papers of both journals. [1]

Sivasekaran & Ragavan (2014) revealed in their study ‘Journal of Astrophysics and Astronomy: A Bibliometric Study’ that majority of contribution were emanating from India as well as were single authored and maximum number of author were affiliated with academic institutions. [2]

Fanjul & others (2013) analysed ‘The Mathematics Education Journals in the SSCI’ and the results shows that USA is the most prolific country in the production of mathematics education research followed by Spain and Brazil. [3]

Panda & others (2013) found in their analysis on the Journal of Information Literacy: An Open Access Journal, (2007-2012) that research articles (51.9%) are highest among other types of publications, majority of contribution (71.75%) is come from UK and almost all the papers (94.65%) are from academic institutions. [4]

Regolini & Emmanuelle (2013) did bibliometric study on ‘Informing Science: The International Journal of an Emerging Transdiscipline’ and demonstrated the high degree of transdisciplinarity of Informing Science, and there is high influence of US and UK papers followed by other variety of country in the journal. [5]

Arik (2013) in his study ‘A Bibliometric Analysis of a National Journal: The Case of the Turkish Journal of Psychology’ found that the articles, published in the journal are mostly (84.65%) in Turkish. Articles are mostly single authored. Mostly authors were from Turkey followed by USA and Canada. [7]

Barik & Jena (2013) explored a bibliometric study on the Journal of Knowledge Management Practice from the period 2008-2012 covers 180 articles of 21 volumes to the given period. They found that 23.3% articles were published in 2011 out of 180 articles in 5 years. Majority of the authors have single contribution and USA secured first rank by contributing highest articles. [8]

Manivannan & Sanjeevi (2012) conducted a bibliometric study on the journal, The Indian Journal of Medical Research from the period 2000-2005. The findings of the study exhibited that most of the publications in the journal have three author, maximum papers belong to journal articles after that book reviews and case study and most of the papers were from academic institutions. [9]

Chuangm & others (2012) have made an exhaustive bibliometric study on the Polish Journal of Environmental Studies from the period of 2000-2011 followed by focused study on publication’s output distribution of author’s keyword and performances of countries, institutions and authors. Results shows that articles are leading document type and Poland is the foremost country as maximum number of articles belong to Poland. [10]

Swain (2011) explored in his analysis of the journal Library Philosophy and Practice from 2004 to 2009 that single author contribution is highest in number, journal articles were most frequently cited, and distribution of journal citations moderately conforms to Bradford’s law. [11]

Swain & Panda (2011) in the eleven years, 2002-2010 study of IJIPR found that there is an utter domination of solo contribution to JIPR during the stated period. The degree of collaboration in JIPR ranged from 0.19 to 0.41 during the publication phase under study. [12]


Thanuskodi (2011) in his bibliometric study of ‘Library Herald Journal’ from 2006 to 2010 reported his findings regarding year wise article productivity, authorship collaboration, and average number of reference per article. [14]

Nosheen Fatima & Ahmed (2011) exhibited in their study ‘Pakistan Journal of Library and Information Science: A bibliometric study’ that most of the articles are single authored, majority
of articles are belonged to Pakistan as the Journal is of Pakistani origin but it also have other country contribution.\[15\]

Lufrano & Pietro (2009) bibliometrically analysed International Literature on Supercapacitors and found that China is the most prolific country in such publication followed by USA, Japan and others. USA is foremost country in overall citations.\[17\]

Nazim & Ahmed (2008) stated in their exploration on ‘A Bibliometric Analysis on Nanotechnology Research for the period 1991-2006 that nanotechnology field have seen rapid growth during the period studied, authorship productivity was discovered by using Lotka’s law and core journals are discovered with the help of Bradford’s law.\[17\]

Anthony & others (2003) studied the International Journal ‘Psychotherapy Research’ by focusing on objective and transparent assessment of journal performance and positioning of a journal in relation to other journals.\[18\]

Swarna & others (2002) studied an article ‘Characteristics of the Electronic Journal: Library Philosophy and Practice published in SRELS journal of Information Management was analysed on the basis of physical organization and layout of the electronic journal, collaboration pattern, subject coverage, presentations of illustrations, style of referencing, citation analysis, accessibility and categorization.\[19\]

3. Purpose of the Study

Periodicals play an important role in scientific communication and now a day’s publication of periodicals not only in print but also in electronic form, especially electronic form is increasing by leaps and bounds. Purpose of the study is to analyse year wise scholarly publication, the country wise productivity, to study the authorship pattern as well as study institution wise productivity of scholarly publication and articles in the selected period 2005-2014.

4. Objectives of the Study

The key objectives of the study are as follows:

- To study chronological growth of literature during 2005-2014;
- To find out the authorship patterns in the journal;
- To find out the authors degree of collaboration;
- To reveal the geographical productivity in scholarly publication in the journal;
- To find out subject wise distribution of articles in the journal;

5. Methodology

The data for the study was downloaded from websites of the respective e-journal: Library Philosophy and Practice -http://digitalcommons.unl.edu/libphilprac/. The total 1177 articles for the period of 2005-2014 were downloaded and keep objectives in mind, each article was
analysed manually for the collection of data and feed on excel spread sheet for further analysis and after that interpretation has been done.

6. Scope of the Study

The study is limited to the analysis according to objectives are set. 7 articles of the e-journal Library philosophy and Practice were not available for download at journal’s archive. And also, 14 articles didn’t provide reference. In this way 1177 out of 1184 were analysed according to the given objectives.

7. Significance of the Study

Bibliometric study on the open access journal possesses significance in itself. As e-journals are most importantly concentrate on librarianship, libraries and all the areas of libraries in the modern information technology era, a study on such journal would definitely help researchers, librarians, in their respective works, research, collection planning and building. It would benefit to journals in gaining status and recognition; in return readers would also be get benefitted. Though this study covers important bibliometric analysis forms, growth of the literature study, authorship pattern analysis, degree of collaboration, country wise productivity and contribution, subject wise analysis, institution wise contribution analysis and collaborative contribution of institutions.

8. Data Analysis and Interpretations

8.1 Year Wise Distribution of Articles

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Year</th>
<th>Number of Articles</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2005</td>
<td>69</td>
<td>6.00</td>
</tr>
<tr>
<td>2</td>
<td>2006</td>
<td>35</td>
<td>3.00</td>
</tr>
<tr>
<td>3</td>
<td>2007</td>
<td>55</td>
<td>5.00</td>
</tr>
<tr>
<td>4</td>
<td>2008</td>
<td>66</td>
<td>6.00</td>
</tr>
<tr>
<td>5</td>
<td>2009</td>
<td>77</td>
<td>6.00</td>
</tr>
<tr>
<td>6</td>
<td>2011</td>
<td>159</td>
<td>13.00</td>
</tr>
<tr>
<td>7</td>
<td>2011</td>
<td>198</td>
<td>17.00</td>
</tr>
<tr>
<td>8</td>
<td>2012</td>
<td>191</td>
<td>16.00</td>
</tr>
<tr>
<td>9</td>
<td>2013</td>
<td>175</td>
<td>15.00</td>
</tr>
<tr>
<td>10</td>
<td>2014</td>
<td>155</td>
<td>13.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1177</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Figure 1 reflects the no. of articles published during the period 2005 to 2014. This figure also shows that year wise distribution of the articles and the percentage of the no. of articles in each year. From the given figure, it is clear that year 2011 has highest no. of articles (198) with highest percentage (16.8%) and year 2006 has lowest no. of articles (35) with lowest percentage (3.0%). Thus from the figure it is clear that year 2011 is most productive year. The table clearly shows that there is a great fluctuation in the size of articles during the period of 2005 to 2006. In year 2005 no. of articles are 69 which decrease in next year to 35. After year 2006, consistent growth is seen till the year 2011. Then once again, no. of articles is decreasing consistently till the year 2014.

It is obvious from the figure shown above that number of article in each year in this journal has given a tendency to measure the growth of the literature. In the first year of taken study period, no. of articles are 69 but the next year has decreasing percentage of articles. For the first five years the average articles are 60.4 per year. After that to the next five year it is increased on 175 articles on an average. After that it is decreasing in no. as well as in percentage.

### 8.2 Year Wise Distribution of Authorship Pattern

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Year</th>
<th>Single</th>
<th>Two</th>
<th>Three</th>
<th>More than three</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2005</td>
<td>54</td>
<td>13</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>2</td>
<td>2006</td>
<td>21</td>
<td>13</td>
<td>01</td>
<td>00</td>
</tr>
<tr>
<td>3</td>
<td>2007</td>
<td>26</td>
<td>23</td>
<td>04</td>
<td>02</td>
</tr>
<tr>
<td>4</td>
<td>2008</td>
<td>34</td>
<td>24</td>
<td>08</td>
<td>00</td>
</tr>
<tr>
<td>5</td>
<td>2009</td>
<td>52</td>
<td>16</td>
<td>06</td>
<td>03</td>
</tr>
</tbody>
</table>
Figure 2 deals with authorship pattern in the journal. It was observed that total 568 number of articles contributed by single author, 421 numbers of articles by double authors, 152 numbers of articles by three authors while 36 numbers of articles by more than three authors during 2005 to 2014. The highlighted points that have been shown above in the figure present highest number of papers in each type of authorship, during the period of 2005 to 2014.

Figure 2 clearly shows that single authorship is predominant in the scholarly publication in the e-journal Library Philosophy and Practice. Single authorship acquires 48% of total contribution by authors. It means most of the author prefers to publish papers singly. After that 36% authorship is the collaboration of two authors. 13% authorship goes with three author collaboration. The percentage of more than three authors is less than 3%.

8.3 Degree of Authorship Collaboration(C)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Year</th>
<th>Ns</th>
<th>Nm</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2005</td>
<td>54</td>
<td>15</td>
<td>0.21</td>
</tr>
<tr>
<td>2</td>
<td>2006</td>
<td>21</td>
<td>14</td>
<td>0.4</td>
</tr>
<tr>
<td>3</td>
<td>2007</td>
<td>26</td>
<td>29</td>
<td>0.52</td>
</tr>
</tbody>
</table>
Growth and development in any subject can be measured indirectly with the help of degree of collaboration measurement. It indicates how authors come together to bring out publications. The degree of collaboration among authors is the ratio of the number of collaborative publications to the total number of collaborative publications published in discipline during certain period of time. [3] In 1983 Subramanyam introduced a mathematical formula to calculate the degree of collaboration among authors in a discipline. The values of degree of collaboration can be calculated both for citation and publications. Formula for degree of collaboration can be expressed as: 

\[ C = \frac{N_m}{N_m + N_s}, \]

Where, 

- \( C \) = degree of collaboration,
- \( N_m \) = number of multi-authored works,
- \( N_s \) = Number of single authored works.

It is noted that the degree of collaboration in Library Philosophy and Practice ranged from 0.21 to 0.59 in the study period of 2005-2014.
Aforesaid figure shows year wise degree of collaboration (C) during 2005 to 2014 in the journal Library philosophy and Practice. In year 2005 C (degree of collaboration) is 0.21 and it (C) is increasing every year as shown in the figure, in year 2006 it is 0.4, in 2007 is 0.52, in year 2008 is 0.48, in year 2009 it is found decreasing but latter on it is again an increasing slope as in 2010 it is 0.506, in 2011 is 0.56, in 2012 is 0.56, in 2013 is 0.58 and in 2014 is 0.67. The average rate of degree of collaboration for the period of 2005 to 2014 is 0.51 which is good rate of collaboration.

8.4 Subject Wise Distributions of Articles

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Title</th>
<th>Number of Papers</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General Library</td>
<td>93</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Censorship</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Digital Library</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Bibliometric Analysis&amp; control</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Impact of ICT</td>
<td>114</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Info. Literacy</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Information Retrieval Seeking Behaviour</td>
<td>105</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Acquisition &amp; collection development</td>
<td>132</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Library &amp; Society</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Library Building</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Library Management</td>
<td>94</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td><strong>Library Services</strong></td>
<td><strong>175</strong></td>
<td><strong>1</strong></td>
</tr>
<tr>
<td>13</td>
<td>LIS Education</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>LIS Profession</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Marketing</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Quantitative analysis</td>
<td>120</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>Repository/Info. Centre</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

**Total** 1177

This table represents the titles which are the sub categories of library and information science disciplines. These Subjects that dig out are General Library, Censorship, Digital Library, E-Resources, Impact of ICT, Information Retrieval and Seeking Behaviour, Knowledge Org. Knowledge Management, Library and Society, Library Automation, Library Building, Library Management, Library Services, LIS Education, LIS Profession, Marketing, Quantitative Analysis,
Repository/Info. Centre, Resource Sharing and User Education. Similar subjects are merged into one subject. Most of the articles (175) are come under title ‘Library services’. It secures first rank among other subjects. Acquisition and collection development subject has secured second rank with 132 articles. 120 articles come under quantitative analyses subject and placed at third rank. 114 articles are written under Impact of ICT and ranked at four. ‘Information retrieval and seeking behaviour’ subject is ranked at five and possess 105 articles. Library Management subject is ranked at six with 94 articles.

It is interesting that among other subjects shown in the table 4, few subjects such as library services, acquisition and collection development, quantitative analysis, impact of ICT, information retrieval, and library management, is predominating. These subjects are categorised as Top six subjects. These Top six dominating subjects, in the journal Library Philosophy and Practice from the period 2005 -2014, are shown in pie diagram in the figure 4 given below:

![Pie Chart: Top Six Dominating Subjects]

**Top Six Dominating Subjects**
- Library services: 24%
- Acquisition & collection dev.: 18%
- Quantitative analysis: 16%
- Impact of ICT: 15%
- Info. Retri. & Seeking Behaviour: 14%
- Library Management: 13%

Figure-4: Subject Wise Distributions of Articles

Figure 4 depicts through pie diagram, the six dominating subject. Among these subjects Library Services employ 24% share, Acquisition and collection development have 18%, quantitative analysis have 16%, Impact of ICT and have 15%, Information retrieval and seeking behaviour employed 14% of total subject percentage, and Library Management acquires 13%. Thus from the figure 4 it is clear that most of the articles were written on library services.

8.5 Country Wise Distributions of Articles
Country wise analysis includes details about the number of articles contributed by the particular country’s authors. It reveals the active participation of various countries authors in the scholarly publications.

Table 5 represents the total contributions of various countries in the journal Library Philosophy and Practice during 2005 to 2014 with their respective percentage. Total 37 countries have contributed in the journal, Library Philosophy and practice. Countries, having less than 20 articles contribution are merged into the section other countries in the table. Under the other countries section, there is Australia, Botswana, Canada, Columbia, Fiji, Greece, Hungary, Italy, Indonesia, Ireland, Israel, Jordan, Kenya, Malawi, Philippines, Russia, Scotland, Slovenia, Saudi Arabia, South Africa, Spain, Sri Lanka, Tanzania, Tehran, Turkey, Uganda, Vietnam, west Indies and Zimbabwe are merged into one section.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Country</th>
<th>Total Contribution</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bangladesh</td>
<td>19</td>
<td>1.00</td>
</tr>
<tr>
<td>2</td>
<td>Ghana</td>
<td>23</td>
<td>2.00</td>
</tr>
<tr>
<td>3</td>
<td>India</td>
<td>267</td>
<td>23.00</td>
</tr>
<tr>
<td>4</td>
<td>Iran</td>
<td>38</td>
<td>3.00</td>
</tr>
<tr>
<td>5</td>
<td>Malaysia</td>
<td>59</td>
<td>5.00</td>
</tr>
<tr>
<td>6</td>
<td>Nigeria</td>
<td>433</td>
<td>37.00</td>
</tr>
<tr>
<td>7</td>
<td>Pakistan</td>
<td>68</td>
<td>6.00</td>
</tr>
<tr>
<td>8</td>
<td>USA</td>
<td>186</td>
<td>16.00</td>
</tr>
<tr>
<td>9</td>
<td>Tehran</td>
<td>23</td>
<td>2.00</td>
</tr>
<tr>
<td>10</td>
<td>Other Countries</td>
<td>61</td>
<td>5.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1177</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>
The figure 5 reveals the total contribution by countries Bangladesh, Ghana, India, Iran, Malaysia, Nigeria, Pakistan, USA, and other countries during the period 2005 to 2014. The figure shows that Nigeria has highest contribution in the journal Library Philosophy and Practice whereas Ghana and Malaysia has lowest contribution in the journal. Nigeria is dominating country with 455 articles (39.1%). Except Nigeria, India with 258 articles (22%) and USA with 202 articles (17.3%) have remarkable participation in the journal Library Philosophy and Practice. Ghana, Iran, Malaysia, Pakistan are also active participant in the journal but not in remarkable percentage as compare to Nigeria, India, and USA. Except these countries many other countries have contributed in the journal and have cumulative percentage of contribution of 67 articles (6%).

9. Findings

After the analysis of data derived from the journal Library Philosophy and Practice for the period 2005 to 2014, here are presented following interesting facts, findings or we can say in more formal word results of the study that is given below:

- Every year the journal has distinguished number of papers and every year number of articles are found in increasing order except the year 2006. In the year 2011 highest number of paper were contributed and in the year 2006, lowest number of articles were contributed in the journal Library Philosophy and Practice.

- For the first five years, average no. of articles are 60.4 per year and for the next five year average no. of articles are 173. For the period of 2005 to 2014 average no. of article are 116.7.

- Single author papers were 568 with highest percentage (48%) in the whole period (2005-2014) or single authorship is predominating among two authored, three authored and more than three authored papers.

- Two authored papers are more in number (421 papers) with 36% within collaborative contribution than three authored (152 papers) having 13% contribution. More than three authored papers are less in number (36 papers) having 3% contribution in the journal.

- The degree of collaboration in the journal Library Philosophy and practice is ranged from 0.21 to 0.59 during the period 2005 to 2014. Average rate of degree of collaboration is 0.51.
• Most of the articles (161) were written over ‘library services’ subject, 123 articles were written on impact of ICT, 120 articles on quantitative analysis, 105 on information retrieval and seeking behaviour, 93 papers on general library, 90 articles on library management and 89 articles on knowledge management.

• The journal Library Philosophy and Practice is enriched with the scholarly contribution of 37 countries across the world. Among these 37 countries only Nigeria, India, USA, Pakistan have good number of contribution of papers.

• Nigeria is the dominating country (433 articles) among other counties according to country wise distribution of papers or articles during the period of 2005 to 2014. Top four countries with maximum number of contribution are- Nigeria (433 papers), India (267 papers), USA (186 papers), Pakistan (68 papers).

10. Conclusion

The journal Library Philosophy and Practice is an internationally established peer reviewed open access journal in its true sense, currently published from university of Nebraska- Lincoln (USA), and possess quite reliable publishing authority. The E-Journal, Library Philosophy and Practice has short history of 17 years (1998 to present), but in this short history, it has shown remarkable growth in all aspects – it is increasingly receiving contribution from different countries across the world (37 countries have contributed during the period of 2005 to 2014), while in 2000-2002 most of the articles were from United States of America only. In the study, articles are increased each year, in an average 117 articles are published in ten years (2005 to 2014). Although single authorship is leading authorship trend but also two authored articles have shown good number of contribution with the 0.51 rate of degree of collaboration. This type of study is helpful for libraries, researchers, readers for scholarly communication to choose right journal for research, study etc., On the other hand, this study also serves as a feedback to the publishers and editors of the journals and help them to improve the status, quality of the journal, so that they can stand before their competitors.

11. References


