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Title : Scientometric analysis of research output on public libraries

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Abstract : Public libraries are primary institutions of basic learning, which involve in providing collection and service to meet information needs of local community. This study present the Scientometric analysis on Public library literature research outputs. Scientometric research publications are a quantitative measure for the basic research activity in a topic. Objectives of this study are, to measure the author productivity, to examine the annual scientific production, country wise productivity, the nature of collaboration and the Lotka's law of author productivity and analyze the bibliometric network metrics. The study covers a period of 18 years from 2000 to 2018 research output publications on "Public Libraries". The data were downloaded from web of Science database. Web of Science is the largest abstract and citation database of research literature and quality webonly journals. Data were analyzed using R-tool. R is an open- sourced programming language for statistical computing and graphics visualization supported by the R foundation for Statistical Computing. Data analysis involves descriptive analysis and network extraction. Different approaches have been developed to extract networks using different units of analysis in BibR. The study found that there are 1747 articles were published on public libraries across the globe, which are categorized under Social Science Citation Index – 1184 articles, Science Citation Index Expanded – 194 articles, Emerging source citation index – 393 articles and Arts and Humanities citation Index – 138 articles. There are 374 different sources contributed above mention number of articles. It was observed that 2495 authors involved on the study and also collaborative index for this research are was 2. 3, this means, around three authors collaboratively work together for a paper. Collaborative index of this area of study is 2. 3. Annual scientific production growth rate was found as – 9.1733. United

State of America is the largest producer of public library related research papers with 523 papers, followed by England (140), Canada (109), Australia (93), Spain (75) and etc where 22 papers were collaborated by the authors from different countries. Journal of librarianship and information science (99) is the major contributing source for the field of public library related research. Lotka's Law coefficient for the scientific production, beta co-efficient estimated as 2.712, constant value is 0.5467, goodness of fit value is 0.9589 and the p-value of two sample Kolmogorov – Smirnov test between the empirical and the theoretical Lotka's Law distribution is 0.036, it means there is no Significant difference between the observed and theoretical value for the scientific production. Bibliometric networks were developed for manuscript and publication source network, Co-citation network, author network and author keyword network. Manuscript publication source metrics revealed that, journal of librarianship and information science- 99 manuscripts (5.66%), library quarterly – 83 (4.75%), Library trends – 70 (4.00%), Library and Information Science research – 70 (4.00) and public library quarterly – 64 (3.72%) are the top five publication sources. Co-citation network shows that, AABO, S (2012), AABO, S (2010), Buschman, John, (2000), Andunson, R (2005), and Putnam, R (2000) are the highly cited manuscripts. Finally author keyword network shows that the keywords used by number of author's are public libraries 463, Libraries 125, Public 59, Public library- 56 and library 51 in the manuscripts.