Citation Analysis of Postgraduate Theses in the Field of Geographic Information Systems and Remote Sensing

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Abstract

Citation analysis, which uses bibliographic data from information sources such as journal articles, monographs, and electronic indexes to explain trends in library use, is a widely used research method in Bibliometric studies. By analyzing citations of postgraduate theses, the trends of library collection usage in a particular field could be identified. The awareness of these trends is useful in taking decisions about the library collection management.

The primary objective of the present study was to analyze the citation patterns of postgraduate theses in the field of Geographic Information Systems and Remote Sensing (GIS and RS). The study also aims to make recommendations for user education on selection of sources for citing in academic writing. Bibliometric research methods were applied to determine the characteristics (user behavior) of the materials referenced by Master's Degree of Science in GIS and RS available in the library, University of Sri Jayewardenepura. All the theses (41) submitted in the year 2016 in above degree program have been considered as source documents.

The results showed that the average number of citations per thesis is 31. The journal articles were the most cited source (35.35%), which is followed by web pages (18.41%). The books, which had 13.44% of citations, were the next mostly used source. The percentages of citations of the conference papers, reports and thesis/dissertations were 11.19%, 10.88% and 3.19% respectively. Rest of the sources e.g. handbooks, newspapers and acts altogether had 7.54% of the citations.

Most of the previous studies have reported that the journals and books are the most used sources. In contrast, the results of the present study place books in the 3rd, while websites having the second highest number of citations. Out of total citations, 30.30% were from online resources. However, online journals accounted only for 3.73% out of total citations, while the majority of cited journals were printed resources (31.62% out of total citations). Furthermore, the vast majority of cited journals were international journals (34.27% out of total citations).

Results reveal that, while journal articles are widely cited source, still the trend of citing is from printed journals. Although a considerable amount of online sources are cited, the majority of them are not much credible sources. It appears that, although the students have searched for online sources, they have not been able to find satisfactory amount of online journal articles. Therefore, it can be recommended subscribing to more journals/ scholarly databases in the field of geographic information systems and remote sensing field. Also, it is recommended to have special sessions for the students of the relevant course on selecting credible online sources for citations in academic writing.

Keywords: Citation analysis, GIS and Remote Sensing, Bibliographic data, Postgraduate theses, Collection development