Using Citation Checking of Ph. D. Dissertation References as a Tool for Evaluating Library Collections of the National and University Library in Zagreb

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Introduction
To identify how the library’s collection is being used is important to evaluate the library and to facilitate decision-making. Collection assessment can be provided by library collection usage study (mainly circulation data) or by user survey as a method of quantitative data collection. Another method is to check library holdings against standard bibliographies. In order to evaluate the collection of the National and University Library in Zagreb, this research, has chosen the citation analysis technique. Citation checking is a time-consuming and in-depth approach for determining the usefulness of libraries’ collection to support research. By citation we implicitly mean a bibliographical entry in a footnote, reference list, or bibliography of a document that contains enough information (e.g., author, title, publisher, or journal title) to verify the original item. Citation checking of scholarly (research) documents and comparison of those citations against the availability of materials in a Library collection offers an unobtrusive method of evaluation of the collection’s ability to support research.

The citation analysis technique can be traced back to the works of Jewett in 1848 using references found in major scholarly works against the holdings of several American libraries. In the early 1960s, Coale evaluated the Latin American colonial history collection at Chicago’s Newberry library using bibliographies for a group of scholarly monographs. Citations drawn from student’s dissertations or term papers was another source of checklist used in many studies. The earliest being that of Emerson’s analysis of 23 engineering doctoral dissertations at the Columbia University between 1950 and 1954 (Heidenwolf, 1994) to determine the percentage of references held or not held by the other campus libraries in the university. A study by L. S. Zipp (1996) indicated that the data derived from research on graduate students provide more than a valuable insight into students’ research behaviour. Zipp found that citation analysis in theses and dissertations is a reliable surrogate method for evaluation of library collection used by the faculty member publication citations against the research part of library collection. Another study investigated library collections of doctoral dissertations used by doctoral students in the humanities, sciences and social sciences (Buzzard and New, 1983). Checking citations in master theses was one of the methods by Ch. E. Bolgiano and M. K. King (1978) used to evaluate journal collections. E. T. Smith (2003) used a sample of graduate theses and dissertation bibliographies from 1991 and 2001 to provide “snapshots” of graduate research demands against the library collection.

This study attempted to evaluate a particular aspect of the library’s collection (meeting the users’ needs), intending to gather and consolidate preliminary data that could be used later as a basis for establishing a proper and systematic evaluation process for other aspects of the library’s collection.

Purpose
The goal of this study was to evaluate the usefulness of the current Library collection as a whole. This study is describing and analysing the application of citation analysis in the collection evaluation of National and University Library in Zagreb collections (NUL). Dissertations used for the purpose of this analysis had to satisfy two criteria:

1. Dissertations are by the scientists who are the users of NUL (registered member of NUL),
2. Dissertations were defended at the University of Zagreb in 2013.

This study describes the method of assessing usefulness of the NUL collections to an extremely important user group - graduate student. By looking at the citation patterns in Ph. D. theses and cited works written by the University of Zagreb students against the library holdings, this study sought to answer one critical, question: Does the Library hold the resources our graduate students use?
Methods
The study analysed citation patterns, characteristics of information resources used by graduate students and their availability in the Library. In 2013 at the University of Zagreb, 270 dissertations were published. Our sample consisted of 73 Ph. D. Dissertations published in 2013 at University of Zagreb (all scientific fields) by scientists being the members of NUL. In order to identify all dissertations written at the University of Zagreb in 2013 we searched the NUL online catalogue. The results were grouped into two general categories: Social Sciences and Humanities and Natural and Applied Sciences (Biomedicine and Engineering). The next step was a comparison of Library’s holdings data against the works cited in those theses. The cited literature was categorized by a type of material, language and available format in the Library (print and electronic). For the purposes of this study, printed document holding was defined as specific edition for monographs or specific issue in case of serials. Ownership of electronic resource was defined as permitted access to the full-text of the specific article cited.¹

Findings
The findings reveal that National and University Library in Zagreb owned 46% of resources cited in dissertations of post graduate students at the University of Zagreb (members of NUL) and 16% of the cited bibliographic references are resources available on the Internet. The dissertations cited more periodicals than any other resource, 57%. Monographs were cited with the second greatest frequency, 34%. Citations by other type of resource show: journals 1.3%, proceedings 5%, other resources 2.5% (dissertation and etc). Analysis by scientific disciplines reveals that 48% dissertations are from Social Sciences and Humanities and 52% dissertations are from Natural and Applied sciences (biomedicine and engineering). In majority of citations both scientific disciplines have one predominant format. In Social Science and Humanities predominant format in bibliographic references is print and in Natural and Applied Sciences (Biomedicine and Engineering) e-resources.

Conclusions
In conclusion, citation analysis gives library researcher a deeper insight into user’s research patterns and library research needs, which should be important in recommending materials for selection and deselection. The complete results of the citation checking/analysis will provide information about the materials cited in dissertations being important in the collection development decision-making. The findings will provide the Library a better insight of its’ own competitive position.

Keywords: citation analysis, dissertations, users, National and University Library in Zagreb, collection evaluation

REFERENCES

Curriculum Vitae

¹ Resources available on the Internet are not counted as material in which the Library provides access, because such materials are available to users regardless of the Library services.
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