

*Citation patterns in the biological sciences: a comparison of faculty publications and student theses at a research university*

Presenter: Yelena Pancheshnikov, University of Saskatchewan

The purpose of the study is to identify and compare citation patterns of two major groups of library users, working in the field of the biological sciences at a single research university and to assess the results of this comparison as a background for library collection management.

A substantial body of literature pertains to the application of citation analysis to published works, theses and dissertations. However, very few publications contain comparative data on the citation patterns of different groups of authors.

The source data for the study were 5467 citations, retrieved from published works and 3429 citations, retrieved from Masters Theses, completed at the Department of Biology of the University of Saskatchewan in 2002-2004.

The methodology was based on the development and application of two groups of quantitative criteria. The first one was applied to the entire list of citations in order to measure the proportion of different material types and their age. The second one was applied to the citations to journal articles in order to measure the frequencies of citations to individual journal titles, similarity of the lists of cited journals and subject distribution of cited journals.

The comparison of the lists of all citations showed similarities in the overall proportion of the used material types and in the age of cited monographs. The comparison of the lists of cited periodicals showed significant similarity in the general distribution of citation frequencies, in the distribution of cited journals by subject, and to a lower degree - in the age of cited articles. The major differences pertained to the total number of citations, the total number of citations to journal articles and most importantly - to the concrete journal titles cited by each of the two groups.

The results suggest that collection management decisions that require general data on the cited material types and the age of literature can be taken on the basis of the patterns identified for either of the studied groups. Faculty publications should be treated as much more comprehensive sources of citation data than student theses. The dissimilarity of citations to concrete journal titles shows that neither of the two studied groups can substitute for the other one for the purpose of serials management.

The obtained results draw attention to similarities and differences in the citation patterns of the two major groups of library users, working in the field of the biological sciences that can be of interest to a broad audience of academic librarians. The developed methodology can be applied to the study of literature use by authors in other subject areas.