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Title：Examining Interdisciplinarity of Library and Information Science (LIS) Based on LIS articles contributed by Non-LIS Authors
Journal：Scientometrics
Year of Publication：2018

To fill the research gap, this study used authorship analysis and content analysis to focus on the LIS research topics contributed to by non-LIS authors. The external influence brought by non-LIS authors on LIS research topics was examined. Although non-LIS authors contributing to LIS journal articles have been investigated before, most studies only identified the numbers and proportions of non-LIS authors and their disciplinary attributes. The influences of non-LIS authors on the LIS discipline have not been explored. This study focused on the LIS articles contributed to or written by non-LIS authors. To examine the interactions between LIS and non-LIS authors, this study investigated collaborations between LIS and non-LIS authors.

This study investigated the external contributors of library and information science (LIS) knowledge who were unaffiliated with LIS-related institutions but published their research results in LIS journals. Differences between the contributors to library science (LS) and contributors to information science (IS) were considered. Articles published in 39 strongly LIS-oriented journals indexed in the Web of Science database between 2005 and 2014 were analyzed.

The results demonstrated that 46.5% of the LIS articles were written by at least one non-LIS author; authors' backgrounds ranged across 29 disciplines. An increasing trend was observed in degrees of interdisciplinarity of LS and IS. An increase in proportion of articles by LIS and non-LIS authors was identified in LS and IS as well. Those with medical backgrounds were the primary non-LIS authors contributing to the LS field and collaborated the most frequently with LIS authors. Those with computer science backgrounds were the most prevalent non-LIS contributors to the IS field and preferred to publish individually. Moreover, the non-LIS authors preferred to collaborate with other non-LIS authors.

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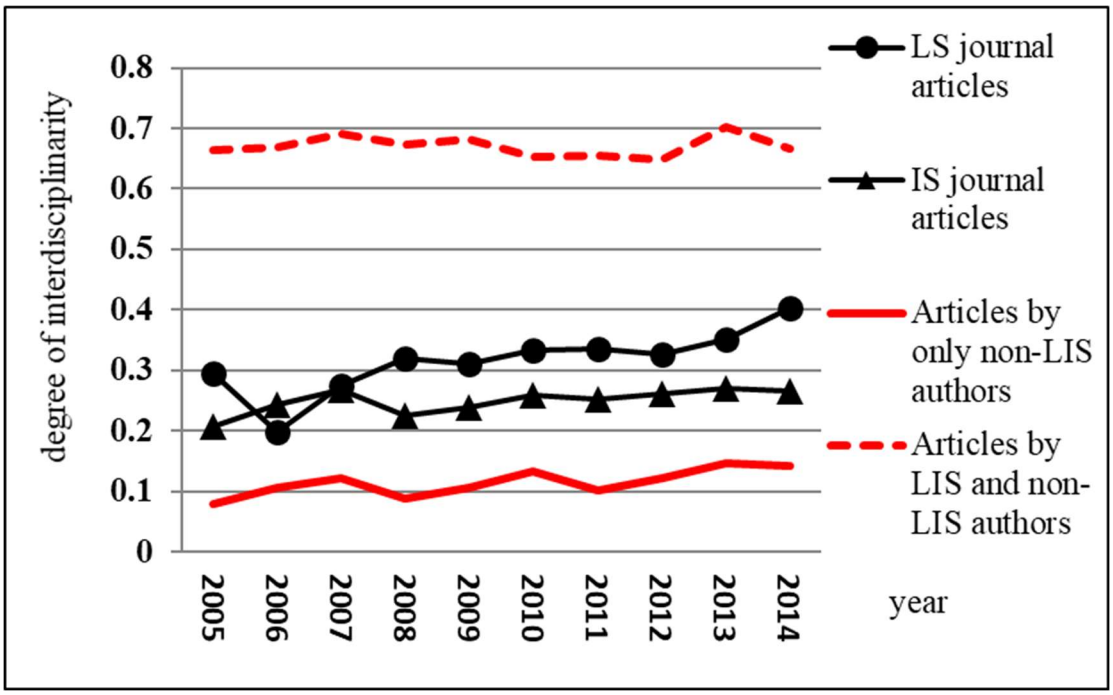

Comparison of average degree of interdisciplinarity by year among four types of articles

A critical difference was also identified in research topics between LS and IS. The foundations of LIS and scientometrics were the largest research topics in LS and IS, respectively.

The findings of this study contribute to the literature because a neglected perspective was adopted for exploring the interdisciplinarity of LIS. Earlier studies have identified non-LIS authors as LIS knowledge creators, but this study extended the literature on the characteristics of non-LIS authors and their articles. The high proportion of LIS articles by non-LIS authors confirms that LIS knowledge is substantially affected by other disciplines. In particular, the decreasing trend in articles by only LIS authors reveals that LIS authors prefer to collaborate with non-LIS authors. An increasing trend in articles by only non-LIS authors was observed. This type of article does not involve direct interaction between LIS and non-LIS authors, which is typical of interdisciplinary collaboration. Because most non-LIS authors do not hold LIS-related credentials, their ever-increasing involvement in LIS research will likely change the academic landscape of LIS. In particular, a substantial proportion of articles were written by only non-LIS authors.