Chapter 5
Systematic Review as a Research Method in Library and Information Science

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ABSTRACT

The aim of this chapter is to assess the current state of application of systematic reviews (SRs) in library and information science (LIS) field and determine how information scientists can advance the SRs as a methodology. The literature shows that there is an increasing number of SRs in LIS although there are still knowledge gaps about the use of SRs as a methodology. The quality of reporting in primary studies in LIS is still poor, and hence, it becomes difficult to appraise the value of the study undertaken. In order to advance the use of SRs in LIS domain, it is important to introduce SRs in LIS education curricular, integrate SRs as part of the continuing scientist development programmes (CPD), use automated SR software to minimize workload, introduce SRs a formal role and service in the libraries, collaborate with research teams as co-authors to conduct SRs not only in the topics defined by research teams, but also in LIS topics, and create SR databases and tools in LIS.

INTRODUCTION

The rapid advancements of information and communication technologies (ICTs) have resulted in an exponential increase in the amount of available information and forced librarians to change their practices. The increasing popularity of ICTs, new ways of communicating research and the transformation in scientific publishing have also posed new challenges for librarians. Information scientists need to rethink and redefine their role in terms of addressing users' needs and thus use advanced technological skills (Vassilakaki & Moniarou-Papaconstantinou, 2014). Systematic reviews (SRs) are increasingly being

produced and published (Chasin & Scholta, 2015). There has been a sharp rise in the publication of SRs due to the increased call for evidence-based research; high publication rate of primary studies, growing number of scientist organizations promoting SRs, and high number of tools available to conduct review (Foster & Foster, 2015). The upsurge in reviews has led to more researchers seeking the assistance of librarians (Foster & Foster, 2015). According to Xu, Kang and Song, (2015), all primary research must be preceded by a SR. SR is defined as a systematic way of collecting, critically evaluating, integrating, and presenting findings from across multiple research studies on a research question or topic of interest (Pati *et al.*, 2018).

SRs help information scientists to keep up-to-date with scientific information since they combine information from several existing publications on a given topic (Don, Cnor & Faan, 2016). As information scientists, library staff could act in a more entrepreneurial style and seek out ways to add value to their roles and show the impact of their work and to do so they must go beyond the traditional parameters of the library. They need to respond more acutely to their users' needs, and develop capabilities to build better profiles of their users, for example through continual needs analysis (Delaney & Bates, 2015). Therefore, SRs provides several opportunities to librarians such as potential income, increased use of library services, research output, and alignment with the new roles of academic libraries (Gore & Jones, 2015).

Information scientists are more and more appealed to participate in the production of SRs (Gore & Jones, 2015). The information scientist are urged to participate in SRs due to the ever-increasing volume of digital information and the constant development of tools to generate and access information require information scientists to operate as information consultants and facilitators (Vassilakaki & Moniarou-Papaconstantinou, 2014). Furthermore, Information scientists need to reconsider their role in the learning process at higher levels due to increased competition among universities for developing successful graduates, hiring prominent academics and finding research funds, skills development, and the adoption of changes in the learning and research organizations (Vassilakaki & Moniarou-Papaconstantinou, 2014).

SRs have often been mainly associated with the field of health science (Don et al., 2016). Health sciences librarians have been involved with SRs since this genre of publication emerged during the 1990s. Since then, librarians have been most widely known for their prowess in searching for the evidence needed to create SRs. Even during the early years, however, librarians and other information scientists were involved in other aspects of the SR process (Spencer & Eldredge, 2018). Further, the first books on the reviews were published by researchers in the field of education, social sciences, and political science (Xu, Kang and Song, 2015; Trudel *et al.*, 2015; Petticrew, 2001). However, SRs are gaining their prominence in other fields as well, including astronomy to zoology, library and information studies and information systems.

A generally known role of information scientists in SRs is information retrieval methods because of their skills in finding and managing information. Nevertheless, information scientists can be involved in other roles of SRs. Since information scientists are more and more involved in SRs, they need to have a better understanding of what SRs are. The following are the objectives of this chapter:

a) To discuss SRs as a research method including typologies/types of SRs and steps for conducting SRs
b) To highlight the current state of SRs in LIS
c) To review how information scientists advance Information retrieval practices for SRs.

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