Information Science Research and Sustainable Development

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ABSTRACT

Awareness on and importance of sustainability in all its facets is becoming more and more important in all aspects of our lives. The question arises, how – not if – scientists can contribute to a sustainable development. As information and knowledge play an important role for development, information scientists should be included in this debate. But is there a sustainable information science or an information science of sustainability? Publications from the Library and Information Science (LIS) community addressing this topic are present, but only sparse. With this visual presentation, we aim at identifying possibilities where Library and Information Scientists can contribute to a sustainable development through and in research as well as teaching. After presenting the results of a structured literature review on sustainability in LIS research we aim at discussing these and further ideas on a sustainable information future with the participants. Thereby we endeavor to raise awareness on the topic and to share approaches to include sustainability in research, teaching and practice.

KEYWORDS

Sustainability, sustainable development, library and information science, structured literature review

INTRODUCTION

On January 1st, 2016, the Sustainable Development Goals (SDGs) went into effect. These 17 goals are intended to "end poverty, protect the planet and ensure prosperity for all" (United Nations, 2015, para. 1). A sustainable development can be described as a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 37). The SDGs include targets regarding different dimensions of sustainability (social, economic and environmental). In detail, the 17 SDGs address the following issues:

1. no poverty
2. zero hunger
3. good health and well-being
4. quality education
5. gender equality
6. clean water and sanitation
7. affordable clean energy
8. decent work and economic growth
9. industry, innovation and infrastructure
10. reduced inequalities
11. sustainable cities and communities
12. responsible consumption and production
13. climate action
14. life below water
15. life on land
16. peace, justice and strong institutions
17. partnership for the goals

Whereas prior formulations of similar goals – like the Millennium Development Goals – focused on advancements in developing countries, the SDGs demand involvement of all countries. Hence, this is a matter for all of us. Today, we can already observe several initiatives supporting a sustainable development, like a growing interest in the sharing economy (Hamari, Sjöklint, & Ukkonen, 2016).

Already in 1995, Spink (1995) discussed the role of information science for a sustainable future. Nonetheless, publications on sustainability from the Library and Information Science (LIS) community remain sparse. However, Chowdhury (2013, p. 617) argues that "since information forms an integral part of every development and innovation, sustainability should become a mainstream research topic within information studies". Apart from research activities, Chowdhury and Koya (2017) argue that sustainability should also find its rightful place in LIS education. Thereby "sustainability should be embedded in every aspect of data and information management teaching and research in iSchools and other university disciplines so that the graduates can make appropriate management, research, and professional contributions at the workplace in every business and industry towards achieving the SDGs" (Chowdhury & Koya, 2017, pp. 2135–2136).

METHODS

A structured literature review was conducted in February 2018, analyzing 81 research articles published in LIS journals and conferences. The set of publications was chosen based on a Scopus database search in 102 LIS sources listed by the SCImago Journal Rank (JIR). All articles were retrieved containing the string *sustainab** in their title or keywords, thus addressing sustainability or sustainable development directly. Some irrelevant publications were removed as well as new ones added based on relevant references. For the remaining articles, it has been noted what dimension of sustainability (environmental, economic, social) was addressed. Furthermore, the main topic, applied methods and addressed countries were listed.

RESULTS

From the 81 analyzed publications, 68 could be related to environmental sustainability, 43 to economic and 45 to social sustainability. Taking a deeper look into the contents of publications, eight major topics could be identified. Most articles (19) focus on libraries and archives, for example, by presenting case studies on green library initiatives. Therein, different types of libraries are addressed. Nine publications focus on academic libraries, four on public and three on digital libraries. The remaining articles did not specify the library type. Eighteen articles consider the role of Information and Communication Technology (ICT) for sustainable development. Ten further publications investigate governmental activities, for instance, information dissemination strategies regarding sustainability. Other articles are concerned with scientific publications on sustainability (7), society (7), urban development (6), research institutes and universities (4) and Information Science in general (3). Seven remaining publications, assigned to the category 'Other', discuss further topics like waste disposal, knowledge management or carbon footprints. Several articles refer to one or more concrete location(s) or region(s). Represented are developing countries (e.g. Nigeria with five publications) as well as developed countries (e.g. the United States with six articles).

VISUAL PRESENTATION AND ENGAGEMENT

While sustainability is the responsibility of every human – and therefore every scientist – journals, institutions, associations and conference organizers can encourage individuals to make one's own contribution to this topic. They can offer spaces for scientific discussion and exchange between professionals. This year the ASIS&T annual meeting's motto is "building an ethical and sustainable information future with emerging technology" (ASIS&T, 2018). We would like to pick up this theme to discover how information science scholars and practitioners will contribute to this future. By presenting our results with an emphasis on information science in relation to sustainability and the Sustainable Development Goals, we have three objectives:

1.   Raising (further) awareness and initiating a discussion on the SDGs and the role of information science research and practice in fulfilling them.
2.   Collecting small and big ideas and tips on how to practice sustainable research and teaching.
3.   Encouraging participants to commit to more sustainable habits and practices or to include the sustainability issue in their research.

Therefore, we would like to invite conference attendees to share their own ideas, experiences and opinions or research projects that are relevant for this discussion. This will be realized by providing a poster with our results as well as a related hashtag. A tablet computer (provided by us) will be showing related tweets with the participant's contributions and summaries from us during the presentation. Furthermore, through the collection of tweets, the exchange of experiences and ideas will be available even after the poster presentation.

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