Evidence-Based Practices

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As climate change accelerates, the need for libraries to promote environmental education and development of sustainability literacy within their communities has accelerated as well. Libraries across the world have met this need in a number of different ways and research on this practice has increased significantly. The International Federation of Library Associations (IFLA) was involved in the creation of the United Nations Sustainable Development Goals (SDGs), and the American Library Association (ALA) officially adopted sustainability as a core value in 2019 (IFLA, 2018; Aldritch et al., 2018). To make the best possible recommendations for promoting sustainability as an academic librarian, it is necessary to review the research that is being conducted on this topic around the world. This will allow us to make the best possible recommendations based on what is working for other libraries and learn from any issues that might have a negative impact. In this paper, I will be reviewing the literature on how different libraries across the globe are currently implementing sustainability into their practices before discussing how our academic library can ensure that we are living up to sustainability as a core value.

Summative Literature Review

By examining the research that LIS practitioners are conducting on the topic of sustainability at their respective institutions, it will be possible to make recommendations for how our library can promote sustainability within the community. In this summative literature review we will be using both domestic and international sustainability practices to inform our recommendations. The triple bottom line, which breaks the concept of sustainability down along the lines of environmental, economic, and social concerns, is currently the dominant framework within the field of library and information science (LIS) which can be seen in the fact that it was used in the vast majority of the research examined in this section even in cases when it was not explicitly mentioned. Though there is some debate about whether or not this is the most beneficial

conceptualization of sustainability for libraries to use, the first source we'll examine focuses primarily on the environmental and social aspects of the triple bottom line when considering the question of whether academic libraries are even part of the solution.

Hamad et al. (2024) give us our first look into how libraries are approaching sustainability across the globe. They highlight that by serving as "knowledge hubs for students, researchers, and faculty members" academic libraries not only provide "climate change information, data, and research," but also provide specific: programs to encourage learning about the topic, events highlighting the issue, and opportunities for collaborations (p. 1). They seek to assess ongoing operations of, and necessary conditions for, academic libraries to promote climate literacy and determine what conditions they require, and what difficulties they face. To do this, they provided a questionnaire to 360 library staff in Jordan and received 203 responses.

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Based on the results of this survey, Hamad et al. (2024) identified some current practices that were being conducted such as: building resources and the development of collections in order to eliminate information gaps related to climate literacy; workshops and events like lectures and panel discussions which can foster community engagement around promoting climate literacy; and collaborative engagement both intradepartmental and with local

organizations in order to serve as “convening spaces” (p. 5). They also highlight some programs from other libraries, both public and academic, outside of Jordan in addition to the results from their survey. These programs include a seed box and community garden in Estonia, planting workshops and development of green spaces in Israel, Morocco, Egypt, and Sudan, the distribution of 100,000 seed kits as part of a program in Ireland, and the Green Grove at a library in Singapore which contains an indoor garden, hydroponics showcase, and augmented reality trail (p. 6). The challenges identified by Hamad et al. (2024) include lack of funding and other resources, gaps in the expertise of staff, resistance to change and information overload on behalf of both students and staff. They recommend further green initiatives and professional development programs as well as additional longitudinal studies, collaborative research, and the development of concrete assessment metrics.

Regarding assessment metrics, we turn to an article that was published three years prior in which Missingham (2021) analyzes a case study from an academic library at an Australian university and compares it to various methodologies that have been used for assessment throughout the history of the field of library and information science in order to build an understanding of how the SDGs should be assessed. While the first study focused on the environmental and social aspects of the triple bottom line, this study is more focused on the *economic* and social aspects. This is in part because many of the methodologies currently used for assessment are directly tied to economic indicators. Not only do assessments allow the universities within which academic libraries exist to compare themselves to one another on an international level, but the rankings that come from these assessments potentially affect things such as funding levels and number of students who apply (p. 388). This has resulted in a focus on Return on Investment (ROI) and contingent valuation methodology which is a passive use assessment based on the estimated value of services provided by a library. Thankfully, it appears that this is starting to give way to assessments focused on either a value-in-use

approach or Social Return on Investment (SRI), the former a more holistic approach focused on providing actual value to library users and the latter a mix of qualitative and quantitative assessments measuring outcomes determined by various stakeholders. (pp. 389-390). Based on her case study, Missingham (2021) found that using qualitative and quantitative methods within a framework based on the SDGs themselves as a multidimensional assessment tool is more effective than methodologies focused solely on the economic or social dimensions alone.

Aziz et al. (2024) publishing in Harf-o-Sukhan, the Urdu Research Journal, conducted a survey of academic library directors in Pakistan to determine their commitment, attitudes, and beliefs regarding how to implement the SDGs, make their libraries greener, identify any challenges they were facing, and determine what steps they have taken thus far. The directors identified a lack of funding and resources, inadequately trained staff, a lack of training on how to best institute environmentally friendly programs, and minimal awareness and understanding of green library initiatives among library users and staff as the primary difficulties. Library directors also highlighted insufficient infrastructure for implementing sustainability initiatives, while simultaneously, and unsurprisingly, ranking their own commitment to promoting environmental sustainability. The authors advocate for building a culture of awareness about green practices and supporting community involvement and engaging all stakeholders through initiatives and campaigns consisting of lectures, workshops, and events all designed to promote environmental education.

Despite the self-proclaimed dedication to sustainability of library directors in the previous study, Tribelhorn (2024) discovered that in the United States only one out of the fifteen libraries that she surveyed had a dedicated leadership committee and that leadership often seemed to lack direction (p. 7). She states, however, that the buy-in of leadership is absolutely crucial to the process of promoting sustainability, and highlights some examples of successful sustainability programs on university campuses in the United States including: the formation of a

Library Environmental Committee at Michigan State University (MSU) which was active in projects focusing on energy conservation, waste reduction, and recycling programs; the creation of a compost collection program at Oregon State University created to minimize the amount of greenhouse gas emissions caused by food waste; a sustainable information literacy course that was offered to first-year students at the University of Calgary in Canada; and a focus on sustainable building design at universities in China. According to Tribelhorn (2024), programs such as these are not without problems, though, including the lack of training provided to staff and again the lack of concrete assessment tools. She recommends a holistic approach to integrating sustainability into academic libraries and including all stakeholders and incorporating sustainability into the mission statement and policies of the academic library.

After reviewing the role of staff and management, it is beneficial next to examine what role other stakeholders might play. Tanzin and Atikuzzaman (2024) conducted a survey of academic library users in Bangladesh and found that while most users were aware of sustainability, only a small percentage viewed their library as environmentally friendly. Another key finding was that users recognized that a more environmentally sustainable library would result in better health outcomes. They recommended comprehensive teaching initiatives focused on sustainability including workshops and outreach to the broader community (pp. 6 -9). They also recommend conducting assessments regularly as they found when students were better educated on sustainable practices, they better understood the benefits and difficulties involved in green practices.

Also studying students, King (2024) conducted a case study on the Canadian undergraduates that she was teaching which she uses to highlight some pedagogical approaches that academic librarians can take to contribute to meeting the SDGs by teaching sustainability through the lens of information literacy and information behavior. She recommends that students complete assessments on their level of sustainability after

completing community-engaged and problem-solving research on green issues as a way to illustrate information literacy (pp. 792-794). King (2024) also highlights the benefits of fighting climate misinformation in promoting sustainability and how this can serve to demonstrate the concept of information behavior to students. Ultimately, she also promotes the importance of making community connections.

Executive Summary

In order to implement the best possible sustainability literacy and environmental education program at our academic library, it is necessary that we make a number of changes and promote those changes publicly to the community. Our leadership team should form a committee on sustainability with experts from different departments in order to take advantage of the interdisciplinary nature of library and information science. This team should include other stakeholders such as community leaders from organizations focused on sustainability and civic leaders in addition to representatives from the student body.

The committee should determine how to best increase funding for sustainability and green practices, how to incorporate sustainability into our mission statement, and how to help with the creation of our official sustainability policy. This committee should also help determine which metrics we should use for the assessment of our sustainability practices, and how often the assessment should be given. I recommend an assessment model that incorporates both quantitative and qualitative metrics such as a value-in-use model or holistic model which incorporates the SDGs. Ultimately, though, it is important that feedback from all stakeholders is incorporated into the assessment, which is why it is important for the committee to help determine the methods that will be used.

Finally, this committee should work with librarians and professors to institute projects like a local seed bank or garden of local flora. Librarians and professors should also incorporate

sustainability literacy and environmental education into their curricula as frequently as possible including a unit on fighting climate change misinformation. There should be a distinct emphasis on community-engaged scholarship and incorporating the wider community into our efforts. Together we can build a culture that is focused on promoting environmental education and work together to ensure that we all have the sustainability literacy necessary to weather climate change and the polycrisis.

Reflective Statement

By examining ongoing research, I was able to ensure that the suggestions made in the executive summary would be as effective as possible. The research that has already been conducted provided a blueprint for the recommendations I made. From this blueprint I was able to build out the practice I would suggest an academic library to take to implement a better sustainability program while at the same time using the challenges that had been identified in the research to avoid making mistakes that have been made before. This would be true regardless of what specific practice I was examining within the field of library and information science, but it is especially true when it comes to the topic of sustainability due to both the global nature of the problem and the urgency with which it must be addressed. Despite being a global problem, though, the solutions for sustainability are best addressed on the local level. This is one of the reasons that evidence-based research was so effective in this situation, because it allowed me to draw on the global effort that librarians and information scientists around the world have put into solving this problem in order to best adapt for my specific, if hypothetical, local situation.

Aldrich, R. S., Tanner, R., & ALA Special Task Force on Sustainability. (2018a). Final.report.of.the.ALA. Special.Task.Force.on.Sustainability. https://www.ala.org/sites/default/files/aboutala/content/governance/ExecutiveBoard/ebd5_4_Task%20Force%20on%20Sustainability_Final%20Report_6.2018.pdf

Aziz, S., Assad, I. H., Manzoor, W., & Rehmani, M. (2024). View of Relationship of social factors, commitment, challenges, efforts and current status of Going Green in university libraries: A survey of librarians. Harf_o_Sukhan, ❹(2), 2709–4030. https://www.harf-o-sukhan.com/index.php/Harf-o-sukhan/article/view/1351/1296

Hamad, F., Elfadel, M., Fakhouri, H., & Abu-Qaadan, A. (2024). Advancing Climate Change Literacy: Are Academic Libraries Part of the Solution? New.Review.of.Academic.Librarianship, 1–23. https://doi.org/10.1080/13614533.2024.2369503

International Federation of Library Associations and Institutions (IFLA). (2018, September 25). Exemplars?Educators?Enablers¿Libraries.and.sustainability. https://repository.ifla.org/handle/20.500.14598/2517

King, M. (2024). Contributions of Academic Libraries, Librarians, and Information Science to Education for Sustainable Development Research and Implementation: A Canadian Undergraduate Example. In: Leal Filho, W., Salvia, A.L., Portela de Vasconcelos, C.R. (eds) An Agenda for Sustainable Development Research. World Sustainability Series. Springer, Cham. https://doi.org/10.1007/978-3-031-65909-6_40

Missingham, R. (2021). A New Lens for Evaluation – Assessing Academic Libraries Using the UN Sustainable Development Goals. Journal.of.Library.Administration, ❷❼(3), 386–401. https://doi.org/10.1080/01930826.2021.1883376

Tanzin, M., & Atikuzzaman, Md. (2024). Towards achieving a sustainable academic library: Users' awareness and perceptions in a developing country. IFLA Journal, 0(0). https://doi.org/10.1177/03400352241276841

Tribelhorn, S. K. (2023). Preliminary Investigation of Sustainability Awareness and Activities among Academic Libraries in the United States. The.Journal.of.Academic.Librarianship, ❹❺(3), 102661. https://doi.org/10.1016/j.acalib.2022.102661