

Sustainability and Library Management Education

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Abstract: The United States along with many other nations actively support the United Nations agenda to educate the next generation about sustainability. Library and information science (LIS) educators may support this effort by incorporating sustainability concepts into the LIS curriculum. While multiple alternatives exist for this goal, this paper argues and provides ideas integrating sustainability into a course focusing on management, offered, and frequently required, by most American Library Association accredited LIS programs. Discussion explains the meaning of sustainability; the international agenda surrounding it; why LIS programs need to help further the sustainability agenda; and, alternatives for incorporating sustainability into the LIS curriculum.

Key Words: sustainability, libraries, management, education

Introduction

The UN has made sustainability a priority by defining *sustainable development* (World Commission on Environment and Development, 1987, p. 43); articulating the dimensions of sustainability (United Nations [UN] Division for Sustainable Development, 1992, section 1; United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2005); and, declaring the period from 2005 to 2014 to be the Decade on Education for Sustainable Development (Bourn & Morgan, 2010, p. 272; UN General Assembly, 2002). A majority of countries around the world signed *Agenda 21* to indicate their support, through words and actions of and intention to participate in this international effort (UN Division for Sustainable Development, 1992). By incorporating the concept of sustainability into the library and information science (LIS) curriculum, LIS masters-level program educators would join the global effort to increase awareness of sustainable development.

The international effort surrounding sustainability explains why LIS educators need to integrate the concept into their curriculum. However, neither this effort nor the relatively little attention the concept has received in LIS literature—despite *American Libraries* Editorial Staff (2011, p. 16) having declared it one of ten (10) hot topics of 2010—explain how to achieve this goal. Sustainability focuses on effective management of limited or nonexistent resources. LIS program administrators, who make careful choices regarding course content presented during the limited credit hours, not only include a course about management, but typically require it. Therefore, it makes sense to introduce sustainability to LIS students by incorporating the concept into the management course.

Hypothesis

The following discussion focuses on how introducing the concept of sustainability into the LIS masters-level curriculum by integrating it into the—typically required—management class (1) reinforces management concepts introduced in the course, (2) prepares graduates to deal with contemporary issues involved in managing information organizations, and (3) aligns LIS degree programs with a global effort to change attitudes toward and behaviors involved in managing the world's resources.

Background information

The World Commission on Environment and Development (1987, p. 43) provides a definition of *sustainability* used herein: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This definition explains how *sustainability* is somewhat synonymous with sustainable development. By articulating three dimensions of sustainability, the UN distinguishes the term from how it can be used more generally to refer to a stable persistence, as in ensuring the lifespan of some entity (Haycock, 2010, p. 130). While discussions of the concept frequently focus on environmental issues (Sannwald, 2007, p. 135), sustainability also has an economic and a social dimension along with its environmental dimension (UN Division for Sustainable Development, 1992, section 1). The dimensions help establish how, "to move from greening to sustainability, we must first unravel a complex set of global interdependencies" (Hart, 1997, p. 68).

The environmental dimension of sustainability emerges from assessing the capacity of the earth to sustain industrial activity, population growth, resource use, and curb pollution. The sobering prediction that the current rate of use would lead to reduced resources and sub-standard ways of life motivate economic practices and attitudes to be oriented around intergenerational equality, not just immediate gain (Crane & Matten, 2007, p. 20-21, 26). In LIS, efforts made to further this dimension of sustainability include the growing number of library buildings in the

United States that have Leadership in Energy and Environmental Design (LEED) rating systems. LEED, which is also used in Asia (other countries have similar tools), reflects an assessment of a building's environmental credentials (Edwards, 2011, p. 190; Hardesty, 2011, p. 2-3; Miller, 2010, p. 9-12; Schaper, 2010, p. S6). Although sustainability seems to focus solely on the Earth, the emerging understanding of the concept holds that limited environmental resources cannot be sustained if people do not have the means nor the opportunity to sustain themselves (Elkington, 1998, p. 70-72).

The economic dimension of sustainability involves finding ways to create a sustainable global economy (Hart, 1997, p. 71-72), including cultivating markets that promote dematerialization; sourcing environmentally friendly raw materials; developing and utilizing environmentally friendly technology; and, expanding the idea of business ethics to incorporate sustainability principles (Crane & Matten, 2007, p. 20-23, 26; Elkington, 1998, p. 126). An example reflecting this dimension comes from how libraries can provide their parent organizations (municipal government, school administration, campus senior staff, etc.) with statistics regarding community information and other needs (Association of College and Research Libraries, 2010, p. 78; Shulenburger, 2010). Sharing this type of information helps ensure that informed decisions about limited resources can be made in ways that help build and sustain community. This example moreover illustrates how furthering sustainability involves interdisciplinary efforts. Organizations, governments, industries, etc., can find appropriate ways to collaborate and remain accountable to one another with regard to sustainable development, which provides a means for achieving progress toward global-scale sustainability goals.

Finally, the social dimension of sustainability relates to social justice. While more is known about differences between developed and developing nations, this dimension also focuses on socioeconomic and other differences among populations within a single nation in part by focusing on health, education, skills, and wealth-creation potential (Elkington, 1998, p. 85). Issues informing this dimension range from how working conditions affect quality life to policies that direct available human services. Libraries further objectives along this dimension by increasing information literacy, for example with summer reading programs that encourage reading skill development in school-age children; community reading programs that facilitate an informed citizenry; and, information technology training programs that help retool un- and underemployed individuals (Urban Libraries Council, 2010, p. 13-14).

Sustainability and the LIS curriculum

Tasks involved in the UN Decade for Education for Sustainable Development include enabling people to continuously learn about ecology, economy, and equity; realize their own visions for society; and, have the capacity to engage in future-oriented thinking (Rasure, 2012, p. 19). These tasks resemble how LIS educators become life-long learners, support others' life-long learning, and remain aware of how library output needs to remain responsive to parent organization and broader societal change. Further, the LIS curriculum prepares graduates to position libraries to introduce new ideas and to model their application. That many people first encountered the information superhighway in a library is no anomaly. An LIS education explicates how internal and external library customers are able to learn not only through library content and programs, but also through exposure to library systems—waste management programs, facilities design, and more (see Edwards, 2011, p. 193).

Nolin (2010, "Introduction") argues that there is an ethical imperative for information professionals, who facilitate access to and help preserve information, to have a critical

understanding of issues at the intersection of information and sustainability. His assertion reflects how the LIS curriculum ensures that libraries facilitate information dissemination and knowledge discovery.

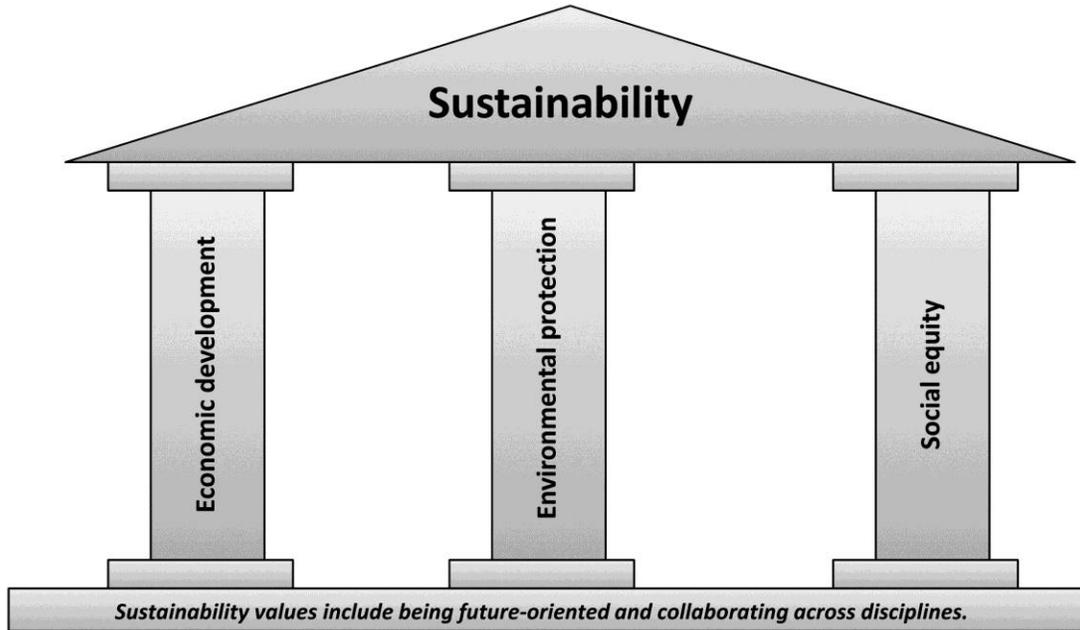


Figure 1

An understanding of sustainability and its dimensions facilitate integration of the concept into the LIS curriculum. The UN Division for Sustainable Development (1992) draws on the image of pillars to characterize support needed to accomplish its sustainability agenda (see Figure 1). Related, the phrase "the triple bottom line" (TBL) has emerged to relate the dimensions to business practices (Crane & Matten, 2007, p. 23; Elkington, 1998, p. 2). This phrase, the pillar model, and the definition of sustainability (see the "Introduction" section) reveal how the concept focuses on effective management of limited or nonexistent resources and suggest a relationship to the LIS management curriculum. Incorporating sustainability ideas into management curricula would also prove effective because most LIS programs offer an introductory course in management theory and principles consistent with American Library Association accreditation standards. LIS programs frequently require students to complete this course, thus making it possible to introduce sustainability to all MLIS graduates and to students from other programs who may enroll in that course.

Finally, the TBL and especially the pillar model help convey how the dimensions of sustainability relate to specific areas of management (see Table 1; see Baldwin, Bommer, & Rubin, 2013; Evans, Ward, & Rugaas, 2000).

<i>sustainability concepts</i>	<i>corresponding areas of library management</i>
values—future-oriented	organizational values reflected in the mission, vision,

and interdisciplinary collaboration, the steps of the floor	goals, and objectives
economic pillar	fiscal management skills; purchasing decisions
environmental pillar	library space planning; materials control and coordination
social pillar	leadership; motivation; performance management; marketing/visibility
sustainability, the roof	practices, services, and other activities (e.g., decision making, operations, problem solving, service models, facilities, etc.) that ensure sustained access to resources

Table 1. How sustainability and library management concepts correspond

When considering sustainability using the idea of pillars, the steps on which the entire model sits represent values on which sustainability is based, ensuring adequate resources for all longitudinally. This part of the figure corresponds to organizational value statements including missions, visions, goals, and objectives. Next, the pillar representing economic development corresponds to areas of budgeting, purchasing decisions, development (i.e., fund raising) and other fiscal related responsibilities belonging to managers. The pillar representing environment is similar to aspects of facilities management and to materials control and coordination responsibilities. And, the pillar representing social equity corresponds to areas of management that involve people: leadership, public relations, and human resources (or HR, including motivation and performance management). Finally, like the roof of sustainability in the model, management relies on the foundation and the three pillars for support.

Pedagogical approaches

Determining how to incorporate the concept of sustainability into the management curriculum involves considering what course learning objectives the material would help meet and how. Once the curriculum planning is completed, this kind of integration may be most effective by providing students with a basic understanding of the concept, emphasizing that sustainability is more than a "green" movement (see the Introduction Section). However, LIS management instructors can integrate sustainability into the management course through a variety of means.

How to incorporate sustainability

Effort needed to integrate sustainability into a course can require anywhere from a minimal to a serious effort.

If the course learning objectives include only exposing students to the concept of sustainability, an instructor can incorporate it into the "hidden curriculum" or into class activities or materials in ways that would require minimal effort, for example:

- Stipulate that any print submissions be double-sided.

- Introduce organizational value statements (e.g., the organizational mission, visions, goals, and objectives) by mentioning that some libraries incorporate sustainability when they prepare such documents, like: "PCC Library is committed to sustaining the environmental, social, and financial well-being of our community: we practice and model sustainability in our daily work, business decisions, and facilities" (Portland [Oregon] Community College Library, 2011).
- Teach about management theory in a way that helps students compare how the need to manage people differently from inanimate resources emerged during the last century as a departure from pure scientific management. Similarly, where sustainability once focused on objects—the earth and its resources, the concept has expanded to also focus on people.
- Provide an example of systems thinking by describing collaborative and interdisciplinary efforts needed to obtain a LEED score or realize some sustainable design project.

Late one quarter, I briefly explained sustainability to my face-to-face LIS management class and explained that I was hoping to incorporate the topic into future iterations of the class. I asked if anyone had heard of or had examples of sustainable practices in libraries. This is another example of expending minimal effort to introduce the topic into the class. No class discussion ensued. However later, a few students expressed interest in the topic or incorporated examples of sustainable practices into their final paper, a case study analysis of a complex, problematic situation in a library. Their efforts demonstrated evidence of students thinking creatively and engaging in self-directed learning. Both are LIS management course objectives and are core skills that can lead to life-long development of students' intellect.

With relatively more planning, instructors can assign readings that describe how to apply management skills in ways that further the sustainability. Schaper (2010, p. S6) describes how to manage day-to-day operations in concert with sustainability principles. In describing library space planning, Sannwald (2007, p. 135) outlines why it will be increasingly necessary to incorporate sustainable design. This kind of reading would facilitate an LIS literature-based introduction to the concept while maintaining the usual focus on basic management concepts, consistent with goals of an introductory management course. Specifically, the readings would help demonstrate how to apply core management practices and skills in ways that rely on equity, longevity and non-immediate gain. This approach can be useful for instructors who are new to the topic of sustainability or who have little flexibility in changing the management course content.

If a course learning objective focuses on students' ability to demonstrate knowledge of sustainability, instructors can incorporate the concept into an existing assignment or create a new one that requires students to apply sustainability concepts. Certainly, required readings would provide helpful background and insight for students' comprehension of and ability to apply this knowledge. Additionally, a guest speaker may convey details involved in furthering sustainability goals within a local context. The speaker might describe how such goals are best accomplished when carried out in a way that takes organization culture, available material, institutional traditions, and more into consideration. For example, a guest speaker would be able to describe processes involved in articulating a vision for a sustainable learning commons; gaining (formal and informal) support of oversight bodies, staff, and others involved; and, appropriate details of designing, funding, overseeing construction, assessing outcomes, and marketing the project completion. An assignment could instruct students to critique some existing library space or a public space, identify one or more sustainable goals for it, and

determine initial steps that librarians could take to fulfill those goals. Or, students could analyze some management issue, case study, or situation and consider whether any sustainability-informed objectives could help remedy the situation and what steps might be needed to apply that remedy.

These kinds of exercises can help students recognize when and how to apply communication, decision-making, fiscal, interpersonal, ethical reasoning, or other skills needed to propose, gain approval for, and realize a goal. Ethical reasoning skills come into play because implementing projects that incorporate sustainable design are likely to involve situations in which no right, wrong, or existing practices exist. Schaper (2010, p. S6-S9) addresses this kind of thinking in describing her struggle to determine how to manage a library in a sustainable manner by doing more than making recycling bins available. Moreover, assignments like the examples described help students think critically because sustainability calls for considering a goal from the perspective of different constituents. Teaching students about all that is involved in realizing a vision for sustainability begins to instruct students in differences between having an agenda or a vision, or more simply articulating goals and objectives on the other.

Finally, students may be even more prepared to demonstrate knowledge of sustainability if the management course was co-taught by at least one instructor considered an expert in the area of sustainability. However, this strategy would require significant resources and involve a good amount of planning that make it a less practical option.

Where to incorporate sustainability

Whether simply introducing students to the concept of sustainability or having them complete assignments to demonstrate knowledge of the concept, course activity that gets students away from the course learning space facilitates learning in this area. For example, take students to a library or to some high traffic, public building. Ask them to study it quietly for 15-20 minutes by noticing activity, materials, and the community of users within that space. Also, instruct them to ask questions of that space:

- What works? What can work harder?
- What information behaviors and systems are in use? On what systems might those systems rely (for example, do staff manage bulletin boards)?
- Can technology be better used in support of sustainability goals? If so, how?
- What resources would be needed to implement changes envisioned?
- What stakeholders might need to be involved? How can you build support for the ideas you envision?
- What evidence of other management issues covered in class exists?

Alternatively, face-to-face or online students can be assigned to complete this assignment on their own. After returning to the class learning space, discussions about what was observed are likely to touch on a range of management concepts including political processes, quality improvement, and budgeting. This type of activity also provides students with an opportunity to think creatively and critically, consider space management issues, engage in ethical reasoning, and observe technology use. Getting students outside of the course learning space can also facilitate discussion about sustainability vis-à-vis the visible nature of libraries (see Edwards, 2011, p. 194).

When to incorporate sustainability

Sustainability can be introduced at any point during an LIS management course because it can apply to a wide range of relevant topics including organization value statements (mission, vision, goals, etc.), fiscal management, decision-making, space planning, and human resources. The end of a term provides an opportunity to review concepts studied throughout the term, discuss how they fit into some broader knowledge universe, or describe emerging trends or issues. Introducing sustainability at this point in the term facilitates reviewing a broad range of management topics. An instructor could lead a course review discussion aimed at identifying management objectives needed to further an information literacy (IL) plan. After describing sustainability, the instructor could help students recognize the importance of ensuring that parent organization administrators, or other oversight bodies, are made aware how IL activities can further sustainability goals:

- a community read program could facilitate community building and cultivate an informed citizenry (social dimension);
- technology training classes could aid businesses by increasing the number of skilled workers (economic dimension);
- holding literacy programs during the same hours as a nearby farmer's market or other civic activity could increase participation in the two and adjacent social and commerce activities while decreasing commuters' carbon footprint (economic, environmental, and social dimensions; Anonymous, 2011, p. 20; Urban Libraries Council, 2010, p. 16); and,
- improving students' IL skills could help prepare the parent institution for its next accreditation review.

This kind of discussion would help expose students to sustainability by providing concrete examples that could also help them review and consider issues involved in applying course concepts—budget/fiscal, communication, decision making, HR, and other skills.

Introducing sustainability at the start of the term, along with core management concepts, will provide opportunities to build on that introduction throughout the term and to more formally evaluate student learning of sustainability topics. For example, if course learning objectives include applying skills needed to foster collaboration, providing an overview of the concept at the start of the term provides opportunities to consider how it applies to various management topics covered during the term. It also provides the instructor with multiple opportunities to assess students' learning in course discussions or assignments.

Discussion and pedagogical concerns

The discussion so far has focused on integrating sustainability into the LIS management course arguing that doing so, in part, would help reiterate management concepts. This approach also presents challenges.

To begin, instructors may not have the needed resources to learn about sustainability while attending to their other responsibilities. Moreover, an institution may have few resources to support instructors' efforts to increase their own understanding of sustainability or to integrate it into existing courses. When facing these circumstances, a program may start with an initial program-wide learning period. Objectives could include making training about sustainability available to one or more instructors, who would also learn how to integrate it into existing courses. Those trained could share what they learned with others. Hosting guest speakers or informal conversations could also help generate interest including among students as appropriate.

There exists some uncertainty about the nature of sustainability. Is it a management trend, a guiding framework, a philosophy, or a set of principles? Some describe the concept as referring to both a set of ideals and a set of practices (Jacobs in Nolin, 2010, “The academic discussion: Strengths and weaknesses of the concept of sustainable development”). The abstract nature of sustainability may cause one to recall any number of management fads that have emerged and faded--not all have been worthy of attention during limited LIS program credit hours. Some question whether society is capable of achieving the full spectrum of goals laid out in the sustainability agenda (Crane & Matten, 2007, p. 28). Yet, unlike many management trends, support for wide-scale individual and societal behavioral change called for by sustainability has garnished interdisciplinary and international support, including by the UN's having declared the Decade on Education for Sustainable Development (Bourn and Morgan, 2010, p. 272). Incorporating sustainability into undergraduate, or even K-12, curricula could be more effective because students may be more likely to adopt the behavioral changes sought before they enter a graduate program. However one might negotiate this strategy, educators within nations actively supporting the UN's Decade have received a mandate to find ways to meet its challenge.

Time will tell whether sustainability will be considered a management trend, a philosophical framework, or something in between. However abstract the nature of sustainability, one task of managing information organizations includes keeping pace with new ways of articulating challenges and opportunities. Integrating the concept into a management course in a way that highlights parallels between managing sustainability and managing information organizations can encourage critical thinking. Moreover, given the current, international investment in sustainability, graduates entering the market would do well to have some understanding of the concept.

While this exploration focuses on integrating sustainability into a management course, sustainability issues pertain to more than management issues that librarians and other information professionals face. Nolin (2010, “Closing discussion: sustainable information in education”) argues, in part, for integrating information science concepts related to sustainability into a course addressing information ethics. Like integrating it into a management course, this approach would facilitate teaching a broad range of topics at which sustainability and ethics intersect. However, it may be less effective if a program does not offer this type of course each term or if it is not required. Another approach would be to create a new course, focused on sustainability and libraries. However, this type of course would likely need to be an elective. In either of the described scenarios, only a subset of graduates would have course time focused on sustainability.

An alternative approach would be to integrate sustainability into all LIS masters-level courses or into all the required courses (Bowler, Mattern, Soyka, & Benner, 2012). While this final approach would also reach all students, implementing it would require considerable program resources. At Drexel University, campus administrators striving to integrate sustainability into coursework across the curriculum provide periodic, committee-led workshops to support instructors in bringing about this curricular change.

Sustainability is fuzzy. LIS researchers can work to identify more concretely how the concept relates to disciplinary objectives. Perhaps a starting place lies in how Nolin (2010, “Defining sustainable information”) discusses “*sustainable information*” as having 2 parts: “information for sustainable development (seen as a resource for the project of sustainable development) and development of sustainable information (creating sustainable information and communication technologies).” Rasure (2012, pp. 126-129) explains how information systems

that support multiagency endeavors can be designed to facilitate multidisciplinary ways of working. This design strategy resembles how integrated library systems support different presentations of library information in ways that aid collection development and maintenance, circulation, fiscal, and borrowing activities. These kinds of systems enable equitable access to information and provide an example of Nolin's *information for sustainable development* (2010, "The concept of information as a useful tool for policy related discussions"). Vallauri (2009, p. 21-22; see also Hart, 1997, p. 72) asserts a new understanding of e-waste by explaining how some people find creative ways to recycle outdated mobile phones. This approach to reusing the raw materials used to construct information and communication technologies, like mobile phones, provides an example of the *development of sustainable information* (Nolin, 2010, "The concept of information as a useful tool for policy related discussions"). While LIS scholars may continue to glean understanding from emerging cases, they may instead develop a research agenda to inform information issues with regard to sustainability (noting however that Nolin [2010, "Sustainable development and the idea of integration"] calls instead for integrating sustainable development practices into how LIS scholars negotiate their research and teaching). LIS curricula could then be reviewed and updated in the wake of anticipated findings.

Future research could also explore early influences of the concept of sustainability. In addition to identifying a possible connection between sustainability and the ways and means of a wide range of indigenous populations (see Jojola, 2008, p. 40), research in this area may better identify parallels between sustainability and librarianship. Librarians advocate for economically vital access to, and the reuse of, information and its products that people can use to improve the quality of their lives. (One might wonder why librarians were not more involved in initial dialogs regarding sustainability.) Research findings may help clarify why teaching sustainability in an LIS program may seem to introduce familiar concepts using new vocabulary.

Conclusion

Professionals today need a more sophisticated understanding of sustainability with its three dimensions. An understanding of the concept will enable MLS graduates to have a greater understanding of broader impacts involved negotiating local level challenges and opportunities. Moreover, teaching students about sustainability and its dimensions better positions students for developing needed sustainability-informed practices after graduation.

A promising approach for introducing sustainability into the LIS masters program curriculum involves integrating the concept into the management course because of the overlapping nature of the two concepts. Learning about sustainability helps reiterate basic skills and more nuanced skills, involved for example in managing organizational politics and parent organization relations, that managers need.

Finally, the UN and other international agencies have asserted the need to incorporate the concept of sustainability into all educational levels. Along with many other countries, the United States has agreed to aid this worldwide effort. LIS programs have an opportunity—if not the responsibility, along with other programs in higher education—to help further this effort.

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