
REPORT

Developing and continuing sustainability-related academic programming: Observations of emerging practices

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Abstract This paper offers an overview and summary of selected sustainability-related academic programs and certificates delivered by universities and colleges that are located within the same geographic area (Grand Rapids, Michigan, U.S.). The authors evaluated the holistic and practical dimensions of creating and sustaining educational programs and reviewed emerging outcomes from universities with a history of prosperous programs to recommend models of applicability. The study focused on the role of internal and external leadership, political and appointed officials, networking of various stakeholders, demand for sustainability in education, and the resources commitment in staffing the programs. The authors analyzed internal reports and documents in the context of sustainability in education and longevity of programs. The findings related to the concepts of successfully developing and sustaining sustainability-related academic programs in Grand Rapids (MI) are examined within a broad and holistic context encompassing educational, programmatic, socioeconomic, organizational, and leadership dimensions. While further research is warranted, all elements add value to the conceptual framework of developing and supporting sustainability-related academic programming, with potential lessons and implications for programmatic approaches to education domestically and abroad.

Keywords: *sustainability, local governments, universities, education*

Introduction

This review focused on emerging practices in developing, embedding, and maintaining sustainability-related academic programming and sustainability studies in higher education institutions. The sustainability programs reviewed for this research are located in a single geographic region (Grand Rapids, MI, U.S.). This study analyzed the functions of internal and external leadership, political and appointed officials, networking, stakeholders, demand for sustainability in education, and the resources committed to implementing sustainability in higher education. Specifically, the researchers evaluated internal reports and documents, each in the context of sustainability in education, and a program's longevity and self-support. Moreover, the authors examined the findings and the concepts of successfully developing and implementing sustainability-related academic programs within a broad and holistic context encompassing educational, programmatic, organizational, and leadership dimensions.

The results function as a template for the success of sustainability programming in domestic and international academic settings. The systemic dimensions of creating and implementing educational programs assist the institution's leadership in determining the outcomes across a variety of academic disciplines. The application of sustainability programming in academic institutions in Grand Rapids serve to model programmatic methods of sustainability in education, domestically and abroad. While further research is warranted,

this review of the features of sustainability programming adds significance to the conceptual framework of developing and continuing sustainability-related academic programming. Moreover, potential lessons and inferences are applicable to the programmatic approaches to sustainability education domestically and abroad.

Literature review

The United Nations University-Institute for Advanced Study of Sustainability (UNU-IAS) report (2014) described the local context of sustainable development as fragmented with disregard for synergies (p. 54). However, as noted by the National Research Council (2009), most collaborations between universities and various sectors is in the area of sustainability and sustainability in education (p. 38). This history of cooperation is evident in specific areas of research, but very little has been reviewed and written regarding collaboration between cities and universities in the field of sustainability, especially given the nascent nature of sustainability. Jentleson (2011) appraised the historical role of partnerships between cities and universities in studying and addressing social problems, asking a question of how “universities, communities, and civically engaged citizens can become better together” (p. 7). In a comprehensive literature review, Jabareen (2012) discussed the confusion and misconceptions surrounding the definitions of sustainability and education.

As the world on a macro-scale and communities on the micro-scale face ecological and social challenges, and prepare for potential economic and environmental trials, there is a mandate for more integrated programming in education where systemic, sustainability-related challenges are considered using interdisciplinary paradigms. Academic institutions play an essential role in fostering research, exchanging ideas, and applying practical sustainability in organizations and communities. The concepts of sustainability, sustainable development, triple bottom line (TBL), and quadruple bottom line (QBL) in organizations and communities, along with the history of sustainability planning are well understood, explained, and summarized (Alibašić, 2017, 2018a). While most organizations are concerned with their financial bottom line, the triple bottom line strategies used in organizational planning encompass the economic, environmental, and social issues involved in organizational planning. Moreover, the quadruple bottom line approach to sustainability considers the financial, governance, social, and environmental outcomes of actions and decisions made by an organization (Alibašić, 2017 & 2018b). The TBL provides a conceptual framework for sustainability. However, the QBL expands the framework to include the governance and related functions of accountability, transparency, and stakeholder engagement.

The prerequisite for incorporating sustainability science into a curriculum is researched and documented in-depth, as are considerations of the interconnectedness between education and sustainability (Barth & Michelsen, 2013; Blewit, 2004; Thomas, 2009). Moreover, Sterling (2007) dissected the integrative archetype form in sustainability edification using the Resilience Theory. The notion of sustainability in education has its roots in the cornerstone of educational opportunities to holistically and systemically incorporate the elements of economic, social, environmental, and governance in the classroom setting. The ideas and concepts of sustainability serve a multidisciplinary and an interdisciplinary role in academic settings. Sustainability promotes systematic planning in community-wide and academic-specific settings and allows for stakeholder engagement around common targets and objectives (Alibašić, 2018a). The commonality of goals and objectives is essential to the interdisciplinary nature of sustainability.

Sustainability in community, universities, and college in Grand Rapids, MI

Grand Rapids and its local government are renowned nationally and internationally for the integration of sustainability practices, both community-wide and within institutions (Alibašić, 2017; Light, 2013; Portney, 2003 & 2012). The city was recognized by the U.S. Conference

of Mayors, the Earth Day Network, the Clinton Global Initiative, the U.S. Chamber of Commerce, and was examined in-depth in articles and research papers from ICLEI-Local Governments for Sustainability, National League of Cities (NLC), and the International City-County Managers Association for its positive advancement of sustainability (Alibašić, 2014, 2017; Beeke, 2010; McCarty, 2012; Wogan, 2014).

An aspect of effective sustainability-related undertakings and delivery of sustainable outcomes in the community is the ability of universities and colleges to pilot and integrate practical sustainability-related initiatives on campuses and in their curricula. Grand Rapids is home to more than fifteen institutions of higher education, each actively engaged with sustainability-related studies. Some of these institutions are based in the community, while others have an active presence through extensions and satellite offices. Specific institutions include Aquinas College, Calvin College, Cornerstone University, Davenport University, Grand Rapids Community College, Grand Valley State University, Western Michigan University, Kendall College of Art and Design of Ferris State University, Central Michigan University, and Michigan State University (Experience Grand Rapids, n.d.). Each of these schools offers sustainability science and sustainability programming in various formats, as integral to the core teaching mission of the respective institution. Similarly, each institution includes course offerings, curricula development focusing on sustainability, and distinct certificate or degree programs.

Almost every academic institution in Grand Rapids has a sustainability office that is staffed by faculty who serve as sustainability champions. In addition, each has an assigned director or sustainability officers. In the case of Grand Valley State University (GVSU), the city's former mayor serves as the sustainability coordinator for the university's Office of Sustainability Practice (GVSU, 2018). One of the office's initiatives is to select and award an annual sustainability champion from within the university and another drawn from the community.

Moreover, the City of Grand Rapids enters into a yearly contractual agreement with GVSU's sustainability office to use its academic research and talent capacity to engage students in internships wherein they provide research and other support for the city's Office of Energy and Sustainability (Alibašić, 2017 & 2018b). This arrangement involves the city providing an annual stipend to support student interns to work with the Office of Energy and Sustainability (OES), which is housed in the city's executive office and provides the direct funding and oversight of this work. In turn, the university provides research, administrative assistance, and technical support for the city in its sustainability efforts, and more recently, supports its resilience planning. Specifically, GVSU students provide support to the OES in the following areas of sustainability: sustainable energy, water resources, parks, climate-related research and planning, updates to the city's Sustainability Plan and reporting, local and regional and other areas of study, and applied sustainability. In addition to leveraging student talent, several GVSU professors advance progressive, sustainability-driven research agendas. Partnerships and interactions such as these serve to leverage significant resources in the field of sustainability, provide continued dialogue and focus on issues of sustainability, and maintain momentum in the areas of strategic importance for the city and the community. Other noteworthy sustainability programs and initiatives at higher education institutions in the Grand Rapids area include Aquinas College's sustainability initiative and its long-standing sustainable business degree (Aquinas College, n.d.). Aquinas College offers numerous courses outside the sustainability program that concentrate on sustainability, and the college's sustainability researchers and representatives have an active presence in the community. Calvin College is another institution that hosts several majors and minors in sustainability. The institution also delivers an annual sustainability progress report (Calvin College, 2018a). Likewise, in addition to numerous sustainability courses and initiatives, Calvin College's president is actively involved in sustainability efforts, and the college is a signatory to the

Presidents' Climate Commitment (Calvin College, 2018b). Davenport University offers programs and courses in sustainability at both undergraduate and graduate levels and carries out an active sustainability agenda on its campuses (Davenport University, 2018). Kendall College of Art and Design of Ferris State University hosts the Wege Center for Sustainable Design and employs a full-time chief sustainability officer (FSU, 2018a and 2018b). Finally, Grand Rapids Community College integrates its sustainability courses into major and minor programs, and includes sustainability in its mission core values (GRCC, 2018a & 2018b).

The postsecondary instructional activities noted above, including partnerships with local municipalities, serve as meaningful examples. However, closer examinations identify notable catalysts and organizational supports that are necessary for successfully implementing and sustaining university-based sustainability programs.

Notable sustainability-related catalysts

Community sustainability partnership

Together with Aquinas College, Grand Rapids Community College, Grand Rapids Public Schools, and Grand Valley State University, the city created the Grand Rapids Area Community Sustainability Partnership in 2005 to encourage and share sustainability practices between organizations in planning and operations (Alibašić, 2017; GRCSP, 2018). From five founding partners, the community sustainability partnership increased to over 280 (GRCSP, 2017). To date, all area colleges and universities continue to engage as active participants in a community-wide sustainability partnership.

Of note, in reviewing the development of these collaborations, many crucial elements for sustained partnership are apparent. Each community partner shares the nomenclature of sustainability practices. However, perhaps more importantly, they are also authentic in their respective approaches to onboarding sustainability-oriented initiatives. While these efforts are undoubtedly diverse across institutions—often driven by resources—the efforts included the engagement and education of the broader community, while simultaneously increasing community value for sustainability practices (Kretzmann & McKnight, 1993). Achievements are evident through tangible outcomes, such as the creation of successful sustainability public-private partnerships in the region, active pursuit of the green buildings and design, and the formation of the GR2030 energy efficiency district in downtown as a partnership between the city and commercial building owners (Alibašić, 2017). Numerous national recognitions awarded to the City of Grand Rapids arguably raised awareness of sustainability as the brand recognition for this community.

United Nations University – Institute for Advanced Studies Regional Center of Expertise for Education in Sustainable Development

In 2007, the United Nations University-Institute of Advanced Studies named Grand Rapids as the first Regional Center of Expertise (RCE) for Education for Sustainable Development (ESD) in the United States (Glasser, 2010). There are nearly 130 RCE organizations worldwide, serving as a mobilization network to advance sustainability in the private and public sectors and higher education (UNU-IAS, 2014). Glasser (2010) explored the RCE model as social learning for sustainable communities through its flagship project, the Center for Economicology at City High/Middle School in Grand Rapids, and observed the outcomes relative to embedding sustainability in a high school setting. The community engagement with RCE through its Grand Rapids Community Sustainability Partnership (GRCSP), the city's sustainability office, and universities has continued to the present time. In 2015 and 2016, the community's colleges and universities partnered with local government to host the UNU-IAS RCE Conference of the Americas in downtown Grand Rapids, as well as the UNU Youth Conference focusing on water protection (RCE, n.d.).

Leadership

The commitment to sustainability among elected and appointed officials and university leadership is evident in all functions of local efforts to promote, embed, and implement sustainability initiatives. Evidence of such commitments involved institutions identifying and allocating resources (e.g., proactive talent acquisition, encumbered budgets) and publically recognizing sustainability initiatives as evidence of institutional values. University and college presidents were personally involved in signing the original community sustainability partnership agreement with the City of Grand Rapids' former mayor. When leaders were reconvened at a later date, the presidents of GVSU and GRCC attended regular CSP leadership meetings.

Conclusions

Tactics used by several colleges and universities with a history of successful sustainability studies programming are provided here as models of applicability. The appropriate methods from such nurturing environments to sustainability in education are drawn and summarized through the following characteristics of these successful programs:

1. **Networked governance of various factors involved in sustainability, from local governments to businesses to universities.** The City of Grand Rapids has a formally established community sustainability partnership with over 280 organizations from both the public and the private sectors involved in implementing and measuring sustainability. The private and public sector organizations officially adopted the sustainability plan to measure and track sustainability-related outcomes. Noteworthy collective activities included community asset mapping aligning sustainability services and initiatives with community priorities and values, and working to enhance natural capacities and network. It is vital to note that as a result of networked governance practices a variety of collaboration strategies have emerged throughout the region in support of sustainability (e.g., partnerships such as West Michigan Sustainability Partnership, alliances such as 2030 District, and coalitions such as regional resilience report coalition).
2. **Internal and external political leadership.** College and university presidents are publically demanding and promoting sustainability in educational programming at their institutions, and when possible working to collaborate with community partners and one another. Political and business leadership buy-in and support for sustainability are instrumental in creating the demand for sustainability studies in education. Such leadership resulted in enhanced organizational synergies, shared and efficient use of resources (e.g. avoiding duplication of services and sharing of resources to overcome obstacles, such as joint public safety agreements to improve service delivery). Furthermore, it led to enhanced community awareness, and opportunities to leverage partnerships in pursuit of additional funding sources (e.g. government grants, foundation funding such as the recent case of regional application for federal resilience grant or tackling climate resiliency) (Price, 2014; Steiner, 2017; Weick, 2015).
3. **Demand for sustainability studies in education.** The competitive nature of the region and branding the area as the hub for sustainability has driven the demand for these educational programs. As an example, companies compete to be branded as sustainable, and as such, there is a high demand for programs that produce sustainability-related degrees or certificates. Major corporations in the region are members of the West Michigan Sustainable Business Forum, from Amway, Steelcase, Cascade Engineering, Gordon Food Services, Herman Miller, Meijer, Perrigo to Progressive AE and Rockford Construction to name a few (WMSBF, n.d).

Leadership in these corporations demand that sustainability is fully embedded in the corporate strategic planning framework. Moreover, each has a designated staff responsible for sustainability-related outcomes.

4. **Dedicated staff, faculty, and resources.** Each institution has a dedicated team or staff promoting sustainability across campuses and within organizations, networking, and embedding sustainability from within and sharing emerging practices within the community. Personnel dedicated to supporting and growing a community-based sustainability agenda serve in roles such as conveners, facilitators, organizers, capacity builders, evaluators, and in some cases funders.

Outcomes and further research

This study focused on the role of internal and external leadership, political and appointed leadership, networking of various stakeholders, and demand for sustainability in education. While further research is warranted, predictably, the findings added value to the conceptual framework of developing and supporting sustainability-related academic programming applicable to the programmatic approaches to education domestically and abroad. The researchers evaluated various elements in the context of sustainability in education, and a program's longevity and self-support. The outcomes indicate a broad range of community support, internal and external stakeholder dynamic necessary for longevity and success for the implementation of sustainability initiatives, and the broad business engagement. Sustainability programs cannot be devoid of potential synergies within and outside of the organization, and sustainability programming must be coupled with hands-on, practical application of sustainability on campuses and in communities.

The findings, which focus on the concepts of successfully developing and supporting sustainability-related academic programs in Grand Rapids, are observed within a broad and holistic context encompassing academic, programmatic, socioeconomic, organizational, and leadership dimensions. In many instances, robust internal leadership and external (community) support for sustainability in education are as instrumental—and varied—as effective leadership. In reviewing the region's sustainability-related academic programs and their resulting certificates and degrees, similarities in approaches and common elements guaranteeing success are apparent. This research further explores the holistic and practical dimensions of creating and supporting sustainability-related educational programs. It also provides lessons from postsecondary institutions with a history of successful sustainability studies programs as models of applicability. The possible effects of the formalized level of sustainability in higher education and different aspects of programming and certificates at colleges and universities in a single geographic region provided a comparative perspective.

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