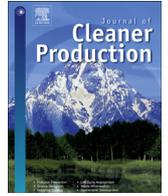




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Review

Sustainability in higher education: a systematic review with focus on management education

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ABSTRACT

Sustainability has received increasing attention in management education over the past ten years. This article reviews a decade's worth of research in a systematic analysis of 63 articles published in international higher education and management education journals between 2003 and 2013. The purpose of this article is to map and review the publications based on the analysis according to the following four categories: (1) Types of papers, (2) Challenges, (3) Teaching techniques, and (4) Curriculum orientation. The scientific value of this article focuses on three main contributions to management education. First, while most articles are descriptive, focusing on specific, unique experiences in a given institution or with a particular teaching method or tool, few situate themselves within the broader philosophy and design of management education. The second contribution is an evaluation of the status of sustainability in management education as a field of study. This systematic review highlights the lack of consistency in the concepts used: no stable categories emerge from these articles and very few studies integrate the three levels of educational philosophy – teaching, program design, and learning. Third, this review highlights future directions for sustainability in management education institution-wide. While all articles highlight the need for curriculum change, very few specify how this change could and would be achieved by course design or explicit educational paradigms.

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1. Introduction

Sustainability² has attracted increasing attention in higher education over the last two decades due to several factors. The Brundtland report (1987) and the presentations of the Rio-1992 Conference criticized the existing educational systems on how

sustainability issues are taught, and put forth the idea that programs should incorporate education that would contribute to a sustainable society. Since then, the terms “education for sustainability” and “education for sustainable development” have gained international usage (Shrivastava, 2010). It is in this context that new educational programs, research institutions and scientific publications, all with an emphasis on sustainability in higher education, have emerged (Wang et al., 2013; Scott, 2012; Sterling and Scott, 2008).

The Talloires Declaration (1990) was the first official statement by university administrators that reflected a commitment to teaching and research in sustainability in their institutions. To encourage compliance and advance the initiative, the Association of University Leaders for a Sustainable Future (ULSF, 1990) was created. Since 1990, over 20 international binding agreements and declarations of higher education institutions to introduce sustainability in their research and teaching agenda have followed (Grindsted and Holm, 2012). In the US specifically, the Association for the Advancement of Sustainability in Higher Education (AASHE) was established in the early 2000s with the mission of empowering higher education to lead the sustainability transformation. AASHE

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² Note: Various definitions of sustainability and sustainable development can be found in the literature. These two terms are open to a variety of interpretations and also subject to internal contradictions, and they are frequently interchangeable in the literature. For instance, according to Carley and Christie (2000), embarking on a sustainable development path is considered to be a political, not just a technical, process, and it can be seen as a continuing process of mediation and trade-offs between different goals and aspirations. In this perspective, sustainability is a “destination that we aspire to reach with the selection of the sustainable pathways that we choose as we proceed along the journey” (Curran, 2009, p. 6). Thus the authors of this paper view sustainability as a result of sustainable development. For this reason, the term “sustainability” has been selected in this article.

seeks to achieve this by providing resources, professional development, and a network of support to enable institutions of higher education to model and advance sustainability in everything they do, from governance and operations to education and research. On the international level, UNESCO initiated the UN Decade of Education for Sustainable Development (2005–2014), with the aim of promoting and integrating the values of sustainable development into all aspects of learning in order to encourage behavioral change (UNESCO, 2005).

More specifically in management academia, the Organizations and the Natural Environment (ONE) division of the Academy of Management (AOM) was created in 1991 with the following mission: “ONE is dedicated to the advancement of research, teaching, and service in the area of relationships between organizations and the natural environment” (ONE, 2014). The theme of the 2009 Annual Meeting of the Academy of Management, for example, was the greening of management. Illustrative of the increasing number of initiatives are the ‘Principles for Responsible Management Education’ (PRME), a global initiative that seeks to establish a process of continuous improvement among management education institutions in order to develop a new generation of business leaders capable of managing the complex challenges faced by business and society in the 21st century. Another relevant initiative is the Beyond Grey Pinstripes. Since 1998, it is a “research survey and alternative ranking of business schools that spotlights innovative full-time MBA programs leading the way in the integration of issues concerning social and environmental stewardship into the curriculum” (Beyond Grey Pinstripes, 2014).

These initiatives illustrate the movement towards sustainability in management education (see Lozano et al. (2013) for an analysis of declarations, chapters, and partnerships developed for institutions of higher education; see Disterheft et al. (2013) for a critical reflection about sustainability science and sustainable development education in universities).

As for management education institutions, over the last decade, educators in post-secondary institutions have launched numerous courses, programs and initiatives in sustainability in management (for a review of these, see Caeiro et al., 2013; for a historical perspective in US management education institutions, see Rands and Starik, 2009). Thus, an increasing number of management educators have contributed to transforming the method of training future business leaders and managers, based on the assumption that companies need to recognize their pivotal roles and responsibilities in achieving sustainable societies. Waddock (2007) points out that this shift towards sustainability challenges educators in existing firm- or organization-centered management programs to take both the environment and society into account in their teaching.

Academic research on sustainability in management education has co-evolved alongside the increasing presence of sustainability in management studies curricula (Stead and Stead, 2010). Issues related to the insertion and integration of sustainability into management education are therefore gaining importance (Audebrand, 2010). This importance has translated into increased academic interest and a multiplication of publications (Stephens and Graham, 2010). For example, a search in the EBSCO academic database (2003–2013) using keywords “sustainability” and “higher education” resulted in 265 papers, while the combination of “sustainable development” with “higher education” resulted in 143 papers.

This paper focuses its attention in management education, including undergraduate, graduate programs, and executive education. A distinction is proposed between two forms of introducing sustainability into management education. While ‘integration’ refers to the full adoption of sustainability into management

curricula, implemented in programs in a holistic way, ‘insertion’ will be used to distinguish a more superficial or tacked-on approach from a holistic integration of sustainability into management curricula.

In this context, sustainability in higher education has emerged as a research field, and within this field increasing interest is shown in management education, in particular in combination with concerns about leadership for a sustainable future. Several issues of journals (Adom̂ent et al., 2014; Starik et al., 2010; Springett and Kearins, 2005) and volumes (Muff et al., 2013; Caeiro et al., 2013; Wankel and Stoner, 2009) have been published. However, this area has not yet been reviewed in a systematic way. Given the increasing interest and the large body of academic literature on the subject, there is a clear need for a systematic review of the literature, which is the aim of this paper. It is accomplished here through the systematic analysis of a decade’s worth of published articles pertaining to sustainability in management education. Thereby, the purpose of this paper is to characterize the publications based on the analysis according to the following four categories: (1) Types of papers, (2) Challenges, (3) Teaching techniques, and (4) Curriculum orientation.

Taking into account that the focus of this paper is how sustainability is being introduced into management curricula instead of why it is happening, the review of curricula and teaching techniques presented here was structured around two guiding questions: (1) How are higher management education institutions guiding the introduction of sustainability into their curricula? (2) What pedagogical techniques are being applied? In so doing, this article complements Karatzoglou’s (2013) literature review of the relevant academic papers on universities’ roles in and contributions to regional sustainability initiatives.

The remainder of this article is organized into three sections. The second section explains the research methods of this literature review, including the systematic process conducted in this analysis. The third section reveals our findings and maps the status of sustainability in higher management education. The fourth section presents the discussions. Finally, the last section brings the conclusions, including the limitations of the field and suggests avenues for future research.

2. Research method

This paper is based on a systematic review utilizing a structured approach to reviewing published academic research. Organized and replicable methods were employed to identify, select, and critically analyze the literature. It includes both a quantitative, bibliographical, and a more qualitative thematic analysis (Tranfield et al., 2003). This systematic review was conducted in three steps, namely, (1) journal identification, (2) keyword identification and search, and (3) article content analysis. Each step is described in further detail below.

2.1. Paper selection and delimitation

First, the journals to be included in the sample were identified. Journals recognized by Management Education and Development (MED), the division of the Academy of Management dedicated to research and practice in management education, were selected. These journals are the Journal of Management Education, Management Learning, International Journal of Management Education, Journal of Education for Business, Journal of Executive Education, Journal of Leadership Education, Organization Management Journal, and Journal of Management Development. The journal *Academy of Management Learning Education* was also included, as it is ranked

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