Global learning for sustainable development in higher education: recent trends and critique

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Abstract
Purpose – to provide a synopsis of some major trends that have marked discussions on global learning for sustainable development (GLSD) in higher education. The aim is formulated against the background of the complexity represented in GLSD, as well as the fact that sustainable development (SD) is an issue of global interest for universities.
Design/methodology/approach – The authors conducted an overview in recent trends in research on GLSD in higher education over the last 20 years, based on the combination of the keyword *higher education for sustainable development* with *global learning* and *global education*.
Findings –The overview suggests that only relatively limited steps have been implemented to achieve GLSD, and rhetoric still dominates the discussions. It appears that little empirical research has been undertaken on learning in global settings. Several authors have identified the need for a competence-based curriculum for GLSD,
Originality/value – Universities, professionals and students need to take greater responsibility. How knowledge, values and abilities are formed and developed from the global learner's perspective therefore remains an open and fundamental question. The article underlines the crucial role that higher education plays in global learning for sustainability.
Keywords Sustainable development, learning, teaching, global, overview
Paper type Research paper

Introduction
Education for sustainable development (ESD) has been one of the top priorities in national policy documents and on the global agenda since the Earth Summit in Rio in 1992. It was again brought to the forefront of international attention at the UN World Summit on Sustainable Development (WSSD) in Johannesburg 2002 (UN, 2002). The Global Higher Education for Sustainability Partnership (GHESP) initiative aimed to make sustainability an integral part of college and university curricula around the world (UNESCO, 2001). UNESCO has played a central role in implementing ESD objectives by means of the *Framework for a Draft International Implementation Scheme* (UNESCO, 2003), where a new vision of education is expressed that will hopefully lead to profound changes in higher education. It therefore provides the starting point for the present overview:

> Education for sustainable development has come to be seen as a process of learning how to make decisions that consider the long-term future... This represents a new vision of education, a vision that helps people of all ages better understand the world in which they live, addressing the complexity and interconnectedness of problems ...The vision of education emphasizes a holistic, interdisciplinary approach to developing the knowledge and skills needed for a sustainable future as well as changes in values, behaviour, and lifestyles. (UNESCO, 2003, p. 4)

Wright (2004) describes the evolution that can be discerned in policy declarations in higher education from 1970 onwards, and examines the patterns and themes that have emerged. Although evidence of an interest in the global dimensions of environmental issues is found as early as the1970s, specific awareness of these issues in the context of higher education is only found from early 1990. The Kyoto Declaration of 1993, adopted by 90 universities across the globe, challenged higher education worldwide to accomplish an essential mission in global sustainable development. One of the two major themes outlined in the Kyoto Declaration public outreach activities (see discussion in UNESCO, 1998; Wright, 2004). In particular, the Declaration points out the responsibility universities have to students, as well as to the broader community, in calling for an increased awareness of the need for sustainable development. The document highlights the priority and significance of a global perspective on higher education, and thereby also marks the origin of the notion of 'global learning'.

   The present article attempts to trace some of the key developments in the movement to promote global learning for sustainable development (GLSD) in higher education, and presents an overview of what is still a very new field. It takes its point of departure in recent research on GLSD in higher education, primarily published in English. Since this research field has only recently emerged, the literature review is limited to the last 20 years. Searches were initially made on the databases ERIC and Google Scholar, using the keywords *global learning*, *global education*, and *higher education for SD* (HESD). This study was then used to guide a further review of related documents. In the process of scanning the field and studying publications, it became clear that the research relating to higher education is comparatively rare. Certain relevant material relating to secondary education was therefore included. Very few empirical studies appear to have been conducted, and the bulk of the collected documents is characterised by visions, ideas, recommendations, suggestions and general comments. Because of the limitations in the available material, the authors see this study above all as a discussion of some of the important challenges in the evolution of GLSD.

The emerging of GLSD
Brunold (2005) argues that the emergence of international concern with issues of SD increases the demand for both global learning as well as education for SD. By 'global learning', Brunold means (with reference to Gugel and Jäger, 1996) developing learning on the uncertainty of knowledge, in the process of establishing links between everyday problems,

global processes and lines of conflicts. Brunold (2005) further contends that global learning requires new values, giving up the aim of reaching the "right" or the "most appropriate" answer, based on a logical interpretation of natural balance. Also, the character of knowledge has changed over recent years. This is why it is increasingly problematic to accumulate knowledge additively. Principles of cause and effect are not available in a global context. The amount of information is vast. Knowledge has become valid for shorter periods of time, and individuals are less aware of the collective knowledge in society, since knowledge tends to be more and more specialised. Taken together, all these factors have led to the need for new modes of learning in a global context. The very question of how to grasp the relativity and uncertainty of knowledge is now coming to the foreground. Finally, the appearance of global online learning settings is calling for new modes of learning, such as learning by simulating and learning in networks (Brunold, 2005). According to Rauch and Steiner (2006) the concept of 'global learning' gradually came to replace the notion of 'development-policy education' (plausibly corresponding to the term 'global education' as used in England), which lacked didactic references.

   GLSD has also emerged from the more general area of global education (GE), first introduced in the 1960s, and a multiplicity of definitions of the term have been formulated since then (for an overview see Gaudelli, 2003, pp. 7-8). A large number of educational theories and practices have also been applied to this area. However, Gaudelli has shown that, in spite of a very lively debate, very little is actually known about the effectiveness of global education or how it develops students' learning. There is a growing need to cooperate and collaborate in both developed and developing countries on GLSD. SD issues need to be reformulated to incorporate diversity and multilingual aspects, and it is important to examine how local experiences can be related to global perspectives more concretely.

Literature review findings: Challenges of GLSD in higher education
University level/Institutional level
Toakley (2004) examines patterns of development and globalisation, and reviews some of the critical issues bearing on SD. He also discusses the role of higher education as a part of this process. In particular, universities are seen as playing an important role in SD in developing countries. A key factor is information technology and internet-based distance education, which allows for reduced costs and increased flexibility in offering materials, making high-quality lectures available to a wider audience. However, Toakley (2004) cautions that for such education to be successful on a broader scale, careful planning is required. Of utmost importance is the development of local universities, since these frequently perform key functions in the knowledge infrastructure of developing countries. Learning, research and innovation are vital parts of this process. With respect to ESD, universities play a particularly central role in developing areas, helping to raise community awareness and carrying out critical analysis of policy issues for public debates (Talloires Declaration of Universities for a Sustainable Future, 1990). Toakley (2004) concludes that universities have only taken some initial steps, such as: educating for learning and teaching in a global context, where the local universities are aware of the vital role they play; assuming the task of educating for environmentally literate students who are able to assume responsibilities for a sustainable future; and taking a more active role towards integration into the national knowledge infrastructure.

   Marsella (2007) has claimed that the majority of challenges of global learning cannot be met within existing theories, assumptions, research methods, or curricula. He argues for mapping out three core elements of particular interest: the characteristics of the students, a philosophy of education, and the process and content of education. Marsella encourages the development of knowledge and skills that promote multidisciplinary, multilevel and

multicultural approaches in research and education. Adequate training involves multidisciplinary methods, distance learning, new technologies, as well as requiring knowledge of global modelling, global communities and extensive field research. In practice, he concludes, teaching and developing such strategies would require adjustments and changes at multiple levels in universities and colleges.

These visions, recommendations and suggestions lead Marsella (2007) to conclude that the educational focus at universities must be more responsive to the global challenges, by virtue of knowledge, methods, and practices that are valid and relevant to our times. Finally, he emphasizes that the crisis of unsustainable development and the challenge of SD are therefore not seen only as an environmental problem, but also as social and ethical issues in education.

Western culture, as presented in school curricula today, contains both obstacles and possibilities for SD. It is contended that to achieve SD, people need to be more motivated and employ multifaceted approaches to the challenges of globalisation (Yagelski, 2005; Marsella, 2007). Above all, a far-reaching change is needed in attitudes among academics in order to promote GLSD, focusing how learning is developed in a global context. Whereas Marsella starts his discussion in more general subject areas, presenting visions and recommendations that concern research and educational systems, as well as concrete activities on an individual level, Yagelski's ideas focus on English education in the US, taking his point of departure in SD. Nevertheless, they both agree that academics bear a share of responsibility in the failure to meet the challenges of SD.

Curriculum level
Global learning (GL) – learning in a global context - has received considerable attention since the 1970s. GL has been of major interest in recent years with the introduction of ESD. In the 1990s, education was faced with new challenges, these challenges derived from the fact that GL was not seen as a question of learning 'facts', but rather as a critical approach leading to commitment in learning, with the goal of encouraging self-determination in a global context. This type of critical approach presupposed a set of specific competencies. Rauch and Steiner (2006) mention competencies such as: systems thinking, team skills, the ability to deal with insecurity, integrated thinking, the readiness to cooperate, coping with change, creative and lateral thinking, and readiness to compromise. In Austria, for instance, GL has been developed in classrooms via interactive exhibitions, workshops, classroom activities, and the use of auxiliary curriculum materials for teachers. A two-year education programme on global learning also exists. Rauch and Steiner outline how the concepts 'environmental education', 'education for sustainability development', 'global learning' and 'peace education' have been handled in teaching practices. They see SD primarily as a regulatory idea, arguing that such ideas provide heuristic structures for reflection, as well as providing a direction for processes of research and learning. This example shows that visions of SD needs to be constantly renegotiated by participants in every concrete learning situation, both at school and in higher education. Consequently, if SD becomes an integral feature of all education, both individual and collective self-development and self-determination need to be stressed.

Irving, Yeates andYoung (2005) review how the global perspective enriches and challenges conventional teaching and learning methods, showing how this perspective informs teaching and learning experiences in British social policy teaching. Their article focuses on the question of how a global perspective in social policy is fostered in the higher education curriculum, in order to promote awareness, knowledge and understanding of different topics relating to SD. Various ways that the global perspective has been integrated into social policies are described. In this context, Irving, Yeates and Young suggest that a global perspective on social policy enhances curriculum development, because a global perspective has topicality and dynamism. There is an increased awareness in the academic

community of the global perspective. The global perspective can stimulate students to widen their thinking and go beyond their own national context, by being more critical and imaginative when considering how classical concerns of social policy are developed in a global context. Also, a global perspective in the curriculum provides students with possibilities to relate their experience to a wider context.

   The main challenges of GLSD are identified in the area of avoiding a content-based approach (a focus on what is taught), since a global perspective becomes merely additive in a content-based framework. Instead, Irving, Yeates and Young (2005) suggest a process-driven approach, that is, a focus on how learning takes place. When learning is seen as a process of knowledge construction, students carry out a variety of cognitive operations to make their understanding meaningful. This demands a more principle-led and competence-driven curriculum change, than a simple expansion of content.

   According to Stevenson (2007), the new globally-based economy has profoundly changed the conditions and culture for teaching and learning. As a result of these changes, teachers in the US are now more focused on preparing students for their individual life and rights, rather than preparing them to become responsible environmental citizens, with the capacity to collaborate for a better world. Issues of SD have been marginalised, compared to economic arguments in the political concerns of a majority of Western countries. However, this trend has begun to shift again, since notions relating to environmental issues, such as 'global warming', are becoming more established concepts. Stevenson further suggests moving from a content-focused and subject-based curriculum, to fostering responsible citizens and promoting the development of essential skills, including problem-solving and critical thinking. Here also, the focus is on a competence-driven curriculum of the kind suggested by Irving, Yeates and Young (2005).

   Rost (2004) articulates similar recommendations in his article *Competencies for global learning*. Like Stevenson (2007), Rost wants to move away from the purely rhetoric level and instead focus on the practical issues of implementing ESD, including GLSD, to guarantee that people in the future are able to deal with and handle globalisation processes. The ideas presented by Rost in the article concern a framework for competencies that give students the possibility to handle complex development issues, and as a consequence behave in more sustainable ways. This functionalist educational idea takes its main point of departure in the basic principles of Agenda 21, where education has the objective of fulfilling learning for SD (Agenda 21, 1993, chapter 36). Three types of competencies are presented, located in the three classical fields of knowledge, values, and action, with the aim of formulating a model for an ESD curriculum. First, global development processes are characterised by their complexity. To develop knowledge competencies, Rost therefore suggests a systems-oriented approach, to foster students' ability to deal with global systemic interconnections. Second, since global problems mean that culturally different value systems need to be taken into account, developing competencies to value involves the ability to understand, recognise and compare different values. The third area of competence, that of action, is seen as the most important. It deals with the ability to approach and direct developmental processes, involving the ability to predict, to set relevant goals, to anticipate events, and finally, to shape processes of change.

Individual level
Very timely, and contrary to much of the rhetoric in SD, Reid and Petocz (2006) have identified the problem that teachers rarely share a common language about SD. Consequently, a common understanding of the issues involved in SD is also missing, and it becomes difficult to integrate SD into the curriculum. Reid and Petocz conclude that if the aim is to empower learners in formal institutions at any level concerning SD issues, the teachers themselves need

to understand these issues, both in their global perspective, as well as constituting the core business of their particular discipline. Reid and Petocz referring to Prosser and Trigwell, (1997) further point out that limiting conceptions of a subject (in this case SD) often relates to limited approaches to teaching that subject, whilst holistic (or expansive) conceptions tend to broaden the teaching and learning approach. When disciplines are woven together, a holistic ESD programme conveys knowledge, issues, skills, perceptions, and values associated with searching for and progressing towards SD - strengthening learning for SD.

Related empirical research has been conducted, in the research project *Learning in the ICT-extended University* (Booth et al., 2007), where a prominent part focused on GLSD. Based on this empirical research, learning and teaching issues in GLSD are identified and discussed (Hansson and Nordén 2007; Nordén, 2005). The results were based on data from the Young Master Programme (YMP), offered by the International Institute for Industrial Environmental Economics (IIIEE) at Lund University, Sweden, and involving young people learning in a global online context about Preventive Environmental Strategies (PES), with a view to promoting sustainability. A total of 7 000 students from 120 countries participated in the YMP, working interactively on a common subject matter, using a problem-oriented approach. Data were subsequently collected from questionnaires online, with answers from 535 students and 45 students group-wise who were invited for in-depth-interviews concerning *how* and *what* they learned. The aim of the analysis of the data was to find qualitative differences in their experiences of their learning in the context of GLSD. The results show that learning meetings in a global context particularly catalyse students' commitment to SD. Students experienced that they developed their critical thinking skills, and became aware of the complexity and the interrelation between the different concepts in the area of SD, as well as modifying their understanding of this interrelation. They learned to ask, search and reflect on subject matters relevant for SD, and were engaged by the dialogues. They found it useful and rewarding to be involved in an extended global learning space. The students thereby developed potentials for more critical learning and thought processes. Conclusions drawn from the YMP studies is that meeting other students on a global online forum is a good start for learning on issues and challenges in the area of SD. A further conclusion is that online discussions provided students with an opportunity to work in a deductive way, not only inductive (Hansson, 2004), which is of major importance for a holistic approach and for learning about complexities.

Discussion

Historically, the shift from environmental education (EE) to education for sustainable education (ESD) started during the United Nations conference 1992 in Rio de Janeiro, at a time when the policy discourse widened the questions to more prominently incorporate global perspectives, as well as a new mix of ecology and economy, integrating social, political and ethical dimensions (Agenda 21, 1993). The tension between approaches to learning and teaching reflected in EE and GLSD have not been treated throughout this article. However, the authors have noted that the vision of changing curricula, pedagogical approaches and institutions to include ESD has laid new ground for increasing the global perspective in ESD (see Figure one, p. 8). Major environmental problems and global challenges have been focused in ESD for several decades. Unfortunately, dealing with world problems, without simultaneously acquiring tools to deal constructively with the situation, may underline feelings of losing control. By contrast, in GLSD, the scale, complexity, and the impact of a global web of political, economic, social, and environmental forces and events that require recognition and acknowledgement, all shape the context of our learning for SD globally. At stake in GLSD is not only resolving pressing global problems. The learning outcomes also include the acquisition of critical thinking skills, values, and socio-cultural awareness.

How GLSD has emerged from ESD, GE and GL is illustrated in Figure one. The differences mostly concern emphasis, related to shaping and specifying learning in a global context that can strengthen the potential of learning through interaction, both globally and locally. With respect to the difference and the relationship between GE and ESD, an important aspect is that the former does not aim to solve sustainable development problems through interdisciplinary reflection. GE has therefore sometimes been accused of building on charity concepts which no longer match reality (Scheunpflug and Asbrand, 2006). It is true that GE does not integrate disciplines in the way that is needed in and for ESD. On the other hand, GE has inspired ESD to widen its perspective, to take into account the need for learning about complexities. Although research in the theory and history of GE has evolved to some extent, giving rise to a conceptual and theory-related debate, the field remains largely underdeveloped. Scheunpflug and Asbrand (2006) point out that GLSD is a field that clearly still requires a basis for a theoretical frame. This is particularly called for with respect to the implementation of GLSD in higher education, concerning the relation between global education and the didactics of SD.
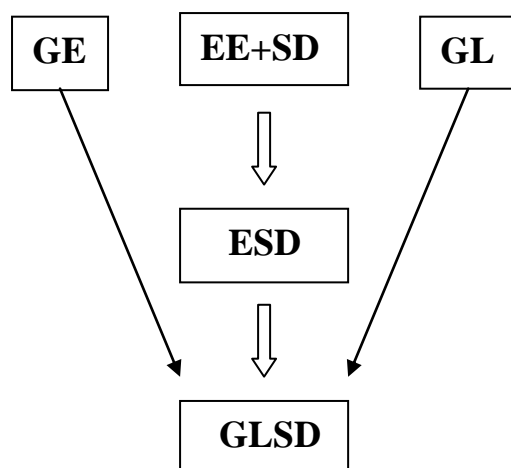

Figure 1. Related concepts in GLSD

The worldwide call for integrating SD in higher education demands a response, not only to the question of how a global perspective could be integrated. In addition, generating knowledge on how learning in a global context is best developed is also needed. GLSD includes the objective of resolving global problems, involving critical thinking, skills and values, as well as socio-cultural awareness. Determining the characteristics that could guide teaching strategies, inform curriculum design, and serve as a reference for teachers, administrators and policy makers in charge of the practical implementation of GLSD, are all questions which need further research and debate. Substantial empirical research is needed on learning in global settings, in particular when dealing with complexity in the context of a world society, focusing competencies both as means and outcome. Innovative educational approaches that facilitate real multi-disciplinary, multi-lingual and multi-cultural understanding in global settings need to be investigated, and competence-driven ways to integrate SD into curricula must be prioritised. Universities play a crucial role in the future to be more responsible for concrete steps in this direction, both globally and locally.

Conclusions

The literature that has been examined reveals the urgent need to recognise and develop alternative, multidisciplinary theories, research strategies and interventions for GLSD at the university, curriculum and individual levels. Irritation is expressed by several authors over the fact that many measures have remained on a purely rhetoric level, that many efforts are ineffective, and that universities do not appear to take their responsibilities seriously. Following the three types of competencies presented by Rost (2004, p.5) and an integration of a global perspective on more principle-led curriculum formulated by Irving, Yeates and Young (2005), this competencies-driven curriculum offers one way to move from the dominance of rhetoric level to practice. However, the steps that have been implemented, so far, concern mostly how a global perspective could be integrated into the curricula, rather than the question of how students learn in a global context. Knowledge on how teaching and learning is best developed in a global context would therefore need to be developed. The pioneer research projects on learning in global context, reported by Nordén and Hansson above (see p. 7) are just an example of such processes, and additional research is clearly called for in this area.

The emergence of GLSD is an area of particular interest in higher education (Nordén, Anderberg and Hansson, 2007), since the kind of knowledge that students need to learn in the field of SD typically involves complexities, which is an additional motivation to develop holistic approaches to teaching and learning (Hansson, 2004). Thus, students' knowledge formation of complexities in a global context is to great extent dependent on how competencies are developed. An integration of competencies and knowledge based curriculum has been developed in the knowledge capability theory (Bowden and Marton, 1998; Bowden, 2004; Booth and Anderberg, 2005; Anderberg et al., 2008), performing a double function of competencies: both as a means and an outcome. On the one hand, it provides the means to achieve holistic understanding of complex knowledge, and on the other it facilitates the acquisition of capabilities required to learn and handle complexities.

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