

## THEME: New Swedish environmental and sustainability education research

This special issue of *Education & Democracy* presents examples from a new generation of Swedish research on environmental and sustainability education and thereby complement the picture of the current Swedish environmental and sustainability education research outlined in the recent Danish-Swedish special issue of *Environmental Education Research* (Vol 16, No 1) and the anthology *Democracy and Values in Education for Sustainable Development – Contributions from Swedish Research* (Öhman 2008). All the contributors to this issue are associated with the *Graduate School in Education and Sustainable Development* (GRESD), either as PhD students or as supervisors.<sup>1</sup>

The purpose of GRESD is to enhance knowledge production relating to the complexity of teaching and learning concerning the intersection between ecology, economy, ethics and social justice within the larger framework of education for sustainable development (ESD). The research mainly focuses on students' experiences of teaching and learning about sustainable development – including how the forms and content of instruction influence their experience. The studies are not limited to certain school subjects, but can include different activities in school and preschool, as well as leisure activities organised by schools. An important objective of GRESD is to facilitate the PhD students' international exchanges and collaborations.

The graduate school can be seen as a direct continuation of the establishment of Swedish environmental education research undertaken within the *Education & Sustainable Development* research network.<sup>2</sup> The network has played an important role in the coordination of the Swedish research field and in the creation of exchange opportunities between researchers. Another aim of the network has been to publish anthologies and thereby present Swedish ESD research contributions to an international audience. This ambition has resulted in two research anthologies: *Learning to change our world? Swedish Research on Education & Sustainable Development* (Wickenberg et al. 2004) and *Values and Democracy in Education for Sustainable Development –*

*Contributions from Swedish Research* (Öhman 2008). Over the years more than fifteen of the network's doctoral students have gained PhD degrees. Together with professors and associate professors in the network, many of these researchers are now functioning as supervisors for the new generation of researchers in GRESO.

## Swedish environmental education in retrospect

Considering that Sweden has a long tradition of environmental education, the Swedish research field is relatively new. Since the beginning of the 20<sup>th</sup> century outdoor education has had a strong position in the Swedish curriculum, and care for nature and environmental concern have been recurring themes in these activities (Sandell & Öhman 2010). In the late 1960s, the outdoor education tradition fused with the new wave of environmentalism that arose during these years to form the basis for Swedish environmental education. This combination is evident in the Swedish national curriculum of 1969 (Lgr 69), in which environmental education intentions appear for the first time. Early discussions of the definitions of the concept of environmental education were published in the USA around this time, and the *Journal of Environmental Education* (1969) and the North American Association for Environmental Education (NAAEE) were also founded (1971). Important inspiration for the Swedish environmental education movement came in 1972, when the Swedish government initiated the first major global environmental meeting known as the Stockholm Conference (the UN Conference on the Human Environment). At this conference education was emphasised as a key issue in environmental protection. Detailed guidelines for environmental education were further developed at the world's first intergovernmental conference on environmental education organised by UNESCO in Tbilisi, Georgia in 1977. The Tbilisi Declaration had a strong impact on the national curriculum of 1980 (Lgr 80), in which environmental perspectives were integrated foremost in science education. The importance of education in the strivings for a sound relationship with the environment, and later for a sustainable development, have been emphasised in a number of UN policy declarations and reports: *Report of the World Commission on Environment and Development: Our Common Future*, 1987; *Agenda 21*, 1992; and *the Plan of Implementation of the World Summit on Sustainable Development*, 2002. In order to further underline the importance of education in addressing global challenges, in 2002 the UN General Assembly declared 2005–2014 as *the Decade of Education for Sustainable Development* (DESD).<sup>3</sup>

## From environmental education to education for sustainable development

The DESD declaration signifies one of the most obvious changes in environmental education policy and practice in recent years, namely the conceptual change from ‘environment’ to ‘sustainable development’. In some parts of the world the introduction of ‘sustainable development’ has led to intense debates, and the concept has also been the object of considerable theoretical and ideological criticism. By and large the critics of ‘sustainable development’ regard it as an ideological concept which rests on the idea that a liberal market economy and economic growth can not only be combined with environmental protection and social justice but are also necessary requirements for this (see Fergus & Rowney 2005, Jabereen 2006, Sumner 2008). Thus, the critics mean that the UNESCO promoted ‘education for sustainable development’ runs the risk of turning education into a political instrument that supports a specific ideology and that education will consequently lose its deliberating and critical potential (see Jickling 2003, Scott & Gough 2004, Jickling & Wals 2008).

In Sweden ‘sustainable development’ has been less controversial. While there may be several reasons for this, the fact that there has been strong political consensus about the concept and the fact that many regard it as a necessary qualitative improvement of the welfare state have probably contributed (see Læssøe & Öhman 2010). This can of course be seen as a rather naïve attitude that hides the ideological tensions and embedded contradictions within the concept. However, ESD does not necessarily have to be restricted to the UNESCO version, but can be interpreted and negotiated in many different ways. The interesting thing is therefore to reflect on what kind of changes these interpretations and negotiations bring about in educational practice.

One way of capturing these changes is to study ‘selective traditions’<sup>24</sup> within sustainability and environmental education. Such studies have shown a gradual transition from a *fact-based* tradition characterised by a focus on the transference of scientific knowledge, via a *normative* tradition with a focus on teaching students the necessary environmentally friendly values and attitudes, to a *pluralistic* tradition that endeavours to mirror the variety of opinions and perspectives informing contemporary debate (see Öhman 2008, 2009). Another way of describing this shift is in terms of a movement from *behavioural modification to a participatory approach* involving diverse interest groups towards supporting independent opinion-making, action competence and critical thinking (see Scott & Gough 2003, Englund, Öhman & Östman 2007, Huckle 2008, Schnack & Mogensen 2010).

These changes in educational practice imply a *relocation* of the process of environmental knowledge constitution (Öhman & Öhman 2010). In traditional environmental education, views about environmental issues were established among experts, textbook authors and teachers *before* the educational event, and the role of education was seen as implementing these views. In participatory approaches, the establishment of environmental views is something that is supposed to happen in the educational event; in the communicative processes that take place between students and between students and teachers.<sup>5</sup> In this way, participatory approaches can be seen as a post-foundational alternative to the fact-based and normative approaches (see Stables 2001).

Changes in environmental and sustainability education are not only evident in the approach and the teaching methods, however. The content is also shifting. In particular, the sustainability perspective has significantly broadened the scope for this kind of education.<sup>6</sup> There is a clear trend towards giving political and moral perspectives greater importance in environmental and sustainability education and that increasing attention is paid to the interrelations between economic development, environmental protection and social justice, both on a local and global scale. Not least, climate change and its increasingly obvious consequences have made it necessary to capture the complexity of sustainability issues in educational practice. As a consequence, the broadening of environmental education is no longer the sole responsibility of science education. In fact, in many secondary and upper secondary schools, social science teachers seem to be taking a leading role in the development of these teaching perspectives. Today, environmental and sustainability education issues are central concerns in many subjects in the Swedish educational system as a whole – from preschool to higher education.

## New trends in environmental and sustainability education research

The developments in the educational practice described above form an important backcloth to the studies included in this special issue and to the research questions asked by a new generation of environmental and sustainability researchers. As the PhD students of GRESD belong to different universities, they naturally represent a diversity of theoretical and methodological approaches to these issues. However, common to most researchers in GRESD is an engagement in empirical research rather than ideological debate. Indeed, this has been significant for Swedish research in this field for the last decade. Furthermore, these students also share

a desire to problematise and develop a critical approach, rather than promote a certain kind of education or teaching methods.

Changes in educational practice are reflected among the PhD students as an increasing interest in the value dimension and the democratic aspects of environmental and sustainability education and the philosophical foundation of different ways of teaching about these issues. This research interest also reflects how internationally renowned Swedish curriculum theory has continued to highlight the political and moral content of education. Other new-generation researchers associate more with the Swedish ‘didaktik’-tradition and focus on the interrelationship between teaching and learning: teachers’ choices and the conditions for these choices, students’ experiences, attitudes and feelings, students’ learning processes and discussions and other interactions between students and between students and teachers etc. There is also an increasing desire to combine an interest in political and moral aspects with an interest in classroom interactions: how socialisation takes place in practice.

## The contents of this issue

The first contribution to this collection of GRESA studies is *Louise Sund & Johan Öhman’s* paper COSMOPOLITAN PERSPECTIVES ON EDUCATION AND SUSTAINABLE DEVELOPMENT – BETWEEN UNIVERSAL IDEALS AND PARTICULAR VALUES. This theoretical paper highlights the possibilities of the philosophical perspectives of cosmopolitanism in the development of ESD. More specifically, the paper sets out to problematise the universal characteristics of ESD aided by the recent work by four prominent cosmopolitan scholars: Martha C. Nussbaum, Peter Kemp, Kwame Anthony Appiah and Sharon Todd. The paper explores the different ways in which these scholars approach the balance between the cultivation of universal values and individual’s autonomous thinking and relates these approaches to ESD.

The global aspects of ESD are also addressed in *Birgitta Nordén & Elsie Anderberg’s* contribution KNOWLEDGE CAPABILITIES FOR SUSTAINABLE DEVELOPMENT IN GLOBAL CLASSROOMS – LOCAL CHALLENGES, albeit at a more empirical level. In their study they used a phenomenographic approach and semi-structured interviews to investigate the experiences of secondary school pupils, teachers and principals when taking part in an implementation project involving online learning for sustainable development. The research focuses on critical knowledge capabilities for acting globally and how they relate to the implementation process.

*Ingela Bursjö* also investigates the problems of implementing new ways of teaching and learning. In her study, HOW STUDENT TEACHERS

FORM THEIR EDUCATIONAL PRACTICE IN RELATION TO SUSTAINABLE DEVELOPMENT, she uses questionnaires to investigate experienced student teachers' perceptions of their professional training to encompass ESD. The findings indicate that the student teachers' transformative learning depends on both external and internal factors, such as tensions between the individual teacher as a professional versus a private person, and tensions between the student teachers and other teachers, principals and the community. In this way, the study provides important insights useful for implementation of ESD in teacher education.

A research focus on sustainable perspectives in economic-oriented education has so far been somewhat neglected – at least in terms of Swedish environmental and sustainability education research. *Pernilla Andersson, Johan Öhman & Leif Östman's* analysis of economy-related textbooks is thus an important contribution to the literature. In their paper, *A BUSINESS TO CHANGE THE WORLD – MORAL RESPONSIBILITY IN TEXTBOOKS FOR INTERNATIONAL ECONOMICS*, they analyse the meanings offered to students regarding the scope of taking moral responsibility in relation to the role of a business person. By exposing these meanings the study opens a “window of opportunity” when framing sustainable aspects of economics education.

Students are in focus in the final two contributions. First of all *Tomas Torbjörnsson, Lena Molin & Martin Karlberg* present their questionnaire study of upper secondary students' attitudes towards fundamental sustainable values: respect for nature, solidarity and equality. Their study, *MEASURING ATTITUDES TOWARDS THREE VALUES THAT UNDERLIE SUSTAINABLE DEVELOPMENT*, shows that there are significant differences in terms of gender, urban/rural living and the education programme and that there is also a positive correlation between solidarity and a willingness to preserve nature. By mapping young peoples' landscapes of attitudes they add new quantitative data to the field and provide essential background knowledge for adopting appropriate teaching strategies in ESD.

The second contribution with a student focus, and the final paper of this collection, is *Lena Persson, Iann Lundegård & Per-Olof Wickman's* paper *WORRY BECOMES HOPE IN EDUCATION FOR SUSTAINABLE DEVELOPMENT – AN ACTION RESEARCH STUDY AT A SECONDARY SCHOOL*. This paper reports on an action research study in which students' worries were made salient through their reflections, which in turn facilitated a change in the teaching methods in a way that transformed students' worries into hope and supported their action competence. In this way, the case study provides an interesting example of how a reflected relation between teaching and students' experiences can contribute to the development of ESD practice.

*Johan Öhman*

## Notes

1. The graduate school was established in 2009 and is the result of a joint application to the Swedish Research Council from eight different universities. The Research Council provides funding for nine PhD students. Six other students are also associated with the school. A steering committee, with Dr. Per Sund as coordinator and Prof. Leif Östman from the Department of Education at Uppsala University as scientific leader, facilitates the work and activities.
2. This network was founded in 2000 on the initiative of Dr. Per Wickenberg and Dr. Harriet Axelsson. The network involves about thirty active senior researchers and PhD students and was supported financially by the Swedish Research Council in the periods 2002–2004 and 2005–2007.
3. For further descriptions of Swedish environmental education history see Breiting and Wickenberg (2010) and Læssøe and Öhman (2010) and for an international overview of education for sustainable development see Arjen Wals' comprehensive mid-point review the DESD (Wals 2009).
4. The analytical perspective 'selective tradition' was originally developed by Williams (1973) and has been introduced to Swedish curriculum studies by Englund (1986). The term 'selective tradition' indicates that teachers' choices of educational content and teaching methods over time create certain regularities and patterns. The identification of selective traditions of environmental education is a result of historical textual analyses of science education textbooks and syllabi (Östman 1995, 1999), complemented by analyses of different authoritative texts on environmental education (see The Swedish National Agency for Education, 2001).
5. Participatory approaches have also been challenged in different ways, and several educational researchers have reminded us of the difficulties and dangers of undesirable consequences of these approaches (see Cooke & Kothari 2001, Boler 2005, Læssøe 2010).
6. These conclusions are drawn from the findings and experiences of several assignments involving different kinds of fieldwork over the last ten years, for example the *National Evaluation of Environmental and Sustainable Education* (The Swedish Agency for Education), the developmental project *HUS* (The Swedish National Agency for School Improvement) and the research project *Implementation of Education for Sustainable Development* (The Swedish Research Council).

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