

Pernilla Andersson, Södertörn University: *Fantasmatic Logics of Business Education for Sustainability*

Bio:



Pernilla Andersson is a Phd-candidate in Environmental and educational sciences at Södertörn University. Her thesis project involves empirical investigations of of education in Business Economics at Upper Secondary level when ‘sustainable development’ is integrated in the syllabus.

Abstract:

This paper explores classroom practice after infusion of ‘sustainable development’ in the syllabus for the subject Business economics at Upper secondary level in Sweden.

The study takes a cross-curricular approach drawing on environmental sociology, pedagogy as well as business ethics. With regard to business ethics the study takes diverging standpoints regarding a business ethical responsibilities as an emanating point. While the role of business could be described as maximising profit, others assert that a business also must have a social purpose. Furthermore, others suggest a position where a business also creates social purposes.

The concept ‘fantasmatic logics’ ([Glynos and Howarth 2007](#)) understood as ‘what we learn to desire’, developed within a discourse theoretical framework, is used to analyse the classroom practice. More specifically the approach implies analysing what the students learn to desire in the context of learning ‘a business role when taking responsibility for sustainable development’. Specific attention is paid to how emotions are evoked, expressed and responded to in classroom practice.

The purpose is to explore fantasmatic logics found in ten lessons of Business Economics when ‘sustainable development’ is integrated. The more specific purpose is to present an analysis of teachers’ actions privileging fantasmatic logics.

As a way to approach and select teachers and students for the study an interview study was made prior to the classroom study. The selection of teachers and lessons was done in order to enhance the possibility to observe different kinds of educational practice with regard to educational methods, subject matter and standpoint regarding a business ethical responsibilities. The empirical material consists of video- and audio-recorded lessons in Business economics. Five teachers and in total ten lessons, transcribed in detail, are included in the study.

The results show that the teachers in the study privilege different fantasmatic logics, implying learning to desire: (1) Listening to and meeting expectations of customers; (2) Involving emotions when making business decisions and (3) Pushing emotions aside in order to make rational decisions. The fantasmatic logics position the business person differently with regard to how emotions are involved.

The presentation of the results also include a detailed analysis of teachers' actions with regard to how different fantasmatic logics are privileged.

The results are discussed in relation to the concept *responsiveness* as developed by Pellizzoni (2004) and Dewey's concept *mis-education* (1938/1997). I argue that the different fantasmatic logics, facilitating the subject position business person differently, have different implications with regard to the potential development of responsiveness as well as what can be said to be educational as according to Dewey.

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Helen Hasslöf, Malmö University: Students' Qualification in Education for Sustainable Development – Epistemic gaps or composites of critical thinking?

Abstract:

When students' *qualification* is a hot topic on the political agenda, it is of interest to ask what the *function of qualification* might implicate in relation to a complex issue as ESD. The relation between knowledge, politics and ethics is complex and sensitive (Lundegård & Wickman 2007; Scott & Gough 2003). In the international policy discourse, issues of sustainability are mainly seen as matters of individual learning and processes of social change (Van Poeck & Vandenabeele 2012; Biesta 2004). But, to translate education into processes of qualification and teaching people how to behave as participants in a democratic society is not unproblematic (Jickling & Wals 2008). In this study we turn to teachers' social practice, to find contributions to this discussion.

To gain knowledge from teachers' social practice we formulate the following RQ: Which central meaning (nodal points) of qualification becomes articulated when a group of experienced teachers discuss what they regard as important in education for sustainable development? From this situated practice we discuss how articulations of qualification crystallise meaning in relation to purpose and functions of ESD.

An approach of discourse theory is applied with inspiration from Laclau and Mouffe (2001). Language use is regarded as processes where elements are articulated and re-articulated to make meaning in a relational context. The empirical material consist of five occasions (autumn 2012), with audio-recorded files of teacher colleagues group-discussions (3-6 teachers) about purposes of ESD. The participants were science- and social science teachers from secondary- and upper secondary schools from the south of Sweden (20 in total).

Three different discourses formulates qualification. 1. *Scientific reasoning*, and 2. *Awareness of complexity* are discourses characterised by different epistemological aims. In 3. *Qualification as critical thinking* the teachers undulate between epistemological views to articulate critical thinking to serve as a reflecting tool for different ways of valuing issues of sustainability. 1. *Scientific reasoning. Schooling; assessment, a rationalistic objective view of knowledge, socialisation towards fact-based knowledge.* 2. *Awareness of complexity. Responsiveness: awareness of complexity, room for the subjectification processes, post-modern view.* 3. *Critical thinking. Socialisation towards students' action, reflective thinking, consciousness and freedom.*

If we, as a purpose of qualification, treat issues of sustainability mainly as scientific reasoning, we might 'risk' to get ESD as 'pure' science education. To make 'matter of facts' into 'matter of concerns' we might need to bridge the bifurcation of epistemological gaps and try to build composites (c.f. Latour, 2008). In this way, *critical thinking* as a *composite* discourse might be seen as a qualification of ESD as *to make sense*. To face difference and conflicts as educational contexts *to learn from*.

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Caroline Ignell: Stockholms University: *A longitudinal approach to investigate upper secondary school students' value orientations and attitudes of pro-environmental actions*

Bio:



My research interest is mainly centred on upper secondary school students' conceptualizations of the pricing and costs for negative environmental impact associated with production and consumption of goods and services. The research also focuses on what environmental values and attitudes, to pro-environmental actions, that the students hold and how these values and attitudes change over time. In my research project I have a longitudinal approach and I follow the students' reasoning in interviews and through repeated quantitatively oriented questionnaires.

Abstract:

During the last twenty years, research has tried to identify underlying values that provide a basis for environmental attitudes and behaviour. Recent interest has rather than investigating general attitudes to environmental issues tried to find underlying values that give a basis for more differentiated environmental attitudes (Schultz and Zelenzy, 1999). Following this interest in the fields of social psychology and environmental psychology, values are also in focus in the environmental education and learning research areas in directing school students' value orientations and environmental concern. However much work remains to be done to identify and understand the key relationship between sustainability values, attitudes and behavior specifically to be able to make strong conclusions about value changes and changes in people's behaviour (Leiserowitz et al. 2006; Dietz, et al. 2005).

In this study we explore Swedish upper secondary schools students' environmental value systems and attitudes to pro environmental actions, in detail solutions to increased greenhouse gases and Climate Change. Specifically the study explores two questions; i) What are upper secondary school students' value orientations and attitudes to pro-environmental actions? ii) Are there significant relations between students' value orientations and attitudes of pro-environmental actions and solutions to the increased emissions of greenhouse gases and climate change? iii) To what extent are there changes in values after a 12 months period?

A survey was conducted in 10 different classes with 212 respondents in the age of 17. The same survey was distributed and repeated a year later to 8 of the initial classes and 184 students in their final year of upper secondary school participated. Altogether we collected 396 responses from the two sets of investigations and in sum 141 individuals have been identified as participators in both years. All students followed the national Economic and Business educational program comprising of courses in business economics, international economics and information and layout; beyond the regular courses e.g.in civics, science and geography that is compulsory in all social science programs in the Sweden.

We examined students' value orientations by using an instrument (De Groot and Steg, 2007, 2008) distinguishing between egoistic, altruistic and biospheric value orientations. The purpose of the second

instrument was to measure students' attitudes to pro environmental actions. This is examined by introducing a scale that reports of to what extent participants agreed with 27 statements concerning pro environmental activities for solving increased GHG emissions as well as environmental issues in a broader view.

Preliminary results show that the altruistic value orientation dominated students' preferences when evaluating how important as guiding principles in their lives, the values were. Biospheric and egoistic values were also regarded as important however they represented the second and third category of guiding principles. We found no changes in the value positions between the time of measurements, but an increase of the importance of each value orientations.

In exploring what attitudes to pro-environmental actions, to solve greenhouse gases and climate change, we found that individual willingness to support political proposals for increased costs on goods was preferable to educational and information arrangements as well as legalizations. An exploratory factor analysis generated seven different underlying dimensions; the constructs' validity seems to be good and specific underlying attitudinal dimensions, for solving climate change problems, are labeled; Positive to increased costs for negative environmental impact, Negative to give up consumption, Positive to market measures and subsidizations, Positive to include environmental external costs in price, and, Positive to education and information.

The strongest relation between value orientations and attitudes to decrease greenhouse gases was between the biospheric value orientation and a positive attitude to increased costs for goods that influence the climate negatively. In sum, the correlation analysis showed weak positive relations for the altruistic and biospheric values while there were almost non for the egoistic value orientation.

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Annika Manni, Umeå University: *Place-specific artefacts; important aspects of young students' meaning-making in Environmental and Sustainability Education*

Bio:



My research interests concern young students' learning and meaning-making in environmental and sustainability issues. Of special interest is the process of experiencing, and students' active participation in those. Situated and place-based learning, for example in the outdoors, are also among my research interests.

I am a PhD student at the department of Science and Mathematics Education at Umeå University, Sweden. I am also involved as a teacher at our teacher training programs here in Umeå.

Abstract:

This study explores in what ways different educational settings and artefacts relate to young students' meaning-making in environmental and sustainability education, ESE (cf. [Laessoe & Ohman, 2010](#)). As a point of departure the concept of *meaning-making* is here understood to involve students' integrated cognitive, social and emotional experiences. In particular, interest was paid to the meaning-making processes as continuous and transactional where previous research had shown that emotional and esthetic expressions had importance ([Wickman, 2006](#)). In this matter Dewey's theoretical concept of *aesthetic experiences* were used to interpret, understand and discuss the empirical findings from the study ([Dewey, 1934](#)). The relevance of this focus take its stance from the attention paid to emotional impact on, and relation to learning in ESE. This study therefore aims to explore how this cogni-emotional integration, and possible place-based interaction is expressed in the school practice of 12 years old students.

In this case study, observations, field notes, log book entries, interviews and written documents were used during a period of four month participatory research in one class in grade 6. In this class with a Sustainable school profile two areas of schoolwork were studied in detail. These were 1. Nature- and environmental activities in the outdoors, and 2. An inter-disciplinary project called "Food-humans- the environment". A content analysis focusing to reveal important aesthetic components in the processes of meaning making were conducted as a first step. A narrative analytical approach aiming to identify phases and their function in meaning-making processes was held as a second step.

The results reveal similarities between the two areas of schoolwork regarding a continuous meaning making process where students' aesthetic experiences were central. In the more traditional outdoor activities, place-specific artefacts such as wet mosses and fire-making tools mediated immediate doings and undertakings of aesthetic character while in the indoor project the modern artefact of a laptop proved to have a similar important function for these students' aesthetic experiences in their meaning making processes.

A conclusion from these results is that place-specific educational environments and artefacts provides immediate aesthetic experiences which was found vital for young students' meaning making in ESE.

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Birgitta Nordén, Malmö University: *Global Learning towards Environmental and Sustainability Education*

Bio:



Birgitta Nordén (M.Edu.Sc., M.Edu. Professional Orientation) is a doctoral student in Education and Sustainable Development (SD) at Malmö University. Her research focuses the global dimension created in learning and teaching towards sustainability, the implementation process, interaction in local-global context, transdisciplinary teaching approaches for a holistic perspective in knowledge formation for SD, and critical knowledge capability foundations.

She was the Director of Distance Education for the *Young Masters Programme on Preventive Environmental Management Strategies* at the International Institute for Industrial Environmental Economics (IIIEE, 1999-2007) at Lund University with over 10,000 high-school students in 110 countries taught online, besides teacher training courses in Beijing including most provinces in China with support from Centre for Environmental Education and Communication, State Environmental Protection Administration of China, Green Schools' project via the Ministry of Education of China support - recognized by UNESCO. Birgitta has awards i.e. from the Royal Swedish Academy for Engineering Sciences for her commitment to IT-development on pedagogical grounds.

Abstract:

Towards sustainability the implementation of Global Learning for Sustainable Development (GLSD) is crucial. A better understanding of how to – from a global didactic angle – establish globally genuine dialogues forming nuanced conceptions of sustainable development (SD) is necessary. Higher education and secondary school as well as informal learning situations require a holistic understanding, while aiming to reach established and new target groups. Highlighted from a perspective of preventative environmental and sustainability education management strategies, understanding collaboratively could serve as a tool to reach a deeper knowledge formation process through global learning.

The purpose of my research is to highlight how a global dimension could be created in education - teaching and learning - towards sustainability. A special attention is paid to how the implementation process locally interacts with a global context. The variation of knowledge formation for sustainable development in a global setting is studied. GLSD is introduced.

The research has a foundation in a strategic and systematic literature review and two empirical studies, the later conducted with a qualitative method, consisting of semi-structured interviews analysed using phenomenography both as theory and methodological approach.

The first study provides some major trends marked in discussions on GLSD in education, formulated against the background of the complexity represented, as well as a global interest for universities and schools. In the findings, it 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 (Brunold, 2005, and Scheunpflug & Asbrand, 2006) have identified the need for a competence-based curriculum for GLSD. Through a global ESD perspective, emphasis is placed on seeking, rather than setting a standard from a pre-defined format. In particular, this implies opening space – space for creating various paths to develop GLSD. Thus, diverse ways of experiencing the world meet, where learning on the edge may appear through the dissonance that arises from such meetings. While the concept ‘SD’ is hard to grasp, it also offers schools and institutions of higher education an opportunity to confront their core values, students’ learning, professional educators’ teaching, the pedagogy established, and the relationship with the surrounding community (Wals & Jickling, 2002).

It is argued that heuristic structures (Rauch & Steiner, 2006; Jickling & Wals, 2008) for investigation and reflection on learning, teaching, and research conducted on SD, can support individual sense-making. These structures serve as means, serving the processes associated with individual sense-making frames for global issues in connection with SD. The ESD concept is ‘so slippery and open to different interpretations and so potentially complex’ (Wals & Jickling, 2002, p. 129). Therefore, explicit heuristic structures could improve the understanding of relationships between epistemic development and the paradigmatic challenge – focusing teaching about and for sustainable development – while assessing the integration of learning and new ways of coming to know, especially in HE (Wals & Jickling, 2002).

ESD is viewed as a threat, in the sense that Jickling and Wals (2008) see it as ‘a product and a carrier of globalizing forces’. They believe that the globalizing agenda has instrumental and deterministic tendencies that favor ‘transmissive arrangements for teaching and learning over more transformative ones’. In this process, they fear that traditional environmental education (EE) risks being marginalized. The same goes for individuals and communities, dealing with such questions in a self-determined, relatively autonomous way, within a context (Jickling & Wals, 2008) that engages people in ‘existential questions about the way human beings and other species live’ on our planet. Brunold (2005) instead maintains that differentiation and equality of all questions are significant for upcoming global rescues, trying to look beyond common sense-making of the ‘one world’ dilemma.

The following studies investigate certain aspects of the implementation and knowledge capabilities needed for GLSD programs in upper secondary schools. Critical knowledge capabilities found developed were: to take command, and to collaborate. Critical knowledge capabilities perceived as necessary, but not developed through the program were: to be prepared, to act in a transdisciplinary manner, and to lead for a holistic understanding.

Global teaching and learning for sustainable development reaches from the classroom to the world outside, and is therefore a particularly interesting setting for practicing transition skills. A number of features perceived as crucial in developing young people’s capability to act in a changing world and under circumstances that are difficult to predict. Based on an empirical study of an implementation project in Swedish secondary schools, some of the conditions in Sweden that particularly impact young people’s transition to adulthood are touched on. Related research is also briefly outlined. Knowledge capability theory is used to discuss results from the empirical study of the project, where interviews were conducted with secondary school students, teachers and headmasters. Based on these interviews, features that appear to be predominantly relevant as transition skills in global learning for sustainable development include transdisciplinary action, democratic collaborative action, as well as self-directed and independent initiative. It is concluded that young people today cannot, as in earlier periods of history, base their actions entirely on the traditions of the family or community. Instead, they also need to learn to form their own communities, capable of acting on both local and global

levels. Education here plays an important role, to develop necessary transition skills that enable young people to be prepared for a rapidly changing and uncertain world.

Notwithstanding, the GLSD has to be integrated in curriculum to achieve a competence-driven global curriculum. By this means, knowledge capabilities through beneficial interaction intended for various intercultural qualities of global learning and critical knowledge formation for sustainable development will be a central part of the outcome. Consequently, when taking the findings in consideration, the indications occur that the transdisciplinary teaching towards sustainable development claims a global dimension. Global teaching as well as global learning has to identify the challenges in various contexts for transdisciplinary knowledge formation. For the upcoming decade (2015-2024) the UNESCO recently proclaimed the emerging need for a global action program (GAP).

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Katarina Ottander, Umeå University, Sweden: *Students' construction of democratic participation within science education*

Bio:



My research interest is science education for citizenship with focus on sustainability issues

Abstract:

One goal in science education is that all students shall develop knowledge so they can participate in social dialogues concerning socioscientific issues, such as sustainability issues. One rationale for this is to work with situations that students may face as citizens where other considerations than just scientific ones have to be taken into account (Roberts, 2007). It is assumed that learning within socioscientific issues can promote democratic citizenship within science education. Learning in democratic participation is always present in science education, as in all education. The interesting question is *how* democratic participation is made.

The aim of the research is to study how students' construct democratic participation in group discussions on sustainability issues within science education.

Classroom studies have been conducted in three social science classes with different teachers. All classes were in their first year in upper secondary school and attended a general science course. The main data collection consists of audio-recorded small-group discussions, complemented with classroom observations. Students were audio recorded two times when they were working in small groups, discussing issues related to sustainability.

Discursive psychology, which purpose is to study how people strategically use talk to portray themselves or 'parts of the world' in social interaction (Potter & Wetherell, 1987), is used as the analytical framework. Through the concepts interpretative repertoires, ideological dilemmas and subject positions (Edley, 2001) students' construction of democratic participation has been analysed. Especially the concepts of troubled and untroubled subject positions (Wetherell, 1998) has been useful.

Students' discussions position them in both troubled and untroubled subject positions, but the students often use different interpretative repertoires in their discussions to position themselves in untroubled subjects positions. The students construct positions where it is possible to live in a western lifestyle, have social justice and environmentally problems will be solved. Subject positions were students are without power and responsibility to influence social change is also constructed in their discussions but at the same time they construct positions where individuals have responsibilities for reducing their own

environmental impact. This study shows that the students language use distance themselves from democratic participation, which is a challenge to overcome in science education.

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Abstract:

Action Competence as a perspective emerged in the 1980s, and has developed parallel to, and within environmental education and education for sustainable development. It is described as an educational ideal in relation to issues of health, environment or sustainability, which recognises the meanings of those concepts as ever-changing, that there are no end-points to be reached, no predetermined goals to achieve. Based on a review of educational research in the Nordic countries, it will be discussed whether the concept still is of significance in relation to education for sustainable development in the Nordic countries and if so, in what ways.

Without the intention of being fully comprehensive, this study gives an overview of the use and interpretation of the concept action competence in Nordic research in ESD in the form of a traditional literature review. The aim was to describe results from research on and with action competence, and discuss what action competence may mean in this research. This is to answer the questions whether action competence is of any significance in contemporary research on Environmental and Sustainability Education (ESE) in the Nordic countries, and if so, in what ways. In addition to this, the review discusses different interpretations of action competence that the studies can be viewed to express in relation to the social contexts they have emerged in.

The study was made as a literature review of educational research in the Nordic countries. Restrictions were made for language, excluding Finnish and Icelandic, but including the other major Nordic languages, as well as English. Only papers where action competence was explicitly mentioned were included. Although interpreted differently, the concept action competence is used also in research on social action skills, these studies were not included in the overview. Likewise, health related studies were excluded, although the concept in the Danish tradition is dynamically used in relation to both health and environmental education. Research for literature was made through formal searches in ERIC, PsychINFO, and several Nordic databases, as well as through cross-references and citations, informal searches on Google, and Bing, and via contacts.

The studied reviewed has been formed into three groups based on the use of action competence: as an incentive for ESE research, as ESE research focus, and as ESE research design. Different interpretations of action competence was discerned and will be discussed in relation to the concepts skills, competencies, competence, and educational ideals.

Reviewing the ESE research on action competence gave a sight of differences in interpretation of action competence. It showed differences in discerning what action competence may be, and how to operationalise it and include it in teaching. Like the concept of education for sustainable development, ESD, the concept of action competence is in danger of being viewed as some or the good thing to aim at and practice in school that it may comprise everything. A deepened discussion on different understandings of action competence and their potentials in relation to different educational ideals is welcomed.

Louise Sund, Örebro University: *On Global Ethics in Environmental and Sustainability Education Policy and Practice*

Bio:



Louise Sund is a former PhD student at Örebro University's School of Humanities, Education and Social Sciences, and is now a senior lecturer at Mälardalen University. She belongs to the Swedish National Graduate School in Education and Sustainable Development (GRESO). Her research interests include philosophical perspectives and approaches to education and sustainable development. She has a particular interest in poststructural criticism of universalistic approaches in environmental and sustainability education.

Abstract:

My research concerns the question of ethics instantiated within global and interhuman relations in environmental and sustainability education. In my doctoral thesis I discuss more thoroughly how a global ethics problematized through a focus on human relations actually needs to take into consideration the ways in which we meet through cultures. The first two studies in my PhD research concerned the philosophical problem of addressing universally sustainable responsibilities and values in ESE and asks these questions: How can one uphold a particular ethical position in a world with a diversity of ethical views? Which kind of grounding is needed to develop such an ethic? Should education promote certain values as universal and teach for these, with the idea of working toward a sustainable future? In these two studies I think through the status of 'global ethics' from within a Butlerian (2000) position of translation: universal ethics are always practices of culture and can never, due to their reliance upon practices of signification, supersede or transcend cultures. I am also inspired by political theorist Mouffe (2005) and educational philosopher Todd (2009) who have developed vital critique of universal claims from poststructural perspectives and have also suggested alternative ways of dealing with the new global challenges. The following two studies have investigated teachers' ethical reflections in a first-hand intercultural experience and also how teachers integrate deal with the complex issues of intragenerational equity or social justice in their teaching. In these studies I elaborate on the following question: In relation to pedagogical practice, how can teachers confront and deal with the difficulties and dilemmas that arise in teaching for universal principles while at the same time encouraging their students to respect human diversity? Here I am inspired by a postcolonial perspective which draws on Andreotti's (2011) work.

This research aims to contribute to the discussion about how teachers can develop a conscious and critically informed approach to the teaching of environmental and sustainability issues and also to contribute to theoretical and philosophical discussions about universalism, normativity and global ethics within environmental and sustainability education research.

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