

Introducing ESDA and the importance of socialisation content: an empirical approach to defusing the worry for ESD teachers at school level

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Introduction

On an institutional level governments and industries are using the concept of sustainable development (SD) to describe the process of change towards a more sustainable society. The role of education for sustainable development (ESD) at this level often is very instrumental and many educators hesitate to embrace the type of teaching associated with this view. At an individual level however there is not a generally agreed or given concept of the change or of how to accomplish this change for the future (Hopkins in Sweden June 2007). As a conclusion from the results in this paper one way of describing the path forward at an individual level is to use the concept of *sustainable development abilities* (SDA). To be able to develop abilities such as critical thinking and reflection (Sterling, 2001), it is urgent to understand how these can be taught, practiced and supported in education in general, in all school subjects and in society as a whole. We need an entirely changed educational strategy, which could promote the development of personal and collective abilities needed for a future more complex and rapidly changing global society. This paper aims to study some important content aspects of a more connective teaching approach. This type of education is aimed to being used below senior school officials' level, mainly at a school/NGO level, and can be implemented by using an *education for sustainable development approach* (ESDA). There is a need among educators for a concept like ESDA, which can help them to elucidate different approaches to education in relation to ESD discussions on a policy level.

This empirical study of ten Swedish upper secondary teachers' environmental education (EE) is examining what an ESDA could amount to by studying important educational aspects found in earlier research, which together are constituting a socialization content (Sund, forthcoming). The paper is also a short summary of another article (Sund, a in preparation).

A study of ESDA at a school level defuses some of the worries for teachers, who often in the international debate are expected to implement a renewed education. ESD at a policy level strives to offer all people education. All these citizens could be educated with a more general approach to teaching and learning (Breiting, 2000; Vare & Scott, 2007). ESDA is promoting the development of SDA, which are needed at an individual level to develop personal competences as a road to individual and collective democratic action for a good quality of life for all people. Although this introductory description is simplistic and idealistic in many ways, it would be fruitful for teachers and other educators to better discern and understand their role in the contemporary, common agenda for global change.

Purpose and method

The socialisation content has not been discussed or studied thoroughly in earlier EE/ESD research. One overall purpose with this paper is to study the socialisation content in three selective traditions in EE (Öhman, 2004). The focus is on the dividing line between on the one hand the fact-based and normative tradition, and on the other the pluralistic tradition. The socialisation content is studied by analysing ten upper secondary teachers' accounts in semi-structured interviews of their environmental teaching. The subject matter content of teachers is often very similar. So a study of differences in the educational content can preferably be made by studies of teachers' socialisation content. The subject content is embedded in socialisation content, which together constitutes an educational context.

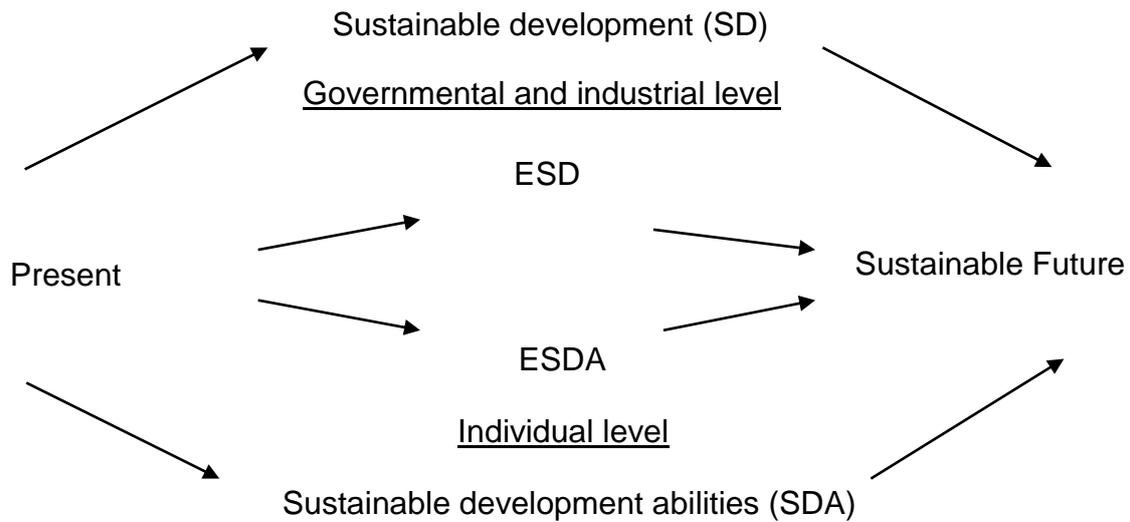
The study is focused on the differences in the socialisation content between the school subject EE and the ESD approach on a school level. The vital differences are to be found in the socialisation content in which the often well integrated subject content is used by the teachers and their students in an educational setting (Sund, a in preparation).

Background

Framing the ESDA issue

Figure 1 shows one way of understanding the relationships between terms commonly used in discussions on learning for SD. ESDA can be regarded as an education below senior school officials' level. This approach educates individuals so they can contribute to the overall development process. This more general educational approach promotes different personal abilities, which can be used both in private and in society. Many researchers have earlier suggested to consider ESD as an education taught with a new approach (Breiting, 2000; Hart, 2000; Jensen & Schnack, 1997; Scott & Gough, 2003)

Figure 1.



Socialisation content

One way to increase the understanding of the characteristics of ESDA is to study content issues in a more extended sense. This could be done by using the concept of socialisation content. Teachers do not only communicate a specific intended content, but through speech and other actions they also communicate a number of implicit and also often unintended messages. These tell students what in their education is regarded to be important, what the aims are or how the content might be related to the world at large. These messages support students to better understand the context in which the subject content could be understood. Subject content and socialisation content together offers opportunities for students *meaning making* (Östman, 1995). There is frequently made a dichotomy between learning and socialisation, but rational facts are not value neutral (ibid). The learning of scientific meaning is accompanied by other factors e.g. the teachers' view of nature. This more extended view of content described here can better be understood by using a concept from science education, which is called companion meanings (Roberts & Östman, 1998)

Science textbooks, teachers, and classrooms teach a lot more than scientific meaning of concepts, principles, laws and theories. Most of the extras are taught implicitly, often by what is *not* stated. Students are taught about power and authority, for example. They are taught what knowledge, and what kind of knowledge is worth knowing and whether they can master it. They are taught how to regard themselves in relation to both natural and technologically devised objects and events, and with what demeanour to regard those very objects and events. All of these extras we call "companion meanings".

These messages communicated to students through teachers' speech and other actions are embedding the subject matter content within an educational context.

Three selective traditions in environmental education

The following two parts in this paper about three selective traditions in environmental education and the method paragraph are mainly derived from another article (Sund, forthcoming).

Since the 1960s three selective traditions, with reference to their roots in educational philosophy and how environmental and developmental problems are perceived by teachers, have evolved in environmental education in Sweden: fact-based EE, normative EE and pluralistic EE (Sandell, Öhman, & Östman, 2005).

The *fact-based tradition* was formed during the development of EE in the 1960s. Environmental problems are based on a lack of knowledge and can be solved by science. There is an assumption that if teachers teach scientific knowledge to everyone then environmental problems caused by human activities will disappear more or less automatically. From an environmental ethical viewpoint, this tradition is situated within modern anthropocentrism. The natural world is considered to be separate from man. From an educational philosophy point of view, this tradition is closest to essentialism where teaching is focused on the subject knowledge needed to solve the current problems. The pedagogic task is to teach students the right and true knowledge.

The *normative tradition* emerged during the societal debate about e.g. nuclear power in the 1980s. Environmental issues are primarily a question of values where people's lifestyles and their consequences are the main threats against the natural world. Scientific knowledge gives hints about the best ways of living and is regarded as normative and prescribing. The development of an environmentally friendly society is obvious and unambiguous. From an ethical point of view, humans are seen as an indispensable part of nature and should therefore adapt to its conditions (Sandell et al., 2005).

The *pluralistic tradition* developed during discussions in the 1990s. Increasing uncertainty on environmental issues and the growing number of different opinions in environmental debates are important points of departure for this tradition (Sandell et al., 2005). Environmental issues

are viewed as both moral and political problems. Science does not provide guidance as to any privileged or preferable way to act when it comes to environmental issues. Everyone's opinion is regarded as being equally relevant when settling the course of action within environmental and developmental issues. Pluralism is an important starting point for the conduct of teaching in education for sustainable development.

It is important to point out that the original descriptions of these traditions are in summary form and have been edited in order to make them more succinct. They have been studied in a large empirical study of teachers (N=568) in the Swedish school system (National Agency for Education, 2002).

Method

Ten upper secondary teachers teaching a mandatory general science course (mainly environmental issues), were interviewed for an hour and asked three curricular questions:

What? (content issues)

How? (methods)

Why? (purposes)

The data were transcribed and then analysed by using an analytical tool (Table 1) developed in earlier research (Sund, forthcoming).

Table 1. shows five analytical questions which concerns essential educational aspects of teaching and how they make teachers socialisation content visible. Teachers' ways of answering these questions reveal the companion meanings they might communicate to students in their teaching. The companion meanings show teachers' standpoints in different value-laden educational aspects of teaching.

Analytical questions	Companion meanings	Aspects	Examples of answers
1) Why are environmental issues important?	Views of nature as a object or subject	Relation to nature: Man – nature	Recourses – Survival – The intrinsic value of nature
2) What is the teaching	Views of	Purpose of	Facts, values –

aiming to change?	knowledge and the development of students tools of change	education: Individual – collective	Communicative democratic abilities
3) What different interhuman relations are established?	Views of generational and intergenerational solidarity	Ethical time dimension: Environment, here, now – Humans, there, then	Insignificant – Social and cultural orientation in the world
4) How useful is school knowledge in environmental and development issues?	Views of where environmental issues exist in students lives	Relation in teaching: School – society	Classroom – Communicative knowledge with the surrounding world
5) What part do students play in their education and environmental issues?	Views of students democratic citizenship	Power relation: Teacher – student	Limited – active co-creators and citizens

Results

Teachers' answers to the analytical questions show how their preferences in their teaching position them regarding five important educational aspects (Table 2). Teachers working within the fact-based and the normative environmental education tradition usually had a position closer to the left term in the word-pairs of each aspect. Their socialisation content concerned mainly the subject matter from science and the teaching was mostly school-based. Students had few opportunities to be active participants in their education.

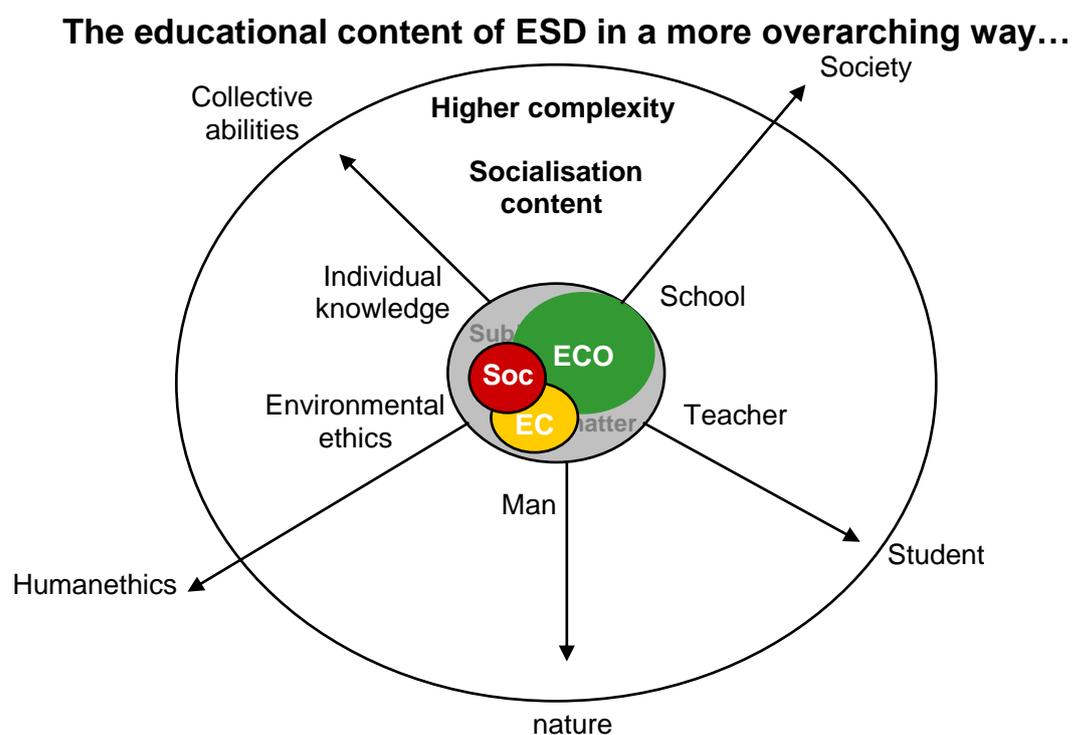
Table 2 The change of the characteristics in the socialisation content regarding three selective traditions in EE (Öhman, 2004). The result is described as a positioning towards the right term in each word-pair regarding each educational aspect respectively.

	Educational aspects				
Selective traditions in	Nature relation: Antropo.-	Ethical dimension	Purpose of education:	Educational relation:	Power relation: Teacher -

EE	Biocentr.	Environment- Human	Individual- Collective	School – Society	Student
Factbased	Some	Some	None	Some	None
Normative	Major	None	Some	Some	None
Pluralistic	Some	Major	Major	Major	Major

Some major features of the result in Table 2 are presented Figure 2. The further out from the centre the higher degree of complexity of the socialisation content of a teacher’s teaching. This was evident in interviews through teacher’s accounts on their teaching. The left term in the word-pairs for each educational aspect is in the centre. By moving out from the centre the subject matter and fact-traditions becomes less dominant.

Figure 2



Discussion

The overall teaching content is relatively constant independently of the approach. All teaching consists of both subject content and socialisation content. Teachers who are working within the fact based tradition are communicating companion meanings to students mainly *about* the subject. The socialisation content can then be seen as an important part of maintaining the

subject traditions. Compared to discussions in science education this type of teaching supports students' learning *for* science (Fensham, 1988). Learning *from* science is learning the applications of scientific knowledge in everyday life (See also Roberts (2007) and his discussion about Vision I and Vision II). This latter type of learning offers quite different socialisation content, which connects scientific knowledge and societal issues in essential ways. Less subject matter content in teaching makes it possible for teachers to offer more socialisation content, which may help students to develop a deeper understanding of environmental issues. Thus, less subject content can result in better learning. The socialisation content in the pluralistic tradition, which is also called ESD by Öhman (2004), can be considered as more connective. This does not mean that there is necessarily less subject matter content in a students' education in total, but instead the common teaching approach used by a teacher team is better connected to each teachers' subject areas, and also to the surrounding world. Socialisation content which is well connected to the overall development of the global society can be regarded as more complex, since it is also including more socio-economic issues.

It can be fruitful in many aspects to separate ESDA on a local level from ESD in SD on a policy level. One is to discern and clarify the difference between practitioners more individual teaching and learning perspectives from policy levels' more instrumental approaches. Another is to find out whether the ESDA discussed in this paper is actually a more connective teaching approach compared to the traditional school subject of EE. The educational aspects presented in this paper can also be very useful in other ways. The different characteristics of the socialisation content can be a point of departure for a development of qualitative criteria for ESDA teaching. These could be used for to qualitatively value both teaching content in an extended sense and learning outcomes. In a forthcoming article (Sund, b in progress), I have interviewed students, taught by three of the teachers in this study, and asked questions on their thoughts of environmental education and developmental issues. Students' accounts also reveal similar kind of characteristics in their socialisation content as their teachers. They discuss different connective abilities, e.g. to debate and present, which are practiced and developed through a teaching resembling of ESDA. According to my view we need qualitative ESDA criteria to facilitate the further implementation and acceptance of an ESDA for all education.

ESDA is one of many descriptions of different indispensable parts of the societal process which is called SD. ESDA is here regarded as an overall teaching approach which develops individuals' sustainable development abilities, which can promote and support the societal process. If ESDA is *the* ESD teaching required for an SD is in the end a matter of political decisions. In this paper ESDA is a way of pointing out how the discussions of ESD can be understood in schools and other non-formal educations on a local level. This paper has aimed to show that socialisation content is vital for students' understanding of environmental and developmental issues. More over the educational aspects presented in this paper could be useful in the development of qualitative ESD-criteria, which might be helpful in assessing a well integrated education. The integration can also concern the education taught by a teacher team or a group of educators. Their teaching is jointly planned and is continuously connected to activities in the surrounding world. This could be one way of describing educators' contribution to support an overall strive for a good quality of life for all people in a global society, in the process of sustainable development.

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