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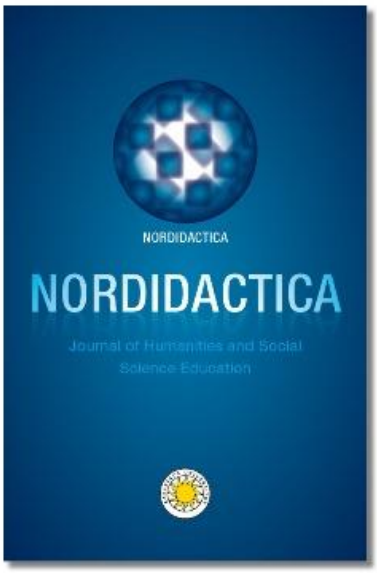

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Education for Sustainable Development in Norwegian Geography curricula

Per Jarle Sætre

Sogn og Fjordane University College, PO Box 133, NO-6851 Sogndal, Norway

Abstract: In Norway, environmental education (EE) has been part of schools' curricula since the 1970s. The concept of education for sustainable development (ESD) was introduced after Agenda 21 was introduced at the UN conference on environment and development held in Rio in 1992. The article shows there has been little change in the geography curricula since the concept ESD was introduced, and no important differences are found between curricula for mandatory schooling (classes 1–10) and curricula for upper secondary schools. ESD is mentioned in the geography curricula but without explanation and implementation. Core goals in the general national core curricula may indicate a change to ESD, but they have not been followed in the development of geography curricula in Norway.

KEYWORDS: ENVIRONMENTAL EDUCATION, EDUCATION FOR SUSTAINABLE DEVELOPMENT, GEOGRAPHY DIDACTICS, GEOGRAPHY CURRICULA

About the author: Per Jarle Sætre (PhD) is a docent at Sogn og Fjordane University College, Norway

Introduction

The United Nations Education, Scientific and Cultural Organization (UNESCO) introduced the concept of environmental education (EE) in 1977 (UNESCO 1978) and in 1992 developed a new concept called Education for Sustainable Development (ESD) (UNESCO undated). This article explores whether the different geography curricula in Norwegian schools have shifted in their approach from EE to ESD since the new concept was introduced. The curricula have been studied because they state the goals for subjects taught in schools. Geography as a school subject has been chosen because the combination of topics dealing with both nature and society make the subject well suited to approaches to study environmental issues.

The main research question in this article is: How is the concept "education for sustainable development" implemented in Norwegian geography curricula?

The study is based on three questions:

1. What were the approaches to environmental education in the geography curricula before the concept education for sustainable development was introduced and what have they been since then?
2. Has the concept education for sustainable development been implemented differently in primary and/or lower secondary schools curricula compared with upper secondary schools?
3. Do the national general core curricula differ from geography curricula in their approach to the concept of education for sustainable development?

The first part of this article discusses the concepts "environmental education" and "education for sustainable development", and briefly presents the history of environmental education in Norway. The second part presents and discusses geography curricula since the time when the concept of environmental education was introduced to Norwegian schools in the 1970s.

Environmental education and education for sustainable development

The world's first intergovernmental conference on environmental education was organized by UNESCO in cooperation with the United Nations Environment Programme (UNEP) and was convened in Tbilisi in 1977. The conference report, also known as the Tbilisi report (UNESCO 1978), includes the following approaches to environmental education:

- To promote an understanding of the interconnection between the human impact on nature, the economy and governmental polices
- To promote knowledge, attitudes, and skills to protect the environment
- To create new patterns of behaviour by individuals, groups and society as a whole towards the environment.

Further to the approaches to learning about the environment stated in the Tbilisi report, a new concept – education for sustainable development – was introduced in 1992 (UNESCO undated). The change in approach was in accordance with the growing awareness of global and local environmental problems. The concept of sustainable development was originally introduced in the Brundtland Report, *Our Common Future* (World Commission on Environment and Development 1987), which defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In 1992 the United Nations published *Agenda 21*, a plan for a sustainable future (UN 1992). In Agenda 21, education is emphasized as one of the most important factors to promote education for sustainable development (Kunnskapsdepartementet 2012b). UNESCO declared the period 2005–2014 the UN Decade of Education for Sustainable Development (UNESCO undated). In Norway was the UN Decade of Education for Sustainable Development implemented for the period 2006–2010 through guidelines for education for sustainable development (Utdanningsdirektoratet 2006). The guidelines were followed up by a new plan for the period 2012–2015 (Kunnskapsdepartementet 2012b).

In a recently published book titled *Schooling for Sustainable Development in Europe*, the editors, Jucker & Mathar (2015), have brought together scholars from different countries to highlight recent developments and issues relating to ESD. The report concludes that there are different approaches to this education and that the concept is sometimes treated as interchangeable with the concept EE, which is similarly open to a wide range of interpretations.

Although the concept of ESD does have many interpretations, it seems there is some degree of common understanding among a number of scholars that the change from EE to ESD can be interpreted as meaning that the latter is understood more broadly than the former (Tilbury 2005, McKeown-Ice & Hopkins 2007, Breiting & Wickenberg 2010, Jóhannesson et al. 2011, Pavlova 2013, Martin et al. 2013, Bagoly-Simó 2014, Berglund et al. 2014, Jucker & Mathar 2015). For example, ESD is understood as involving the following: socially and environmentally acceptable modes of economic activities, working, and living; overcoming poverty worldwide; and the participation of all people in education, democracy, and good governance. A further understanding of the concept is that pupils and students should have the necessary empowerment and competence to participate in society in order to contribute to sustainable development.

Sandell et al. (2005) have shown that traditionally environmental education was based on the belief that knowledge of environmental problems and certain sets of environmental values were sufficient to solve environmental problems. Since then, the approach has been reorientated to recognize the importance of ecological, economic, and social development and thus create a balance between environmental protection and human development.

Bagoly-Simó (2014, p. 128) has a corresponding understanding and explains the distinction between EE and ESD by using the metaphor of ESD "englobing" EE. By

this, he means that ESD has a larger framework that encompasses additional sociocultural and economic dimensions.

Tilbury (2005) and Breiting & Wickenberg (2010) explain the shift from EE to ESD as due to a need for a more clearly defined stance when addressing education for sustainability in the long term, in contrast to the apolitical, naturalist, and scientific work that they claim was carried out under the EE banner in the 1970s and early 1980s.

My understanding of ESD is based on the above-mentioned explanations. ESD is "englobing" EE (Bagoly-Simó 2014, p. 128), and ESD is not just about knowledge about environmental problems, but also about how environmental issues are interrelated to economic and social dimensions in society, and how society must change in order to become sustainable.

One criticism of the shift to ESD may be that the approach fails to communicate adequately the potential conflicts that such a radical change can cause. It is difficult to envisage consensus on sustainable development in society. Sustainable development represents a new way of thinking and challenges the current order in society. Evaluations from different countries show that engagement in ESD has been limited and that major changes in education to contribute to sustainable development have been more or less absent (Sandell et al. 2005, Smith 2013, Torbjørnsson 2014).

EE and ESD in Norway

The environmental approach in Norwegian schools reflects an emerging interest in environmental issues in the society. In Norway, as elsewhere in Europe, environmental awareness was growing in the 1970s. The increasing concerns about environmental issues also resulted in the appointment of Norway's first Minister of the Environment in 1972 (Berntsen 2011). The change in attitudes towards the relations between man and nature was reflected in the new curricula in schools from 1974.

After the Rio Conference in 1992 and the publication of Agenda 21 the Norwegian Government made new measures to implement ESD in schools. In the academic year 1991–1992 teachers of all subjects in upper secondary schools had to complete a 40-hour course in ESD to enable them to integrate environmental themes into their teaching. It is not known whether these courses improved ESD, but the importance of the approach to the subjects was clear.

Probably the most important contribution to ESD was the 1992 curricula for teacher education for classes 1–9. The curricula introduced a mandatory cross-curricular subject, equivalent to a half-year study course, called "Natur- Samfunn-Miljø" (NSM, Nature, Society, Environment). The main goal of the subject was to teach trainee teachers about environmental education and sustainable development, and consequently make stronger commitments to education for sustainable development in Norwegian schools.

NSM existed in Norwegian teacher education for ten years. The subject was removed from the curricula as part of the teacher education reform in 2002. The change from being an important part of teacher education to no longer being a priority was probably a major setback for education for sustainable development in Norway. Since then, few measures have implemented ESD, with the exception of new guidelines for schools (Utdanningsdirektoratet 2005, Kunnskapsdepartementet 2012b). The guidelines are not curricula and do not carry the same weight.

Geography, environmental education and education for sustainable development

Both EE and ESD are seen as cross-curricular (Jucker & Mathar 2015). Especially ESD are very ambitious and may lead to a fundamental change in education. However, education in schools is based on different subjects. If either EE or ESD is to be implemented, it will have to be treated as an important approach within the different subjects.

The *2016 International Charter on Geographical Education* produced by the International Geographical Union Commission on Geographical Education outlines the environmental approach to geography as a taught subject (International Geographical Union Commission on Geographical Education 2016). The approaches to ESD are stated in the *Lucerne Declaration on Geographical Education for Sustainable Development* (Haubrich et al. 2007).

Researchers in the geography community have claimed that geography has many conditions that render it an important subject on environmental issues because geography, EE and ESD have several linkages. Geography is an integrating discipline and it bridges the sciences and social sciences, which is necessary in order to analyse sustainability issues. Additionally, the subject deals with many economic, social and environmental issues. Geography contributes also to spatial understanding and scales of sustainability issues (Ballantyne 1999, McKeown-Ice & Hopkins 2007). However, a study of geography teachers in 18 countries (not including Norway) showed that in relation to the environment environmental educators focused on developing environmental knowledge and attitudes in the classroom rather than on influencing students' decision-making and actions in society (Ballantyne 1999).

Only a few studies of geography curricula have approached the difference between EE and ESD. Peter Bagoly-Simó (2014) studied the situation of EE and ESD in lower secondary schools' geography curricula in Bavaria (Germany), Romania and Mexico. He found that geography curricula in Bavaria and Romania were more related to EE than to ESD because they lacked the relation between environmental issues and economic and social issues in society, although some concepts connected to sustainable development were used.

By contrast, Bagoly-Simó (2014) found that the Mexican geography curricula integrated ESD. The curricula integrated the concept of sustainable development into

the core concept "space" and aimed both to foster ESD through combining geographical content, skills, and attitudes, and to foster learning to promote students' actions in society when faced with environmental problems and possible risks to their living spaces.

In the following section, I analyse the approaches to EE and ESD in Norway's geography curricula since the 1970s. Geography, together with history and social science constitute the subject social studies in lower secondary schools, and in the recent curricula also in primary schools. In upper secondary schools, geography is a compulsory one-year subject for students attending programmes leading to qualification for university admission. There are also optional courses in both physical geography and social geography in upper secondary schools, but these are not studied in this article.

I have divided the studied period from the 1970s to the present day into two parts, namely before and after Agenda 21, when the concept of education for sustainable development was introduced into Norwegian schools.

Methodology

The use of interpretation to provide meaning has been advocated as a methodology by geography theorist since the 1970s (Gerber 1996, p. 12). The methodology used in this article can be described as qualitative content analysis. In qualitative content analysis the researcher interprets the meaning of the text. The researcher can systematize his or her text by using different approaches. Philip Mayring (1993) shows three approaches to systematizing text: (1) the provision of references, (2) the demonstration of associations, and (3) the use of a pragmatic approach. In this study, I use both references and associations. Further, the references to EE and ESD are interpreted.

If the formulated goals for a school curricula refer to EE or ESD, this raises the question: Does the curricula explain the content of the concepts? It is not enough to mention ESD without explaining the meaning of the concept. The goals should be associated with how environmental issues are interrelated with the economic and social dimension in the society, and how the society must change to become a sustainable society.

Sandell et al.'s approach to describing different levels of education for the environment has been used in this study as a tool to interpret the goals in the school curricula (Sandell et al. 2005). They have distinguished between three levels of approach to environmental education. The three levels can be likened to a ladder, with the ESD at the top, as the most developed and comprehensive approach to environmental education.

1. The first and lowest approach level is environmental education limited to learning about scientific knowledge. Environmental problems are seen as unforeseen production and exploitation.

2. The second approach level is environmental education based on learning about scientific knowledge but also with goals to develop environment friendly values and attitudes.
3. The third approach level is education about sustainable development. Such education involves seeing the environmental perspective in light of a society that causes environmental problems and how the challenges can be solved in a democratic political process and subsequently transform that society in a sustainable direction. The cause of environmental problems is seen as conflicts between humans' wide ranging achievement goals.

Since 1997, the curricula for mandatory schooling in Norway (classes 1–10) have had the goals formulated only at the end of each class group, 1–4, 5–7, and 8–10.[1] The other studied curricula have the goals stated for each year.

In the following section, the approaches to EE and ESD in the geography curricula since 1970s are analysed, for both compulsory schooling (classes 1–10) and upper secondary schools. The period before the concept ESD was developed is analysed to determine whether there has been any progress regarding how environmental education is described. Curricula for both school levels are studied to see whether there are differences between primary and lower secondary school education (*grunnskolen*, classes 1–10) and upper secondary school (*videregående skole*, classes 11–13).[2] In addition, general core curricula are analysed to see how geography curricula relate to the above-mentions core curricula.

Curricula in the period before Agenda 21

Primary and lower secondary schools

The 1974 curricula for primary schools (*barneskoler*) and lower secondary schools (*ungdomsskoler*), known as Mønsterplanen 1974 (M74), was the first to state the importance of EE (Kirke- og undervisningsdepartementet 1974). The general core part of the curricula is rather comprehensive, but environmental issues are not treated in a separate part, despite being mentioned a few times. The general core curricula state the importance as follows: "Knowledge of both the living and the not-living nature shall give both understanding and joy"[3] (Kirke- og undervisningsdepartementet 1974 p.12).

The 1974 curricula were separated into cross-curricular topics and school subjects. The most prominent place for environmental education was as one of 12 cross-curricular topics. Science was mentioned as the most important subject, but

[1] Mandatory schooling changed from 9 to 10 years in 1997.
[2] In primary and lower secondary schools, geography is not taught as a separate subject. Rather, the geography syllabus is included in the social studies curricula. In upper secondary schools, geography is taught as a separate subject with its own curricula. In this article the concept 'curricula' is sometimes used for both syllabuses and curriculas, to simplify the text.
[3] All translations from non-English sources have been made by the author of the present article.

environmental issues were regarded as part of other subjects, such as social studies and religious education.

In primary school classes 1–3, the subjects' social studies and science were merged to form the subject "Orientation". Neither in classes 4–6 nor in classes 7–9 was geography treated as a separate subject, but like history and social science, there was a separate syllabus for geography as a school subject, which was covered under social studies. Among the three social studies subjects in the 1974 curricula, and in subsequent curricula, geography appeared to be the appropriate subject to deal with EE; neither history nor social sciences had any goals that directly mentioned environmental issues.

Environmental issues were mentioned in the geography syllabus for classes 4–6 and classes 7–9. In the introduction to the syllabus, knowledge about environmental problems caused by human use of resources was stated as an important approach within geography teaching, and competence goals stated the importance of "developing attitudes to a more even and fair distribution of goods between people on Earth" (Kirke- og undervisningsdepartementet 1976 p.46).

The next curricula reform in primary and lower secondary schools was the 1986 Mønsterplanen, which was cross-curricular and thematic-oriented, such that the relation between geography and EE was diffuse. In primary school classes 1–6, social studies and science were merged to form the subject "Orientation". In lower secondary schools (classes 7–9) social studies was based on different thematic topics. One of the topics "Nature, man and resources" (*Natur, menneske og ressurser*) can be interpreted as based on geography, but geography as a subject was not mentioned (Kirke- og undervisningsdepartementet 1987).

Upper secondary schools

For upper secondary schools (*videregående skoler*), the 1976 curricula was the first general core curricula to state the importance of EE (Kirke- og undervisningsdepartementet 1976). Additionally, the curricula stated that EE should be covered under both science and geography. Ecological understanding and global awareness were core goals. Also the importance of knowledge about the environment and positive attitudes to environmental protection were stated.

The geography curricula were divided into two parts: cultural geography and physical geography. Environmental topics did not have a prominent place in the curricula: in physical geography environmental issues were not mentioned at all, but land use and environmental protection as well as developing and industrialized countries were two of the four main aims in cultural geography (Kirke- og undervisningsdepartementet 1976).

While the 1976 general core curricula were continued, the subject curricula were changed in 1990. The environmental approach in geography was considerably strengthened. The new geography curricula stated the environmental approach to geography very clearly. Five of the topics in the curricula were highlighted as of special importance in geography, all of which were typical environmental topics:

humans' living conditions in different places on Earth; the relations between natural resources, population and human activity; the scope and distribution of environmental problems; environmental issues; and the development and North–South relations. The learning goals approached both knowledge and environmentally friendly attitudes (Kirke- og undervisningsdepartementet 1990). However, the 1990 curricula never used ESD as a concept. The concept existed, but was not introduced in schools until two years later, with Agenda 21. Thus, a relevant question may be: When the environmental approach is so important in the geography curricula, can we find elements of ESD, even when the concept itself is not used? One goal of the 1990 curricula states: "Knowledge of humans' basis for existence, and the possibility to achieve a broad competence of understanding places can be seen in the relation between nature and society" (Kirke- og undervisningsdepartementet 1990 p.2).

The 1990 curricula cannot be defined as one that highlights sustainable development, since it does not address the importance of the strong relation between economic and social development in society and environmental problems, and the importance of developing a society that is built more on environmental friendly principles. However, the curricula show that there is considerable potential to develop geography as a taught subject into an ESD approach.

With regard to the three levels of environmental education presented by Sandell et al. (2005), goals in both primary and lower secondary geography curricula before Agenda 21 can be related to both the first level of environmental education (environmental knowledge) and the second level of environmental education (developing environmental attitudes), but not to the third level – education for sustainable development.

Curricula after Agenda 21

Primary and lower secondary school

In 1997 a new curricula for primary and lower secondary schools was introduced. The general core curricula stated the environmental approach to education very clearly. One of seven core aims for education in both primary and lower secondary schools, as well as for upper secondary schools, was "The environmentally-aware human being". In this regard, the curricula states:

> *The interplay between economy, ecology and technology must make unique demands, scientific and ethical, on our age, if we are to ensure sustainable development. This must take as its starting point the limitations set by our natural environment, by resources, technological level and social conditions as well as by the conflicts which arise when environmental considerations are given priority.* (Kirke-, utdannings- og forskningsdepartementet 1996, p. 46).

It also states that: "in a sustainable development an important assumption is the ethical development of brotherhood with the world's poor inhabitants" (Kirke-, utdannings- og forskningsdepartementet 1996, p. 46). These formulations can indicate

the general core curricula to approach ESD, because the social and economic approaches to environmental issues are integrated.

In the 1997 curricula, the social studies curricula for classes 5–10 was structured into three syllabuses: geography, history and social science. The curricula was rather comprehensive, with goals for each year. Some of the goals in the geography syllabus related geography to EE. These goals were based on traditional geographical topics, including: knowledge about the interdependencies between man and nature, knowledge about how humans change the environmental balance; the use of natural resources; environmental conflicts; environmental problems caused by human activities such as pollution; the use of technology and recycling of goods; knowledge about international economies; and poverty and the distribution of goods between people on earth. By contrast, the link to ESD was weaker. The syllabus referred to ESD in one goal, which stated that "premises for sustainable development should be discussed" (Kunnskapsdepartmentet 2006, p. 185), but the concept was neither explained nor linked to economic and social development.

A new curricula for primary and lower secondary schools was introduced in 2006 (Kunnskapsdepartementet 2006) with a minor revision in 2013 (Utdanningsdirektoratet 2013). The general core curricula from 1997 were continued. Common main objectives in the social studies curricula stated that knowledge about sustainable development was one the approaches to the subject. As in the curricula in social studies in 1997, the subjects history, social science and geography each had their own syllabus, but the curricula had a new approach, with learning goals only stated after classes 4, 7, and 10. Geography had several goals concerning learning about environmental issues, but as in earlier curricula the goals were related to traditional geography topics, such as the use and misuse of resources and the consequences for nature and society at different geographical levels. Although the curricula stated that "the premises for sustainable development should be discussed" (Kunnskapsdepartementet 2006 p. 8), it did not provide a definition of the concept. The 2006 geography curricula can be characterized by its focus on knowledge about the environment and environmentally friendly attitudes, but even when the concept ESD is used, the social and economic approach to the curricula does not indicate that ESD is implemented.

The geography syllabuses from 1997 and 2006 (revised in 2013) can be categorized as at level one and two in Sandell et al.'s approach to environmental education, environmental knowledge and environmental values (Sandell et al. 2005).

Upper secondary schools

Already in 1994 a new reform was implemented in upper secondary school: Reform 94 (Kirke-, utdannings- og forskningsdepartementet 1994). The reform was a setback for geography because the teaching was reduced from three hours per week to two hours per week. Due to the reduction, the curricula had to be shortened too, and the scope for environmental education was decreased. Nevertheless, the main

objectives mentioned in the introduction to the reform recognized that knowledge of environmental issues and sustainable development is very important.

The curricula had four groups of aims, which related to landscape and climate, cultural landscape, resources and industry and population and settlement. Particularly the international perspective was moderated, but also the scope and distribution of environmental problems. One competence goal stated that the student should explain the term sustainable development, but as in the curricula for primary and lower secondary schools the concept was not explained (Kirke-, utdannings- og forskningsdepartementet 1994). With regard to the approach to environmental education presented by Sandell et al. (2005), the curricula were at the first level (knowledge about environmental problems) and second level (attitudes to the environment).

The curricula for upper secondary school were reformed in 2006 and the same general core curricula were kept. Geography is still only taught two hours per week for one year within the education programme that prepares students for university studies. Like the former curricula, the introduction of the geography curricula contains some formulations indicating the value of ESD (Kunnskapsdepartementet 2006).

There have not been any major changes in the competence goals since the 1994 curricula, but international issues such as demography and development are outlined as a major aims, and the topic cultural landscape is not stated as a major aim. One goal mentions the sustainable use of resources: "discuss the term sustainable use of resources" (Kunnskapsdepartementet 2006 p. 1), but the meaning of the goal is not explained. Compared to Sandell et al.'s theoretical approach, the geography curricula since Agenda 21 have been at level one (environmental knowledge) and level two (environmental values).

Discussion

Ballantyne (1999), McKeown-Ice & Hopkins (2007) claim that the environmental dimensions are important in geography curricula. The findings presented in this article indicate that the environmental education dimension is also present in Norwegian geography curricula. The syllabuses for primary and lower secondary schools from 1974, 1997 and 2006, and the curricula for upper secondary schools from 1976, 1990, 1994 and 2006 all show that environmental topics are considered important and several learning goals in geography are related to environmental issues.

The environmental approach in geography curricula in Norway is mainly connected to geographical topics related to the use of resources, how man can use and misuse the environment at different geographical levels, and global perspectives on the distribution and use of resources. All of these approaches have traditionally been major topics in geography and consequently the environmental perspective has a well-founded connection to geography as a taught subject. Where different geographical topics are discussed, the environmental consequences are often presented too.

The concept of sustainable development has been mentioned in Norwegian geography curricula since 1994, but the concept has not been explained or has only very slightly been related to other competence goals. However, since 1997, the general core curricula in Norwegian schools has stated the importance of ESD in primary schools, lower secondary schools, and upper secondary schools, but this has not been followed up in the geography curricula. There appears to be no important differences between curricula in mandatory schooling (classes 1–10) and curricula in upper secondary schools. The lack of coherence between general core curricula and geography curricula is present both in curricula for primary and lower secondary schools and in curricula for upper secondary schools.

With regard to Sandell et al.'s (2005) approach to environmental education, the geography curricula can be related to the first level (knowledge of environmental problems) and the second level (environmentally friendly attitudes). ESD is interpreted as going one step farther, as it not only deals with knowledge and attitudes, but also includes education in how to contribute to sustainable changes in a society. The findings presented in this article show that the geography curricula introduced after the concept of ESD was developed have been very similar to those introduced before the concept was used.

Compared with the results from Bagoly-Simó's study of EE and ESD in lower secondary school geography curricula in Bavaria (Germany), Romania, and Mexico (Bagoly-Simó 2014), Norwegian geography curricula seem to have been quite similar to the geography curricula in Bavaria and Romania because they have been more closely related to traditional EE than to ESD. Norwegian, Bavarian, and Romanian geography curricula have all lacked an integrated economic and social dimension, even though some concepts connected to sustainable development have been used. By contrast, Bagoly-Simó (2014) found that the geography curricula in Mexican schools integrated ESD. The Mexican curricula stated the importance of economic and social development and integrated the concept of sustainable development into the core concept "space".

The reason for the failure to implement ESD in the geography curricula in Norway may be due to ESD generally being given low priority in Norwegian schools. A recent evaluation of ESD in Norwegian schools for the period 2005–2014 has shown that the strategy for ESD did not have an action plan even though there were guidelines, and the approach lacked priority and was reduced to an extracurricular activity (Ugland et al. 2015). This situation may also explain the divergence between the core goals in the national curricula, especially the 1997 general core curricula and the competence goals in geography curricula. Disparities between the competence goals stated for certain subjects and the general core goals in the national curricula may be due to the fact that core goals have been seen as involving less commitment, and have been more general wishes for education in Norwegian schools that led to aims to define specific goals in the subject curricula.

Regarding the lack of interest in ESD, one relevant question is: Does society really want schools to educate pupils and students to implement sustainable development?

It is difficult to see any consensus on sustainable development in society. Sustainable development represents a new way thinking and challenges the current order in society. Evaluations from different countries show that engagement in ESD has been limited and major changes in education to contribute to sustainable development have been more or less absent (Smith 2013, Torbjørnsson 2014). A recent evaluation of concepts, policies, and educational experiences at the end of the UN Decade of Sustainable Development (2005–2015) (Jucker & Mathar 2015) has shown that no real progress has been made in the changes towards ESD, nor has there been any high-level policy commitment.

Conclusions

The change from EE to ESD involves education about the environment being understood in a broader way, about how environmental issues are interrelated to economic and social dimensions in society, and how society must change in order to become sustainable.

The Norwegian geography curricula show that geography has an environmental approach to many geographical topics. Geography has always dealt with relations between man and nature at different geographical levels and therefore an environmental approach to the subject is in line with its history and content. However, there has been little change in the geography curricula since the concept of education for sustainable development was introduced. Although ESD is mentioned in the curricula, it is not explained, nor has it been implemented. However, although general core goals in the national curricula indicate a change to ESD, they have not been followed in the geography curricula. There are no important differences between mandatory schooling (classes 1–10) and education in upper secondary schools in Norway.

Compared to Sandell et al.'s (2005) three levels of approached to environmental education, involving environmental knowledge, environmentally friendly attitudes and education for sustainable development, the geography curricula have approached the former two levels. However, education for sustainable development (the third level) has had little presence in the geography curricula in Norway.

References

Bagoly-Simó, P. 2014. Tracing sustainability: Education for Sustainable Development in the lower secondary geography curricula of Germany, Romania, and Mexico. *International Research in Geographical and Environmental Education* 23:2, pp. 126-141.

Ballantyne, R. 1999. Teaching Environmental Concepts, Attitudes and Behavior Through Geography Education: Findings of an International Survey. *International Research in Geographical and Environmental Education* 8:1, pp. 40-58.

Berntsen, B. 2011. *Grønne linjer*. Oslo: Unipub forlag.

Berglund, T., Gericke, N., Rundgren, S.C. 2014. The implementation of education for sustainable development in Sweden: Investigating the sustainability consciousness among upper secondary students. *Research in Science & Technological Education* 32:3, pp. 318-339.

Breiting, S. & Wickenberg, P. 2010. The progressive development of environmental education in Sweden and Denmark. *Environmental Education Research* 16:1, pp. 9-37.

Gerber, R. 1996. Interpretive Approaches to Geographical and Environmental Education Resarch. In Williams, M. (ed.) *Understanding Geographical and Environmental Education.* New York: Cassell Education, pp. 12-26.

Haubrich, H., Reinfried, S. & Schleicher, H. 2007. Lucerne Declaration on Geograhical Education for Sustainable Development. Reinfried, S., Schleicher, Y. & Rempfler, A. (eds.) Geographical Views on Education for Sustainable Development. Proceedings of the Lucerne-Symposium, Switzerland, July 29–31, 2007. *Geographiedidaktische Forschungen* 42, pp. 243–250.

International Geographical Union & Commission on Geographical Education [IGU-CGE]. 2016. *2016 International Charter on Geography Education.* http://www.igu-cge.org/Charters-pdf/Draft%20Charter%20IGU-CGE%20June%2011th%202015.pdf (downloaded 1 April 2016).

Jóhannesson, I., Norðdal, K., Óskarsdóttir, G., Pálsdóttir, A. & Pétursdóttir, B. 2011. Curricula analyses and education for sustainable development in Iceland. *Environmental Education Research* 17:3, pp. 375-391.

Jucker, R. & Mathar, R. 2015. Introduction: From a Single Project to a Systematic Approach to Sustainability—An Overview of Developments in Europe. In Jucker, R. & Mathar, R. (eds.) *Schooling for Sustainable Development in Europe: Concepts, Policies and Educational Experiences at the End of the UN Decade of Education for Sustainable Development.* London: Springer. pp. 3–14.

Kirke- og undervisningsdepartementet. 1974. *Mønsterplan for grunnskolen M 74*. Oslo: Kirke- og undervisningsdepartementet.

Kirke- og undervisningsdepartementet. 1976. *Læreplan for den videregående skole, felles allmenne fag 1976*. Oslo: Kirke- og undervisningsdepartementet.

Kirke- og undervisningsdepartementet. 1987. *Mønsterplanen for grunnskolen M 87*. Oslo: Kirke- og undervisningsdepartementet.

Kirke- og undervisningsdepartementet. 1990. *Læreplan for den Videregående skolen, Geografi felles allmenne fag.* Oslo: Kirke- og undervisningsdepartementet.

Kirke-, utdannings- og forskningsdepartementet. 1994. *Læreplan Geografi fellesfag.* Oslo: Kirke-, utdannings- og forskningsdepartementet.

Kirke- utdannings og forskningsdepartmentet. 1996. *Læreplanverket for den 10-årige Grunnskolen.* Oslo.Kirke- utdannings og forskningsdepartmentet.

Kunnskapsdepartementet. 2005. *Strategiplanen for utdanning for bærekraftig utvikling*. 2006-2010. Oslo: Kunnskapsdepartementet.

Kunnskapsdepartementet. 2006. *Læreplan i samfunnsfag*. Oslo: Kunnskapsdepartementet.

Kunnskapsdepartementet. 2012a. *Kunnskap for en felles framtid.* Oslo: Kunnskapsdepartementet.

Kunnskapsdepartementet. 2012b. *Kunnskap for en felles framtid: Revidert strategi for utdanning for* bærekraftig utvikling 2012-2015. Oslo: Kunnskapsdepartementet.

Kunnskapsdepartementet og Utdanningsdirektoratet. 2006. *Læreplaner for kunnskapsløftet. Geografi fellesfag.* Oslo: Kunnskapsdepartementet og Utdanningsdirektoratet

Martin, S., Dillon, J., Higgins, P., Peters, C., Scott, W. 2013. Divergent Evolution in Education for Sustainable Development Policy in the United Kingdom: Current Status, Best Practice, and Opportunities for the Future. *Sustainability* 5, pp. 22-1544.

Mayring, P. 1993.*Qualitative Inhaltsanalyse*. Weinheim: Deutcher studien Verlag.

McKeown-Ice, R. & Hopkins, C. 2007. Moving Beyond EE and ESD Disciplinary Debate in Formal Education. *Journal of Education for Sustainable Development* 1:1, pp. 17-26.

Pavlova, M. 2013. Towards using transformative education as a benchmark for clarifying differences and similarities between Environmental Education and Education for Sustainable development. *International Research in Geographical and Environmental Education* 19:5, pp. 656-672.

Sandell, K., Öhman, J. & Östman, L. 2005. *Education for Sustainable Development*. Lund: Studentlitteratur.

Smith, M. 2013. How does education for sustainable development relate to geography education. In Lambert, D. & Jones, M. (eds.) *Debates in Geography Education.* London: Routledge. pp. 257-271.

Tilbury, D. 2005. Environmental Education for Sustainability: Defining the new focus of environmental education in the 1990s. *Environmental Education Research* 1:2, pp. 195-212.

Torbjørnsson, T. 2014. *Solidaritet och utbildning för hållbar utveckling.* Acta Universitatis Upsaliesis. Uppsala.

Ugland, M.A., Høgmo, N. & Sandås A. 2015. Learning from ESD Projects During the UN Decade in Norway. In Jucker, R. & Mathar R. (eds.) *Schooling for Sustainable Development in Europe*. London: Springer. pp. 241-256.

UNESCO. 1978. *Intergovernmental Conference on Environmental Education: Tbilisi (USSR) 14–26 October 1977*. UNESCO, Paris. http://unesdoc.unesco.org/images/0003/000327/032763eo.pdf (downloaded 1 April 2016).

UNESCO. Undated. *UN Decade of Education for Sustainable Development 2005–2014*. UNESCO document ED/2005/PEQ/ESD/3. http://unesdoc.unesco.org/images/0014/001416/141629e.pdf (downloaded 1 April 2016).

UN. 1992. *Agenda 21: Programme of Action for Sustainable Development Earth Summit*. United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, 3–14 June 1992. New York: United Nations. https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf (downloaded 1 April 2016).

Utdanningsdirektoratet. 2005. *Utdannelse for bærekraftig utvikling.* Oslo: Utdanningsdirektoratet.

Utdanningsdirektoratet. 2006. *Geografi, Fellesfag i studieforførebuande studieprogram.* Oslo: Utdanningsdirektoratet.

Utdanningsdirektoratet. 2013. *Læreplan i samfunnsfag.* Oslo: Utdanningsdirektoratet.

World Commission on Environment and Development.1987. *Our Common Future*. http://www.un-documents.net/wced-ocf.htm (downloaded 29 October 2013).