

JYX



This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

Author(s): Mykrä, Niina

Title: Ecological Sustainability and Steering of Finnish Comprehensive Schools

Year: 2023

Version: Published version

Copyright: © 2023 The Author(s)

Rights: CC BY 4.0

Rights url: <https://creativecommons.org/licenses/by/4.0/>

Please cite the original version:

Mykrä, N. (2023). Ecological Sustainability and Steering of Finnish Comprehensive Schools. In M. Thrupp, P. Seppänen, J. Kauko, & S. Kosunen (Eds.), *Finland's Famous Education System : Unvarnished Insights into Finnish Schooling* (pp. 87-104). Springer. https://doi.org/10.1007/978-981-19-8241-5_6

Chapter 6

Ecological Sustainability and Steering of Finnish Comprehensive Schools



Niina Mykrä

Abstract With the climate catastrophe and biodiversity loss, our globe is facing enormous challenges: the basis of life on Earth is in danger. Eco-anxiety and global eco-social crises are also driving education to search for solutions to build a sustainable future, for instance the United Nations Agenda 2030 for Sustainable Development views education as a key instrument for change. One of the key promises of the Finnish Ministry of Education is to commit to sustainable development, and the Finnish National Forum for Skills Anticipation states that important future skills should include knowledge of sustainable development. In national reports on how to carry out Agenda 2030, Finland has highlighted education as a key strength in meeting the sustainability goals. Yet the global goals of sustainability education fail to translate into concrete actions by the time they reach everyday life in Finnish schools. The 2014 Finnish national core curriculum for basic education is also insufficiently clear in the area of sustainability even though it expects sustainability to be included in school culture and teaching. In addition to this, the enactment of the curriculum in Finnish comprehensive schools meets various hindering and promoting cultural elements, which are interconnected. Change towards sustainability across levels of activity from high-level policy to everyday life within schools in Finland is complicated.

A change of direction is vital for a sustainable future: the globe is facing enormous challenges with the degradation of the environment. News about the climate catastrophe, biodiversity loss, and soil and water contamination fill the media.¹ New research reveals devastating details of the state of the environment with only a few signs of improvement, and researchers have appealed to politicians to take action.² The cause of the degradation of nature lies in human-centred relationships to nature, overconsumption and the neo-liberal paradigm: all of these are central to the frightening developments.³ There is an urgent need for society to change both individual

N. Mykrä (✉)

Finnish Institute for Educational Research, University of Jyväskylä, P.O. Box 35, 40014

Jyväskylä, Finland

e-mail: niina.p.mykra@jyu.fi

© The Author(s) 2023

M. Thrupp et al. (eds.), *Finland's Famous Education System*,

https://doi.org/10.1007/978-981-19-8241-5_6

and institutional environmental practices. However, promoting sustainability can be expected to be complex because it conflicts with overall trends in society and politics, it is based on diverse academic disciplines, it is strongly connected with ecological literacy, and it is value dependent.⁴

The United Nation's Agenda 2030 for Sustainable Development⁵ presents 17 sustainable development goals (SDGs) for prosperity for people and the planet, now and into the future. It suggests that education is a key enabler of all other Sustainable Development Goals. In global politics, there are ambitions that public school systems should lead the way to a sustainable future.⁶ At the same time UNESCO's 'roadmap' for education for sustainable development suggests that we are nowhere near that point because in many countries education for sustainable development (ESD) is reflected in education policy, teacher training, and curricula but often it is interpreted with a narrow focus on topical issues rather than with a holistic approach on learning content, pedagogy, and learning outcomes which make the transformation possible.⁷

Bringing change to schools is not an easy task as they can never be released from the society in which they are situated.⁸ Moreover education and schooling are inherently contradictory: their role is to both socialise children and renew society.⁹ In these two tasks also stands the relevant possibilities of education: learning to live in equilibrium with other-than-human and learning to renew the present unsustainable way of life.

The literature on sustainability often regards ecological, social, cultural, and economic dimensions as equal bases of sustainability. In contrast, but like Rockström and Sukhdev,¹⁰ I view ecological sustainability as the most central element. Only a stable climate system and resilient ecosystems can provide a foundation for human social, cultural and economic activities, and so at school, to learn and act for this order of priority, is vital. For this reason, I look at the situation in Finnish comprehensive schools through the promotion of ecological sustainability at school. I define the promotion of ecological sustainability at school as a multi-voiced, multidisciplinary, and multilevel activity that hopefully will lead the way to an ecologically sustainable future. Promotion means actively encouraging or furthering the progress of ecological sustainability. Ecological refers to the equilibrium between living organisms such as human beings, plants, and animals as well as their environment. Sustainability is the ability to uphold or defend this ecological equilibrium. The school is the place where this promotion happens, and it includes both environmental and sustainability education and reducing the environmental load of the school.

Steering of Comprehensive Schools Towards Ecological Sustainability in Finland

As the promotion of ecological sustainability is a multi-level phenomenon, it is important to consider what kind of steering policies for ecological sustainability there are in Finland, how the national curriculum of basic comprehensive schooling

reflects the goals defined by steering documents, and how these relate to local school activities in Finland. Environment and education policies have often attempted to create change at schools but as this section will show, often with little real impact.

There are many policy documents that drive comprehensive schools towards sustainability in Finland. In recent research¹¹ I examined over 80 Finnish steering documents and web pages from the Ministry of Education and Culture, the Ministry of the Environment and the Finnish National Agency for Education. I also considered documents that included ecological sustainability in education from other areas of Finnish public administration on different levels. Key documents were found by going through websites, Non-Governmental Organisations' lists of the documents that are important for environmental education, and different search engines. The goal of this document analysis was to find the central documents that steer or intend to steer Finnish comprehensive schools towards sustainability, and to describe the spectrum of the policy instruments. I collected all essential contents from the documents, made first descriptive analysis and then thematic analysis of the contents, and the main findings of my analysis are discussed in this section.

When steering Finnish comprehensive schools, public administrators use mainly soft policy instruments like information, agreements, strategies, and action plans. Many documents related to sustainable development make mention of comprehensive schools. As they are soft policy instruments, there are no penalties if the plans are not fulfilled. Even so, these documents bring the themes to stage and show which things public administration prioritises. Documents are often made in cooperation or through democratic negotiations, which broadens the thinking of all involved, but can also make documents a heterogeneous collection of different and contradictory aspects.

The main international document related to sustainable development is Agenda 2030. It is at the heart of in Finnish environmental policy as well. The most important goal for sustainability education is subgoal 4.7: "By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles (...)". How Agenda 2030 gets enacted in Finland is a matter for the Finnish Government. Instead of a traditional national strategy document, the National Commission on Sustainable Development formulated *Society's Commitment to Sustainable Development*.¹² The goal was that both the Finnish public sector and other actors, would all make pledges to promote sustainable development in their work and operations. The Finnish National Commission on Sustainable Development argued that this widespread national commitment and concrete operational pledges would be a key instrument for implementing the Agenda 2030 in Finland.

In the field of education, both policymakers and every school were challenged to make their own commitments.¹³ For example, the Finnish National Agency of Education promised to include sustainable development systematically in the national goals of education, steer and support municipalities to change according to sustainability goals in curriculum and strengthen abilities to build a sustainable future in schooling.¹⁴ The Ministry of Education and Culture promised to respect the *Society's Commitment to Sustainable Development* and implement it in its strategies and

steering.¹⁵ It is expected that those who have made the commitments self-assess if the goals have been reached, but by the summer of 2021, neither the Finnish National Agency of Education nor the Ministry of Education and Culture had completed the assessments. Only a small percentage of schools made their pledges by 2020, and most of the pledges made focus narrowly on reducing personal waste or other small everyday acts.¹⁶ As a prompt for carrying out ecological sustainability at schools, *Society's Commitment to Sustainable Development* has not been a success.

Monitoring of the state of sustainable development in Finland is undertaken by the Prime Minister's Office together with the Finnish National Commission on Sustainable Development.¹⁷ The purpose of such monitoring is to create a comprehensive picture of how Finland is succeeding in promoting sustainable development and to identify the challenges for consistent policies. Progress towards targets was monitored by means of indicator baskets linked to the commitment. One indicator is particularly linked to ecological sustainability in education and relevant competences: "The number of daycare centres, schools and educational institutions with a focus on sustainable development". The number in this area has increased very slowly. As early as 2006, the Education and Training Division of the Finnish National Commission on Sustainable Development had set a target of 15% for the number of certified schools, but Finland has not yet reached even half of that target. Despite this, many reports argue that the area of education and competences is strong for ecological sustainability in Finland. For example, one national report on the applying the 2030 Agenda for Sustainable Development in Finland stated that its strengths lie in good education and competence, and that it is supported by a long-term, integrated approach to sustainable development in schools.¹⁸ A more recent report claims that sustainable development permeates all levels of education from early childhood education and care through to the secondary level.¹⁹ Unfortunately, these assessments are over-optimistic: in the education sector, the focus is on social sustainability and it is rare for policy statements to take a stand on ecological sustainability.²⁰ Agenda 2030 sub goal 4.7 is forgotten from the assessments, or they assume that the work has already been done by including sustainable development in the national curriculum of comprehensive schools.²¹

It was only in 2020 that the Ministry of Education and Culture in Finland published its Sustainable Development policy for achieving the goals of Agenda 2030.²² This policy declares that the special responsibility of the Ministry of Education and Culture lies in the promotion of goals related to social sustainability. Ecological sustainability has only a marginal presence in the document, it suggests ecological, social, and financial dimensions should be considered equally but the concrete subject matters of ecological sustainability education are missing. The document talks about energy efficiency and the circular economy in the maintenance and use of existing buildings, which is also important for ecological sustainability, but this is not enough to enhance learning for ecological sustainability. Concrete goals or steps for learning ecological sustainability are missing.

In addition to Agenda 2030 and related documents, many other environmental policy documents in Finland include enhancing ecological sustainability at schools. They include, for example, the Biodiversity Action Plan 2019 of Finland, the National

Forest Strategy 2025, a report on the National Energy and Climate Strategy for 2030, the National World Heritage Strategy, the National Climate Change Adaptation Plan 2022 of Finland, and the National Strategy for Walking and Cycling 2020. The education policy statements acknowledge ecological sustainability education much less than environmental policy documents, even though the strategy of Ministry of Education and Culture 2030 and the Finnish National Forum for Skills Anticipation states that important future skills should include knowledge of sustainable development.²³ Statements about ecological sustainability are scarce on the websites of the Ministry of Education and Culture and the Finnish National Agency of Education. For example, the Ministry of Education and Culture does not mention sustainability or environmental aspects at all when introducing ‘Finnish education in a nutshell’, a key overview of the Finnish education system for those in other countries.²⁴ There are some signs of more favourable future developments: the National youth work and youth policy programme 2020–23 has said that education providers will be encouraged to follow the principles of sustainable development and that there will be national sharing of good practices related to sustainable development.²⁵ Work based on the policy has already started: in 2021 the Finnish National Agency of Education published a web guide “Sustainable future” which concentrates on learning, working culture and everyday practices in the world of education and schooling.²⁶ The target group of the guide is educators on all levels. In addition to this, in 2021 the Finnish National Agency of Education launched a development project for sustainability education.²⁷

Closer analysis²⁸ of all the Finnish environment and education policy documents reveals six particular themes that I want to highlight here. First, environmental or sustainability education is significant in policy documents of all levels. They point out its importance and use inclusive language such as ‘all’, ‘every’, ‘overall’, when talking about learning with relation to sustainability. Some documents also argue that education is essential in making sustainability possible.

Second, education is seen as one tool for environmental policy. The documents suggest that policy goals should be achieved through schooling and the curriculum. Environmental policy sees schools as partners in cooperation towards carrying out the environmental policies.

Third, education policy documents do not include sustainability issues as comprehensively as the commitments of the national school administration would suggest. Many policy documents state that all activity concerning comprehensive schools should include sustainability issues. When examining educational steering documents, in many of them sustainability issues are missing or very scarce, even if including them could be reasonable. Many of the documents that do include ecological sustainability emphasise social aspects or concentrate only on climate change. There has, however been some better recent progress.

Fourth, the steering of schools towards ecological sustainability stays on the abstract level. The concepts used are abstract and ambiguous. Even when a steering document mentions sustainability education as an important aspect, it does not include it when listing the concrete steps of carrying out the policy. In environmental policy documents, the enhancement of environmental and sustainability education

stays at the level of administrative development or recommendations for cooperation. Many documents have recommendations attaching subject areas to the national curriculum of comprehensive school, but even then, statements stay abstract and do not specify what is meant to be learnt.

Fifth, commitments to include sustainability issues in all activity in education and comprehensive schools fade level by level until they reach the local documents. On the global and national level, documents promise to strengthen the knowledge and skills needed when building a sustainable future. For example, documents recommend that every school should have a plan or commitment for sustainable development. In reality however, only a minority of schools have made an official commitment to sustainability, a sustainable development or an environmental plan, or have some kind of certification of sustainability.

Finally, regulatory and economic policy instruments stay marginal when steering schools towards ecological sustainability. Most of the steering documents with relation to ecological sustainability at schools are soft policy instruments, like information and strategies. There are no economic instruments that focus on steering schools towards ecological sustainability although some relevant project funds have been released lately. National legislation includes only one statute that steers comprehensive schools towards sustainability, apart from the national core curriculum.

Overall, there are few steering documents with concrete steps to steer schools nationally towards ecological sustainability. One of the reasons could be that the great majority of schools are run by independent municipalities (see Kalalahti and Varjo in this book), and in addition to the non-earmarked lump sum distributed to municipalities, for the most part the state has statutory power over schooling only through the national curriculum.²⁹ Different organisations with many policy documents have wanted to include ecological sustainability in the national curriculum of comprehensive schooling, so it is to that I now turn.

Ecological Sustainability in the Finnish National Curriculum

In its Report on the Implementation of the 2030 Agenda for Sustainable Development, The Prime Minister's Office stated: "In Finland, sustainable development and global civic skills feature prominently in the national curricula and in qualifications from early childhood education to primary and secondary education".³⁰ But how true is this really? Looking at the national core curriculum for compulsory basic education in Finland, to what extent does it steer schools towards ecological sustainability?

The Finnish National Agency of Education drew up and confirmed the most recent National Core Curriculum for basic education in 2014, and it was required in municipalities and schools in 2016. Every comprehensive school is expected to work towards the objectives the National Core Curriculum. Education providers and schools draw up their own local curricula within the framework of the national core

curriculum. At every level, teachers, policymakers and citizens have had opportunities to have an impact on the content of the curriculum—although recent research suggests that the process was not as democratic as it was intended to be.³¹

My research analysed Finnish national core curriculum for basic education, the local curriculum of the field municipality and school level curriculums of three schools. The curriculum has two parts: the general part and the subjects at different levels. The general part concerns everybody, every lesson and all the activity in schools. It includes, for example, values, general goals, and operating culture. The subject part includes the special task of Grades 1–2, 3–6 and 7–9. Every subject has objectives of instruction and key content areas. Every object of instruction has a connection to the specific transversal competencies in the general part of the curriculum.

The first paragraph of the whole curriculum tells the reason why Finland updated the curriculum: "... to ensure that changes in the world around the school can be responded to and that the school's role in building a sustainable future can be strengthened in the organisation of education". Indeed sustainability is one of the key concepts in the Finnish curriculum.³² The main concepts used in the curriculum are sustainable development, sustainable future, and sustainable way of living. The curriculum uses the concepts environment, environmental awareness, and relationship with nature. Both the general and the subject part of the curriculum are rich with diverse content areas and themes connected with ecological sustainability. Most of the main chapters include sustainability issues, and more than 15% of the pages of the curriculum include the concept of sustainability. Yet the use of the concepts is not coherent. Different subjects use different concepts, and some use them all without any clear logic.

The general part states that eco-social knowledge and ability are part of sustainable development, and that eco-social knowledge and ability means that pupils understand the seriousness of climate change in particular, and strive for sustainability. One impressive section about underlying values points to the necessity of a sustainable way of living: "Humans are part of nature and completely dependent on the vitality of ecosystems. Understanding this plays a key role in growth as a human being". One of the seven transversal competencies in the curriculum is "Participation, involvement and building a sustainable future". There are some far-reaching statements in that part too. The curriculum promises that "the pupils develop capabilities for evaluating both their own and their community's and society's operating methods and structures and for changing them so that they contribute to a sustainable future". The operating culture section also includes strong statements: The pupils are encouraged to work for the well-being of their environment, and one principle of the "Environmental responsibility and sustainable future orientation" section promises that "A learning community accounts for the necessity of a sustainable way of living in all of its activities". Working methods in the curriculum include methods familiar from environmental education: outdoor learning, experiential pedagogy, exploration and multidisciplinary learning. The curriculum takes into account central competencies for sustainability, like responsibility, critical thinking, participation and cooperation,

too. In addition to this, one goal of multidisciplinary learning modules is “practising agency that is consistent with a sustainable way of living”.

My research considered how the transversal competence area “T 7. Participation, involvement and building a sustainable future” is connected with different objectives of instruction of the different subjects. In the curriculum, there are all together 741 objectives of instruction at all levels and in all subjects. Every subject and over a quarter of the objectives of instruction are marked in the curriculum as related to the Transversal competence area T7. I analysed whether these objectives include ecological, social, economic, or cultural sustainability. Only 10 subjects include ecological sustainability in 23 objectives, this equates to only 3% of the objectives of instruction. The social and cultural dimensions of sustainability appear more in the objects of instruction than ecological, although social sustainability takes the rather vague and unambitious form of “working together” and “taking care of each other”. Economic sustainability is mentioned less than ecological sustainability. Connecting the objects of instruction to the transversal competencies has not made the curriculum coherent: Ecological sustainability has not reached all subjects, but it is left mainly to the traditional natural sciences (environmental studies, biology, geography) but with some presence in religion, ethics, crafts and home economics. Most of these objectives include only personal choices for a sustainable way of living, with a quarter including a societal level. There are some ambitious objectives for ecological sustainability, but more critical ideas are missing, particularly if you compare the contents with the general part about changing the structures of the community. I would argue that every subject has its own role in fostering ecological sustainability, a role that no other particular subject can fill, and sustainability crises cannot be solved with personal choices but with collaboration between communities. Teachers should have been able to follow the curricula of the subjects and still get an extensive idea of promoting ecological sustainability.

To summarise, the structure of the Finnish National Core Curriculum for Basic Education includes multiple parts linked to sustainability, but some subjects have only weak connections to ecological sustainability. The curriculum is neither consistent nor coherent when talking about ecological sustainability. This could be because of the process of creating the curriculum: many different stakeholders wanting to have their say in the curriculum. While the general grounds for fostering ecological sustainability at school is strong, the curriculum is utopian rather than realistic, and does not provide a tool for every subject to work clearly towards ecological sustainability and ecological sustainability.

This leaves teachers with the huge task of realising connections between ecological sustainability and content areas of teaching. Although sustainability is recognised in the curricula, changes towards ecological sustainability in the everyday practices of schools do not automatically appear and it may be that change is only external.³³ Next, we turn to the everyday life of schools. How do teachers see the steering of environmental and educational policies within ecological sustainability?

Teachers and Administrative Steering

Although Finland's policy documents and curriculum steers schools and teachers towards ecological sustainability, everyday activity in Finnish school has many facets. My research involved interviews with 42 people working in school settings, mostly teachers from three schools but also some school leaders or administrators and some environmental educators. The main topics of the semi-structured, one-hour interviews were factors hindering and enhancing sustainability education at schools. The transcriptions were analysed through thematic analysis.³⁴ The analysis revealed 24 dilemmas that schools should solve before the promotion of ecological sustainability can fully expand, as well as three dimensions in the everyday activities of schools that include all these dilemmas and their possible solutions. I call these dimensions a *Sphere of Fostering Ecological Sustainability* (Fig. 6.1), as discussed.

The first dimension is that in Finland, teachers have considerable autonomy.³⁵ They can interpret and implement curriculum quite widely based on their quality education and expertise. Research has usually seen this as very advantageous for quality teaching, it gives motivation and job satisfaction, supports decisions suitable for local circumstances and gives learners a good example of working in organisation.³⁶ Nevertheless, my research found that this autonomy also sets challenges to the promoting of ecological sustainability at school—and steering of schools towards sustainability.

Teachers that I interviewed, called for their peers to engage with promoting ecological sustainability. At the same time, they did not like their own autonomy being

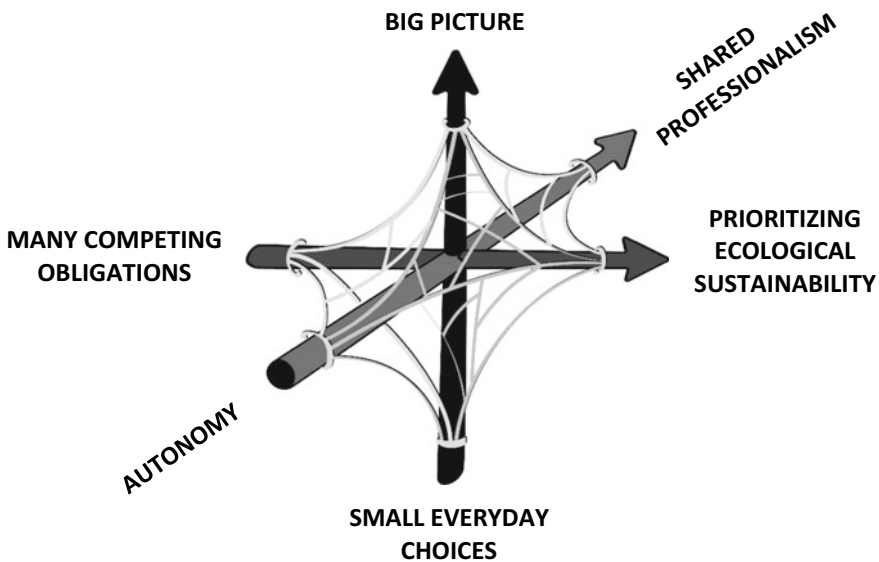


Fig. 6.1 A sphere of fostering ecological sustainability

disturbed: they said that they disliked guidance on environmental matters from their peers. This impacts another way: teachers do not like to disturb the autonomy of their peers: they are afraid that talking about environmental matters would bring negative emotions to the fore, and sensitive matters of this kind are better left undiscussed. Promoting ecological sustainability may be part of the underlying values of basic education as written in the curriculum, but unwritten rules can be much more powerful.

We can see the same kind of dilemma with autonomy and administrative steering: Teachers hope for clearer administrative steering in ecological sustainability, but at the same time many perceive the demands of the school administration as an unnecessary bureaucracy and administrative propositions as unsuitable for everyday school life. Meanwhile, many partners in cooperation with schools, like NGOs and other environmental education professionals, have the mission and professional skills to help schools to promote ecological sustainability, but find it hard to get inside the everyday life of school. Strong steering by school administrations or NGOs is rejected as disturbing teachers' autonomy.

Many young people have good ideas and an urge to promote ecological sustainability, but they do not have the autonomy to carry out the changes. Teachers and the national curriculum ask students to be active, but they have little real decision power. Many learners in comprehensive schools are capable of helping teachers in ecological sustainability issues and have many fresh and innovative ideas. Organising real possibilities for students to participate in developing activities and decision-making processes could help schools as a whole to make progress in the field of ecological sustainability.

Another possibility for overcoming these dilemmas and keeping the strengths of teacher autonomy is expanding autonomy to shared professionalism. My interviewees said that they think that teachers have a positive attitude toward promoting ecological sustainability, but at the same time they said that the major barrier to sustainability was negative attitudes. Joint planning and cooperation in the field of environmental education can bring different standpoints to the fore and make joint learning and local common solutions possible. Joint planning can also be a possibility for different actors at school (like cleaning, maintenance, lunch services and even environmental education professionals) to have their say in sustainability matters. There were some examples in my data how administrative steering helped schools to set up situations of this kind where the whole school community has training and discussions about ecological sustainability at school. In this way administrative steering can expand teachers' independent autonomy to the shared professionalism.

Moving now to the second dimension in the everyday activities of schools that incorporates dilemmas and their possible solutions, many schools concentrate on small everyday choices, when talking about ecological sustainability. The major role of everyday ecological acts at school is also highlighted by earlier research.³⁷ The everyday practices of the school can be justified because whole school approaches using everyday activities as a springboard to learning can help students move from

awareness to action and reduce the environmental load of the school.³⁸ Yet the environmental crisis that the world is facing cannot be solved with small local acts, rather fundamental transformation and transformative learning is needed.³⁹

Many interviewees recognised the big sustainability challenges that humankind must solve, and many of them considered that small acts at school are insignificant in comparison with big environmental problems. Still, at the same time, they said that most important thing is to teach learners small practical environmental choices, which are easy for children. Teachers said they needed tips for environmental education but did not take them to be part of their regular “serious” schoolwork—it is impossible to have suitable pre-made environmental education material for every lesson when the autonomous teacher has a strong view of what and how they want to teach. Usually, teachers used environmental education tips with learning methods during special days or programmes, such as environmental days at school. Many teachers did not challenge the current human nature relationship in society. They did not either give examples about how they brought out big environmental challenges in their teaching—many said that they are too difficult to take into discussion with children, and it is difficult to talk about something that raises the lifestyles of the children’s families. This is in contradiction to the curriculum and its demands for teaching pupils to develop capabilities for evaluating and changing society’s unsustainable structures as discussed earlier in this chapter.

One point of view concerning everyday sustainable acts relates to division of labour: teachers’ main job is teaching, not negotiating with refuse recycling companies about suitable waste bins or emptying them. The curriculum did not manage to deliver the whole picture of sustainability to teachers: Teachers said that promoting environmental sustainability belongs to their tasks, but many had only small-scale outlooks and thought that ecological sustainability only concerned recycling. Wherever local infrastructure was not ready for that, they found promoting ecological sustainability too hard. The previously mentioned joint planning including different actors at school is important for making the division of labour at school clearer—and for expanding the idea of what ecological sustainability includes. If the municipalities ensure that practices connected with recycling, energy and water usage and lunch services are ecologically sustainable, teachers can concentrate in what they know best: teaching and using the built environment as an example of environmental sustainability.

I also found possibilities to look at the bigger picture and wholeness of the world in my research. Some teachers used the school’s immediate surroundings (including nature) with many possibilities for considering ecological sustainability, while others preferred classroom teaching to outdoor teaching. (The situation might have changed, because with COVID-19 teachers found new interest in the outdoors and the use of outdoor learning and environmental education materials increased significantly).⁴⁰ Versatile working methods and multidisciplinary learning, mentioned in the curriculum as well, are very suitable for teaching ecological sustainability. Both of these possibilities seemed to be underused at school. Some teachers found multidisciplinary learning hard to manage. Administrative steering was able to not only introduce schools’ possibilities of multidisciplinary learning in local natural areas,

but also allow learning by teachers through enabling, for example, the services of nature schools (mentioned in the curriculum) or other professional environmental education services for schools.

The third dimension in the everyday activities of schools that incorporates dilemmas and their possible solutions was that teachers talked about many competing obligations at school. That teaching is very busy work is a well-known phenomenon that gets hundreds of thousands of hits in internet searches. Research recognises multiple demands that teachers meet at school as well.⁴¹ In my interviews, teachers said that a sustainable future is an important goal, but in the middle of numerous everyday demands that future seems far away, and you can think about it later—but the suitable time for sustainability issues never comes. Even if the more recent school reform in Finland has increased the demand for ecological sustainability, it also increased the number of pupils with special needs in average classes. This has increased teacher workload and reduced their energy available to sustainability matters.

Joint planning and cooperation can make joint learning and local common solutions possible in the field of promoting ecological sustainability at school, as I previously mentioned. At Finnish comprehensive schools, time is scarce for this kind of cooperation. One of the reasons is the collective agreement of Finnish teachers that counts only working hours with classroom teaching when determining salary.⁴² In addition to planning and giving lessons autonomously, teachers' obligation to work with their peers is restricted to only a few hours per month—including all the meetings of the teachers. In addition, the school year includes only three days joint planning. As a result, many teachers see the planning of ecological sustainability with others and for the whole school organisation as an extra task. Because there are so many other everyday practices in schools, teachers specialise: some teachers take care of musical instruments, others look after sports equipment. Teachers said that teachers in charge of sustainable education are important for reminding and developing the school activity related to ecological sustainability. The risk is that the responsibility falls entirely to the teachers in charge, and other teachers forget the issue.

One cure for the constant lack of time could be shared teaching, which means that there could be two teachers sharing larger teaching classes. In my field school, this brought many possibilities for teachers to take care of common issues like ecological sustainability during the lessons. Shared teaching also made it possible for teachers to discuss their ideas about ecological sustainability. Shared teaching could therefore be a springboard for school development, but sometimes it does not help: it could also lead to a division of labour without creative collaboration, a situation where sustainable issues are again left to one partner.

Schools could develop their ecological sustainability by prioritising the promoting of ecological sustainability over some other tasks. This is not easy: teachers generally do not know the global agreements on sustainability and so are unable to use them as their compass towards ecological sustainability. Even the curriculum has not managed to prioritise sustainability in everyday school life, although it contains strong statements promoting ecological sustainability for the reasons discussed earlier in this chapter. Textbooks do not help much either as teachers do not see

them as very helpful in these issues. It could also be that most teachers do not recognise the content areas of the subjects that include ecological sustainability, and that it is mainly those who already have qualifications in ecological sustainability that are improving their competence.

The steering of schools could prioritise sustainability issues. Principals can bring ecological sustainability to school meetings on a regular basis. Every year schools must answer the questions of the local administration to fulfil a local yearly plan of the school, and municipalities can ask about sustainability issues, and in that way make sustainability a priority in everyday choices. National school administration could communicate about ecological sustainability as a major theme in their information letters to municipalities or on their web sites. In the long run, governance can prioritise ecological sustainability by clearing the curriculum and improving the collective agreement of teachers so that time-consuming discussions on sustainability issues are better considered.

The three dimensions of a Sphere of Fostering Ecological Sustainability that I have introduced have many connections. That is why change cannot start only from one dimension, but every dimension should be considered. The steering of schools for bringing sustainability to central attention and into discussion can help in this multidimensional task.

Conclusion: Promoting the Ecological Sustainability at Schools Lacks Concrete Actions on Every Level

Many global organisations, national and local public administration and NGOs are steering comprehensive schools towards ecological sustainability in Finland. At schools, principals and teachers are implementing strategies and plans. Promoting ecological sustainability at school is a multi-voiced, multidisciplinary, and multilevel activity. In this chapter, I have introduced the steering towards ecological sustainability at schools that exists in Finland, what the national curriculum says about ecological sustainability and what the steering towards ecological sustainability looks like at the local school level through the eyes of teachers. The Finnish National Core Curriculum for Basic Education is the main document steering schools towards ecological sustainability, but it is inconsistent and not so concrete when talking about the subject contents. The independent autonomy of teachers, concentrating on small practical choices and many competing obligations challenges the promotion of ecological sustainability—but can be expanded to shared professionalism, awareness of the bigger picture, and the prioritising of ecological sustainability.

Such steering can have favourable implications for ecological sustainability, but there is still much to do. While the Prime Minister's Office praises the Finnish schools for a long-term, integrated approach to sustainable development,⁴³ closer analysis of the situation shows that the whole picture is not so rosy. A larger view is needed on every level. It is important to have a dialogue on all levels: What is

the goal in promoting the ecological sustainability of schools? What can the role of schools be in making societies ecologically sustainable? Steering is not equivalent to giving instructions on exactly how to do this. It can provide possibilities for discussions and debates where everybody's expertise and standpoints build a more ecologically sustainable school and education in cooperation. Steering has the possibility to bring environmental issues to wider attention, show that ecological sustainability is an important issue, and that every subject area has some connection to sustainability. Steering documents could also show the larger view about what sustainability includes. More concrete statements and examples are still needed to build the base for the conversations. Steering of school exists, and there is possible to steer schools towards sustainability—in a socially sustainable way.

Our world needs a huge transformation, and transformation means learning on all levels. The change is not possible without a need to change, which concerns both individuals and organisations. Steering can be one factor creating the need for change. The need for ecological sustainability can pull together different levels and organisations to work towards more sustainable future. The COVID-19 pandemic shows that big changes in communities are possible. Change towards a better world could start by systems thinking and identifying relationships between all activities and ecological sustainability, including at school.

Notes

1. IPCC. 2018. *Global warming of 1.5 °C: An IPCC special report on the impacts of global warming*. Intergovernmental Panel on Climate Change. <https://www.ipcc.ch/sr15/>. Accessed 19 Dec 2021.
 IUCN. 2019. *The IUCN red list of threatened species*. The International Union for Conservation of Nature IUCN. <https://www.iucnredlist.org/>. Accessed 19 Dec 2021.
 Steffen, W., K. Richardson, J. Rockström, S.E. Cornell, I. Fetzer, E.M. Bennett, R. Biggs, S.R. Carpenter, W. De Vries, C.A. De Wit, C. Folke, D. Gerten, J. Heinke, G. M. Mace, L.M. Persson, V. Ramanathan, B. Reyers, and S. Sörlin. 2015. Planetary boundaries: Guiding human development on a changing planet. *Science* 347(6223): 1259855–1259855.
 WHO. 2017. *Inheriting a sustainable world? Atlas on children's health and the environment*. Geneva: World Health Organization. <https://www.who.int/publications/i/item/9789241511773>. Accessed 19 Dec 2021.
2. United Nations. 2019. *Global sustainable development report 2019: The future is now—Science for achieving sustainable development* [ed. Independent Group of Scientists appointed by the Secretary-General]. New York: United Nations. <https://sustainabledevelopment.un.org/gedr2019>. Accessed 19 Dec 2021.
3. See for example: Martusewicz R.A., J. Edmundson, and J. Lupinacci. 2015. *Ecojustice education: Toward diverse, democratic, and sustainable communities*. New York: Routledge.
 Salonen A.O., J. Siirilä, and M. Valtonen. 2018. Sustainable living in Finland: Combating climate change in everyday life. *Sustainability* 10(1): 104. <https://doi.org/10.3390/su10010104>.
4. Wolff, L., P. Sjöblom, M. Hofman-Bergholm, and I. Palmberg. 2017. High performance education fails in sustainability? A reflection on Finnish primary teacher education. *Education Sciences* 7(1): 32. <https://doi.org/10.3390/educsci7010032>.

5. United Nations. 2015. *Transforming our world: The 2030 agenda for sustainable development*. <https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>. Accessed 19 Dec 2021.
6. For example: UNESCO. 2014. *Shaping the future we want. UN decade of education for sustainable development (2005–2014). Final report*. Paris, France: UNESCO. p. 92.
 OECD 2017, op. cit.
 Education at a Glance. 2017: *OECD Indicators*. Paris, France: OECD Publishing. <http://dx.doi.org/10.1787/eag-2017-en>. p. 27. Accessed 19 Dec 2021.
 Council of the European Union. 2010. *Council conclusions on education for sustainable development. 3046th education, youth, culture and sport council meeting*. Brussels. 18 and 19 November 2010.
7. UNESCO. 2021. *Education for sustainable development: A roadmap*. Paris, France. <https://gcedclearinghouse.org/resources/education-sustainable-development-roadmap>. Accessed 19 Dec 2021.
8. See for example: Tyack, D., and L. Cuban. 1995. *Tinkering toward utopia: A century of public school reform*. Cambridge, MA: Harvard University.
 Wolff, L. 2011. *Nature and sustainability an educational study with Rousseau and Foucault*. Saarbrücken: Lambert Academic Publishing.
9. For example: Noddings, N. 2012. *Philosophy of education*. Boulder, Colorado: Westview Press.
10. Rockström, J., and P. Sukhdev. 2016. *How food connects all the SDGs: The wedding cake*. Stockholm Resilience Center. Stockholm University. <https://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html>. Accessed 19 Dec 2021.
11. Mykrä, N. 2021. *Peruskoulu ekologista kestävyttä edistämässä: Toiminnanteoreettinen tutkimus koulun monitasoisesta muutoshaasteesta*. Doctoral dissertation, Tampere University. Some of the research was funded by the Maj and Tor Nessling Foundation, the author is very thankful for this support. <https://urn.fi/URN:ISBN:978-952-03-1878-9>. Accessed 19 Dec 2021.
12. Prime Minister's Office. 2016. *Society's Commitment to sustainable development*. <https://kestavakehitys.fi/en/commitment2050>. Accessed 27 July 2021.
13. Prime Minister's Office. 2016. *What is a commitment?* https://sitomus2050.fi/en_US/mika-on-sitomus-. Accessed 27 July 2021.
 Ministry of Education and Culture. 2017. *Promoting the sustainable development in the Ministry's administrative sector. Operational commitment of the Ministry of Education and Culture*. <https://sitomus2050.fi/en/toimenpidesitoumukset#/details/554C5EB4F826C3CC7421EA14>. Accessed 27 July 2021.
- OKKA Foundation. 2014. *Nyt kaikki antamaan kestävän kehityksen sitoumuksia! Challenge for schools*. The Finnish national Sustainable Development Certification of Educational Establishments <https://koulujamparisto.fi/nyt-kaikki-antamaan-kestavan-kehityksen-sitoumuksia>. Accessed 19 Dec 2021.
 The Finnish Association for Nature and Environment Schools. 2014. *Challenge for schools to make an operational commitment to sustainable development*. http://www.luontokoulu.fi/download/tietoa/kannanotot/ylhteiskuntasitomus_kouluille_14-06.pdf. Accessed 19 Dec 2021.
14. Ministry of Education and Culture 2017, op. cit.
15. Finnish National Agency of Education. 2016. *Kasvatuksella, koulutuksella ja työ-hteisön arkivalinnoilla kestävään elämäntapaan ja hyvinvointiin*. Prime Minister's Office, Sitomus2050. https://sitomus2050.fi/fi_FI/toimenpidesitoumukset#/details/5746D2F588FC8A014BA8EE5C. Accessed 27 July 2021.
16. Mykrä, op. cit., p. 149.
17. Prime Minister's Office. 2017. *The state of sustainable development. What do the facts tell?* <https://kestavakehitys.fi/en/monitoring>. Accessed 10 Dec 2021.

18. Prime Minister's Office. 2016. *National report on the implementation of the 2030—Agenda for sus-tainable development*. Publications of the Prime Minister's Office 2016:10. <https://julkaisut.valtioneuvosto.fi/handle/10024/75188>. Accessed 19 Dec 2021.
19. Prime Minister's Office. 2020. *Voluntary national review 2020 Finland: Report on the implementation of the 2030 Agenda for Sustainable Development*. Publications of the Prime Minister's Office 2020:8. <http://urn.fi/URN:ISBN:978-952-287-947-9>. Accessed 19 Dec 2021.
20. Mykrä, op. cit., p. 166.
21. Prime Minister's Office. 2016, 2017 and 2020, op. cit.
22. Ministry of Education and Culture. 2020. *Sustainable development policy of the Ministry of Education and Culture and its administrative branch*. <http://urn.fi/URN:ISBN:978-952-263-706-2>. Accessed 19 Dec 2021.
23. Ministry of Education and Culture. 2019. *Ministry of Education and Culture Strategy 2030*. <http://urn.fi/URN:ISBN:978-952-263-632-4>. Accessed 19 Dec 2021.
24. Finnish National Agency for Education. 2019. *Osaaminen 2035. Osaamisen ennakointifoorumin ensimmäisiä ennakointituloksia. Raportit ja selvitykset 2019:3*. <https://www.oph.fi/fi/tilastot-ja-julkaisut/julkaisut/osaaminen-2035>. Accessed 19 Dec 2021.
25. Ministry of Education and Culture, Finnish National Agency of Education. 2017. *Finnish education in a nutshell. "Education in Finland"-series*. <https://www.oph.fi/en/statistics-and-publications/publications/finnish-education-nutshell>. Accessed 19 Dec 2021.
26. Ministry of Education and Culture. 2020. *National youth work and youth policy programme 2020–2023: Aiming to ensure a meaningful life and social inclusion for all young people*. Publications of the Ministry of Education and Culture, Finland 2020:4. <http://urn.fi/URN:ISBN:978-952-263-887-8>. Accessed 19 Dec 2021.
27. Finnish National Agency for Education. 2021. *Kestävä tulevaisuus: Opas oppimisen, toimintakulttuurin ja arkiikäyhtöjen kehittämiseen kasvatuksen ja koulutuksen maailmassa*. <https://www.oph.fi/fi/kestava-tulevaisuus>. Accessed 19 Dec 2021.
28. Finnish National Agency for Education. 2022. *Kestävyykskasvatuksen kehittämishanke*. <https://www.oph.fi/fi/kehittaminen/kestavyykskasvatuksen-kehittamishanke>. Accessed 7 Aug 2022.
29. Mykrä, op. cit., pp. 159–171.
30. Kauko, J. 2019. The Finnish comprehensive school. Conflicts, compromises, and institutional robustness. In *Great policy successes*, eds. M.E. Compton and P. Hart, 122–142. New York, NY: Oxford University Press.
31. Prime Minister's Office 2020, op. cit. p. 113.
32. Säily, L., R. Huttunen, H.L.T. Heikkinen, T. Kiilakoski, and T. Kujala. 2020. Designing education democratically through deliberative crowdsourcing: the case of the Finnish curriculum for basic education. 53(6), 841–856. <https://doi.org/10.1080/00220272.2020.1857846>
33. Sustainability was under discussion in the early phases of creating the curriculum, and also after publication, see e.g. early presentations of the officers of the Finnish National Agency for Education: Halinen, I. 2013. *Curriculum reform in Finland*. Power Point-presentation. <https://www.slideshare.net/Steinerkasvatus/halinen-curriculum-reform-in-finland-2012-2014-ih-16-9-2013-pptx>. Accessed 19 Dec 2021.
- See also Jääskeläinen, L. 2015. *Global education in the Finnish basic education curriculum reform—How and what*. Power Point slides from conference “Global Education Scenario: from concept to action”, Lithuania. <http://slideplayer.com/slide/4906661/>. Accessed 19 Dec 2021.
34. See Stanišić, J., and S. Maksić. 2014. Environmental education in Serbian primary schools. Challenges and changes in curriculum, pedagogy, and teacher training. *The Journal of Environmental Education* 45(2): 118–131. <https://doi.org/10.1080/00958964.2013.829019>.
- O'Brien, K., J. Reams, A. Caspari, A. Dugmore, M. Faghihimani, I. Fazey, H. Hackmann, D. Manuel-Navarrete, J. Marks, R. Miller, K. Raivio, P. Romero-Lankao, H. Virji, C. Vogel, and V. Winiwarer. 2013. You say you want a revolution? Transforming education and capacity building in response to global change. *Environmental Science and Policy* 28: 48–59. <https://doi.org/10.1016/j.envsci.2012.11.011>

34. Braun, V. and Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101.
35. Erss, M. 2018. 'Complete freedom to choose within limits'. Teachers' views of curricular autonomy, agency and control in Estonia, Finland and Germany. *The Curriculum Journal* 29(2): 238–256. <https://doi.org/10.1080/09585176.2018.1445514>.
- Komulainen, K., and H. Rajakaltio. 2017. Opettaja johtamisparadigmojen ristipaineissa. In *Opetussuunnitelmatutkimus: Keskustelunavauksia suomalaisen kouluun ja opettajankoulutukseen*, eds. T. Autio, L. Hakala, and T. Kujala, 223–246. Tampere: Tampere University Press.
- Salminen, J., and T. Annevirta. 2014. Opetussuunnitelman perusteiden välittämä ohjaus—mitä, kenelle ja miksi? *Kasvatus. Suomen Kasvatustieteellinen Aikakauskirja* 45(4): 333–348.
36. See for example Jeong, D.W., and T.F. Luschei. 2018. Are teachers losing control of the classroom? Global changes in school governance and teacher responsibilities, 2000–2015. *International Journal of Educational Development* 62: 289–301. <https://doi.org/10.1016/j.ijedudev.2018.07.004>.
- Parker, G. 2015. Teachers' autonomy. *Research in Education* 93(1): 19–33. <https://doi.org/10.7227/RIE.0008>.
37. For example: Aarnio-Linnanvuori, E. 2019. How do teachers perceive environmental responsibility? *Environmental Education Research* 25(1): 46–61. <https://doi.org/10.1080/13504622.2018.1506910>.
- Markle, G. 2014. Accounting for the performance of environmentally significant behavior. The symbolic significance of recycling. *Symbolic Interaction* 37(2): 246–263. <https://doi.org/10.1002/symb.102>.
38. Tilbury, D., and D. Wortman. 2005. Whole school approaches to sustainability. *Geographical Education* 18: 22–30.
39. Blake, J., S. Sterling, and I. Goodson. 2013. Transformative learning for a sustainable future. An exploration of pedagogies for change at an alternative college. *Sustainability* 5(12): 5347–5372. <https://doi.org/10.3390/su5125347>.
- Lotz-Sisitka, H., M. Mukute, C. Chikunda, A. Baloi, and T. Pesanayi. 2017. Transgressing the norm. Transformative agency in community-based learning for sustainability in southern African contexts. *International Review of Education* 63(6): 897–914. <https://doi.org/10.1007/s11159-017-9689-3>.
- Macintyre, T., H. Lotz-Sisitka, A. Wals, C. Vogel, and V. Tassone. 2018. Towards transformative social learning on the path to 1.5 degrees. *Current Opinion in Environmental Sustainability* 31: 80–87. <https://doi.org/10.1016/j.cosust.2017.12.003>.
- Wals, A. E. J. 2011. *Learning our way to sustainability*. *Journal of Education for Sustainable Development* 5(2): 177–186. <https://doi.org/10.1177/097340821100500208>.
40. The Finnish Association for Nature and Environment Schools. 2021. The statistics of MAPPAn.fi-usage (MAPPAn.fi is a common on-line database and service for environmental education, sustainability education and outdoor teaching). Yearly report 2020 of The Finnish Association for Nature and Environment Schools (in Finnish).
41. For example: Atjonen, P., E. Korkeakoski, and J. Mehtäläinen. 2011. Key pedagogical principles and their major obstacles as perceived by comprehensive school teachers. *Teachers and Teaching: Theory and Practice* 17(3): 273–288. <https://doi.org/10.1080/13540602.2011.554698>.
42. Additional information about collective agreements in Finland: KT Local Government Employers. 2019. <https://www.kt.fi/en/collective-bargaining-and-agreements/municipal-agreements>. Accessed 27 Aug 2021.
43. Prime Minister's Office 2016, op. cit.

Niina Mykrä is Post-doctoral Researcher in the Finnish Institute for Educational Research at the University of Jyväskylä. She has had a long career involved with environmental education as an art teacher and teacher in charge of environmental issues, as the head of the nature school of Tampere municipality, and as the Executive Director of The Finnish Association of Nature and Environment Schools. Mykrä's recent PhD research was about promoting ecological sustainability in Finnish Basic Schools.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

