





Sustainability Education in Finland: Policy, Theory and Practice



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The Topic of this Presentation

- The development of sustainability education in Finland
- Shift of focus over times
- The use of models
- The role of strategies
- A tangible examples
- The role of sustainability education research
- Missing issues and future prospects

22/04/2021 12:03 lili-ann.wolff@helsinki.fi 2



My frameworks



- HELSUS
- SIRENE
- SusEdu
- KekePeda



- IUCN (esp. CEC)
- Several Nordic networks (Sense of Sustainability, Mesin, etc.)
- PHOENIX (EU Cost Action)
- Research projects together with colleagues in Finland and other countries (SveSus, SUSTE, LISMUS, ABC, etc.)
- Newest article (20.4 Frontiers in Education): Shephard & al.: *On the Nature of Quality in the Contexts of Academic Publication and Sustainability*

IUCN


22/04/2021 12:03 lili-ann.wolff@helsinki.fi 3



How it started in Finland


- The first nature school in 1986
- Suomen Ympäristökasvatuksen Seura, founded 1990 (now FEE Suomi)
- A few researchers in the beginning of the 1990s (science, psychology, architecture)
- A slow increase, few researchers and professors in the 1990s and 2000s
 - A fast increase in the 2010s
- The SIRENE national network of researchers 2016
 - A still faster increase in the 2020s

22/04/2021 12:03 lili-ann.wolff@helsinki.fi 4

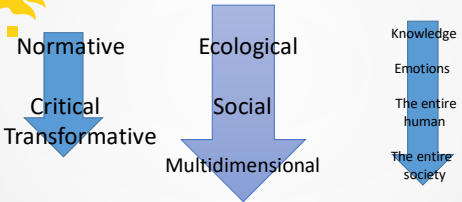


From
environmental education (EE)
to
education for sustainable development (ESD)
to
sustainability education (SE)
and
climate change education (CCE)
and
environmental and sustainability education

22/04/2021 12:03 lili-ann.wolff@helsinki.fi 5



A shift (to and fro) in fokus



Normative
↓
Critical Transformative

Ecological
↓
Social
↓
Multidimensional

Knowledge
Emotions
↓
The entire human
↓
The entire society

22/04/2021 12:03 lili-ann.wolff@helsinki.fi 6

Policy and strategies

Acts	Core curricula	White papers	Other documents
<ul style="list-style-type: none"> The Constitution of Finland (731/1999, approved in 2000 after a thorough reform of previous constitutional documents): "nature and its biodiversity, the environment and the national heritage are the responsibility of everyone." Government Decree (2001): "Instruction shall promote the pupils' agency development and support them to be able to participate in the building of a just and sustainable society (Finlex, 2/5, 1435/2012)" Act of early Childhood Education: Yes Governmental regulation of upper secondary education: Yes Basic Education Act, Grades 1–9 (ages 7–16) (1998): no mention 	<p>The National Core Curriculum for Basic Education (2014)</p> <p>The National Core curriculum for upper secondary education (2019)</p>	<ul style="list-style-type: none"> A national strategy for environmental education (Unesco 1991) Strategy for education and training for sust. dev. and impl. plan 2006–2014 (Finnish National Commission Sustainable Development, sub-committee for Education, 2006) Kansallisten kestävä kehitystä edistävien kasvatuksen ja koulutuksen strategioiden toimeenpanon arviointi (Gaia Consulting, 2012, evaluation) Ympäristökasvatuksen ja ympäristötiet. kehittämisen (Ministry of Environment, 2015, report) 	<ul style="list-style-type: none"> Sustainable development in education: Implementation of Baltic 21E programme and Finnish strategy for the Decade of Education for Sustainable Development 2005–2014 (2016) Education for Global Responsibility – Finnish Perspectives (2007) Global Education 2020 (2007) Sustainable development in schools and educational institutions (National Board of Education / Raportointi & Raportointi 2005, evaluation) Education for sustainable development in Finland (Ministry of Education / Luokka, Isä, Isä, Lindström, 2003, report) Several global education documents Several strategies of Ministry of Education (later Ministry of Education and Culture)

The curricula

The word "sustainable" mentioned over 180 times – but a lack of clear definition or didactical tools

"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. Basic education acknowledges the necessity of sustainable development and ecosocial knowledge and ability, follows their principles, and guides the pupils in adopting a sustainable way of living. Sustainable development and ways of living comprise an ecological and economic dimension as well as a social and cultural dimension. The leading idea of ecosocial knowledge and ability is creating ways of living and a culture that foster the inviolability of human dignity and the diversity and ability for renewal of ecosystems while building a competence base for a circular economy underpinned by sustainable use of natural resources. Ecosocial knowledge and ability means that the pupils understand the seriousness of climate change, in particular, and strive for sustainability."

22/04/2021 12:03

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8

The gap between policy and practice

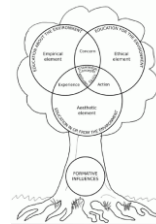


22/04/2021 12:03

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9

Models and modelling



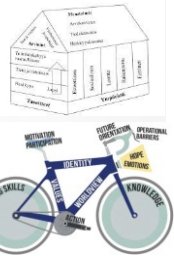
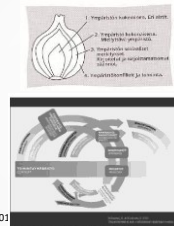
Palmer's tree model, 1988

Käpylä's onion model, 1995

Jeronen's & Kaikkonen's house model, 2001

Paloniemi & Koskinen, 2005

Tolppanen, Aarnio-Linnanvuori, Cantell & Lehtonen, 2017



22/04/2021 12:03

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10

The three ethical dimensions of sustainability education

- Humans' relation to themselves ("care of the self", the own identity, oneself as a part of nature)
- Human's relation to other people and society (all forms of human relations, like politics, economy, religion, art, etc.)
 - Human's relation to nature (from care of nature nearby to planetary responsibility)



Wolffi, 2011

22/04/2021 12:03

11

Perspectives in SE research




- Philosophical/theoretical studies
- Empirical studies

Science
Art, drama and design
Philosophy
Humanities
Technology
Home economics
Interdisciplinary approaches
Etc.



22/04/2021 12:03 | i@annawolff@helsinki.fi | 13

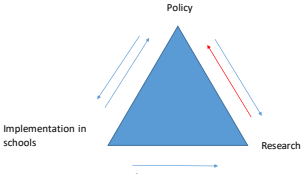

Neglected topics and needs



- Teacher education nearly neglected in SE research, but also in policy and practice
 - Early childhood education nearly absent in SE research
- Evaluations on how well the aims of the strategies and curricula are fulfilled are seldom undertaken
- Need of a focus shift from individuals to collective**
 - Whole school approaches (interventions)**
 - Leadership and leadership education**
 - Didactic studies**

22/04/2021 12:03 | i@annawolff@helsinki.fi | 14

Research and Curricula

22/04/2021 12:03 | i@annawolff@helsinki.fi | 15

Researchers and methods



Examples on researchers:

- Sirpa Tani**, prof. of geography and environmental education, UH: daily life of urban youth, embodiment, etc.
- Anna Uitto**, prof. of biology education, UH: inquiry-based learning (IBL), conceptual learning, mobile gaze tracking, socio-scientific issues in biology education, etc.
- Pauliina Rautio**, Adj. Prof., UO, Posthumanism, aesthetics of daily life, animal/child relationship
 - Panu Pihkala**, Dr of Theology, UH: eco anxiety, recognition
- Veli-Matti Värrö**, prof., UT: educational philosophy and theory, teacher education, ethics of education and philosophy of dialogue

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A cut from an upcoming seminar



12.10-12.40 **Niina Mykrä** (Tampereen yliopisto, väitös 9.4.2021): **Peruskoulu ekologista kestävyyttä edistämässä**. Toiminnanteoreettinen tutkimus koulun monitasoisesta muutoshasteesta

12.40-13.10 **Kimmo Härmä** (Itä-Suomen yliopisto, väitös 22.1.2021): **Lukio-opiskelijoiden argumentaattotaidot** kontekstina yhteiskunnalliset ympäristöaiheet maantieteen opetuksessa

13.10-13.20 Tauko

13.20-13.50 **Henrika Ylirisku** (Aalto-yliopiston taiteiden ja suunnittelun korkeakoulu, väitös 19.3.2021): Reorienting **environmental art education**

13.50-14.20 **Anttoni Kervinen** (Helsingin yliopisto, väitös 21.8.2020): Out of earshot and out of sight of the **science teacher**. An investigation of learning opportunities in **outdoor settings**

14.20-14.50 **Anna Lehtonen** (Helsingin yliopisto, väittelylupa myönnetty): **Drama** as an interconnecting approach for **climate change education**

22/04/2021 12:03 | i@annawolff@helsinki.fi | 17

Wolff's research as examples



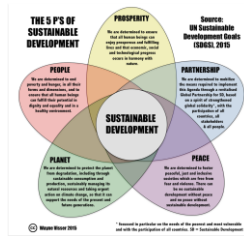
- Education in the Anthropocene – interdisciplinary studies
 - Transformative learning – theoretical and qualitative
 - Leadership – concept analysis, policy analysis
- Outdoor education and science in sustainability education – qualitative and quantitative studies
- Literacy and science in multicultural schools – ethnography, observations and interviews (primary school students), international comparison
- Education in the Anthropocene – literature reviews and interdisc. studies
 - Worldview transformation – discourse analysis, document analysis
 - Quality of publishing – auto-ethnography
- Mapping Education for Sustainability in the Nordic Countries – policy document analysis, course site analysis
- Other studies – data in form of mind maps, diaries, species tests, evaluations, etc.

22/04/2021 12:03 | i@annawolff@helsinki.fi | 18

Sustainability in its Complexity

- a pluralistic, interdisciplinary subject
- complicated to understand, to learn about and to teach about
- focuses on the students' emotional intelligence and strives to develop empathy
- connects people with each other and with their cultural and natural environments

(Penna, 2018)



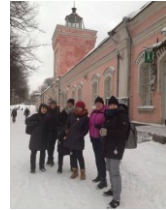
22/04/2021 12:03

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19

SveSus – Whys and and Whats

- From a pilot to a course (planning started 2017)
- Initial lecture + three whole days on Suomenlinna
- Seven (eight) teachers/researchers from various disciplines
- Other researchers: One bachelor student, one master student, one doctoral student, one post doc researcher, international exchange researchers (coming)
- Many other involved, such as experts from the Governing Body of Suomenlinna, Suomen Kulttuurikasvatuksen Seura, artists, environmental specialists, etc.
- Reference group and international partner projects
- Funding from Svenska Kulturfonden, SEED funding from HELSUS.



22/04/2021 12:03

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20

Sustainable Worldheritage Learning on Suomenlinna through a phenomenon based approach

Sustainability

- Climate change
- Biodiversity
- Social and cultural diversity
- Social and economic justice



- art
- nature
- cultural history
- linguistic and cultural diversity
- contemporary urban reality
- time travel
- history present time future
- Many kinds of encounters.

22/04/2021 12:03

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21

How does Sveasus interpret phenomenon-based learning?



- sheds light on a phenomenon from different science or subject perspectives (from within)
- exploratory learning process (focus on the students' questions and curiosity)
- cognitive but also physical and emotional (Küpers 2012)
- dependent on the environment in which it takes place, *authentic learning* (Shapiro & Stolz 2019)
- co-teaching, co-learning and co-exploration
- aims at transdisciplinarity and transformation

22/04/2021 12:03

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22



Both sustainability and phenomenon based learning is about learning to *think and act differently* – to creatively look into many different perspectives

- The teachers task is not to change the students, but to stimulate and inspire.
- The teachers' role is most important.

Many learning dimensions:

- Teacher educators
- Student teachers
- Students as future teachers
- Many partners
- School teachers and pupils (to come)



22/04/2021 12:03

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23

SveaSus: Studies and methods



- Basic theoretical/philosophical studies
 - Basic didactical studies
 - Bilingual learning studies
 - Art based studies
- Transformative learning studies
- Immaterial world heritage studies (sauna)
 - Digital storytelling studies
 - Co-teaching


Upcoming perspectives

- Mathematics
- History and social sciences
 - Geography

22/04/2021 12:03

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24



Available data

- Video recorded lectures, workshops, discussions, seminars and other learning sessions
- Material produced by the students – videos, pod casts, sauna diaries, essays (based on literature)
 - Material produced by the researchers: notes, reflections
- Individual interviews, focus group interviews, questionnaires

22/04/2021 12:03

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25

Several studies and a broad interest		
Research interest	Questions	Approaches and methods
The phenomenon of phenomenon based learning, phenomenon based learning and Bildung	The how and why of phenomenon based learning	Philosophy and philosophy of education
Sustainability and world heritage education as phenomenon based learning	How to promote sustainability and world heritage learning through phenomenon based approaches	Philosophy, education, didactics, questionnaires
Bilingual learning, to enhance positive experiences in bilingual learning situations	How students communicate and learn in bilingual situations, which the students attitudes to other languages are	Ethnographic studies through observations and video recording, interviews, questionnaires
Art based and place based learning in relation to sustainability and phenomena	How can art based learning promote phenomenon based learning	Interventions, observations, interviews
Transformative learning in relation to sustainability and phenomena	Can phenomenon based learning promote critical self-reflection	Observations, deep interviews
Embodiment learning and emotions	When	Learning diaries, videos
Digital storytelling focusing on phenomena in sustainability education	How do the students create stories, what kind of stories do they create	Notes from tutorials and discussions, the students' videos
Teacher educators and student teachers working and learning together	How to best promote co-teaching – challenges and advantages	Observations, interviews

