Learning in local outdoor environments for sustainable development

A study of Norwegian practice

Anja Gabrielsen
Telemark University College
Faculty of Art, Folk Culture and Teacher education.
Norway
Content

• Background
  - Approach to education for sustainable development
  - Policy and theory

• Study
  - Teachers rationales and barriers to the use of outdoor local learning arena

• Discussion and implications
Main aim and research question

Main aim: *How can the local environment function as a learning arena for education for sustainable development?*

RQ1: What are the teachers' rationales for the use of local learning arenas in education for sustainable development?

RQ2: What are the teachers' perceived barriers to outdoor teaching?
National policy documents

- Strategy plans

- The National Curriculum (LK06);
  - Core curriculum; *the environmentally-aware human being*
  - Subjects
International policy documents on education for sustainable development (ESD)

- UN report; Shaping the Education of Tomorrow (2012)
  - Need for locally relevant interpretations, learning processes and change mechanisms
  - Requires understanding local contexts, including traditional knowledge

- UN report; Shaping the Future we want (2014)
  - ESD is grounded in local experience and actions
  - Reinforcing the importance and benefits of providing a local context for ESD
The Sustainable backpack

Main aim;

*increase awareness, understanding and competencies in and for sustainable development*

School projects focus on;

- inquiry-based teaching
- inter- or multi-disciplinary teaching
- alternative learning arenas (outside classroom)
- collaboration with external, local partners
Organization

MINISTRY OF EDUCATION AND RESEARCH

MINISTRY OF CLIMATE AND ENVIRONMENT

NATURFAGSENTERET
NORWEAGN CENTRE FOR SCIENCE EDUCATION
Regions and participating schools
A school project

Healthy and sustainable cooking from the sea and shoreline

- Inter-disciplinary
- Aim
  - Learn about local unutilized resources
  - Find recipes with local sustainable ingredients
  - Harvest ingredients
  - Cook food
  - Write a cookbook
A school project

Product;
Cookbook with local sustainable ingredients

Page 2;
“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

(United Nations; 1987)
Theory

Outdoor teaching affords ‘authentic and real-life’ contexts
- supporting meaningful and motivating learning opportunities
- with an affective dimension

(Szczepanski et al., 2007; Jordet 2010, Waite 2011; Fägerstam 2012; Dewey 1938/2000; Chen-Hsuan Cheng, J., & Monroe, M. 2010; Chawla 2007; Sandell & Ohman, 2010; Gibson 1979; Manni et al., 2013)
Theory

Connection between outdoor, local teaching and environmental and sustainability education


➢ Teachers' experiences and perspectives of ESD and the use of outdoor local learning arenas are poorly investigated

(McNaughton, 2012; Norðdahl & Jóhannesson 2014)
Data, sampling and analyses

Purposeful sampling:
• 8 teachers from 6\textsuperscript{th} to 10\textsuperscript{th} grade
• Different school projects
• Experienced in ESD and participating in the Sustainable backpack

Data collection:
• Document analysis of teachers' reports
• Semi structured interview with teachers

Analyses:
• Qualitative approach; constructivistic Grounded Theory
  (Glaser & Strauss, 1967; Strauss & Corbin 2008; Charmaz 2014)
Findings RQ 1: What are the teachers' rationales for the use of local learning arena?

- Authentic and concrete learning
- Opportunity to act
- Exemplify various perspectives
- Affective impact
- Better learning environment in general

Use of local environment in ESD
Findings RQ 1: What are the teachers' rationales for the use of local learning arena?

- Authentic environmental challenges
- Concrete examples and activities
- Local people

«Use local venues and make it relevant»
Findings RQ 1: What are the teachers' rationales for the use of local learning arena?

Increased opportunity to illuminate ESD perspectives;
- environmental, social, economic
- local-global
- the past-present-future

«Pupils do not feel responsible for what is far away in time and place»
Findings RQ 1: What are the teachers' rationales for the use of local learning arena?

- Experience that it is possible to do something
- Experience the local-democracy
- Ownership to the project

«When it's in their environment, they can experience that it's useful»
Findings RQ 1: What are the teachers' rationales for the use of local learning arena?

- Enjoy nature and the local community
- More personal
- Multisensory experiences
- Proud of their local nature and community

«It is more personal… and easier to be influenced»
Findings RQ 1: What are the teachers' rationales for the use of local learning arena?

- Better relations
- Varied teaching and learning

«Getting out of the classroom has great effect, and gives a completely different learning environment»
Findings RQ 1: What are the teachers' rationales for the use of local learning arena?

- Authentic and concrete learning
- Exemplify various perspectives
- Opportunity to act
- Affective impact
- Better learning environment in general

Use of local environment in ESD
Findings RQ 2: What are the teachers' perceived barriers to outdoor teaching?

- Curriculum
- Teacher competence
- School leadership
- Practical considerations
Findings RQ 2: What are the teachers' perceived barriers to outdoor teaching?

➢ Curriculum

- Overcrowded
- Unclear; ESD and outdoor, local
- Clear competence-aims in subjects
Findings RQ 2: What are the teachers' perceived barriers to outdoor teaching?

➢ Teacher competence

- Themes/subjects
- Subject specific pedagogy
- Outdoor
- Local
Findings RQ 2: What are the teachers' perceived barriers to outdoor teaching?

- School leadership
- Practical considerations
Discussion and implications

Main aim: *How can the local environment function as a learning arena for education for sustainable development?*

- Teachers' perspective
- Use of local outdoor learning arena in ESD
- Rationales and barriers

Broader implications
Thank you

Contact information:
Anja.Gabrielsen@hit.no
References

• Breiting, S. et al., 2009. *Action competence, conflicting interests and environmental education - the MUVIN programme*, Research Programme for Environmental and Health Education. DENMARK


• Fägerstam, E. (2012). *Space and Place. Perspectives on outdoor teaching and learning*. PhD, Linköping University


References

- KD 2012, Kunnskap for en felles framtid. Revidert strategiplan. Kunnskapsdepartementet
References


• UN 2012, Shaping the education of tomorrow; Report on the UN Decade of Education for Sustainable Development, Abridged

• UN 2014. Shaping the Future we want. Report on the UN Decade of Education for Sustainable Development, Abridged