Making–and changing?–social norms about sustainability

How educational researchers approach what happens in schools

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(Östman & Öhman 2019)

Table 5.1 Main characteristics of the three selective tradition of ESE

Tradition of ESE	*Fact-based*	*Normative*	*Pluralistic*
Perspective on sustainability problems	Sustainability problems are knowledge-based and are resolved by means of research and information	Sustainability problems are moral which can be resolved by exerting an influence on people's attitudes and behaviour	Sustainability problems are political which should be dealt with democratically
The cause of sustainability problems	An unforeseen result of production and resource exploitation in society	A conflict between society and the laws of nature	Conflicts between humans' wide range of achievement goals
Main method of teaching	Factual information from teacher to student	Transferring sustainable values in student active exercises	Critical discussions based on a number of alternatives
The purpose of ESE	Students receive knowledge of sustainability problems by learning of scientific facts	Students adopt sustainable attitudes and behaviour	Students develop their ability to critically evaluate and take a stand in sustainability issues
The aim of ESE	Citizens who have enough information to judge between different political alternatives in sustainability issues	Committed citizens who accept and approve of the necessary changes in order to develop a sustainable society	Citizens who are competent to engage in the democratic debate and practices that concern a sustainable future
Fact-value focus and relation	Facts	Facts → Values	↕ Facts ↔ Values ↕
The democratic process in relation to education	After	Before	In
Strengths and weaknesses	Based on reliable knowledge Omits the value dimension of sustainability issues	Effective for individual change Violates the democratic and emancipatory purpose of education	Supports democratic competence Time-consuming and a challenge to create a commitment

Phenomena

Context

Methods

Findings

(Cincera & Krajhanzl 2013)

What do the researchers want to find out about?

Which students, teachers? Doing what?

Where and when?

What methods did the researchers use?

What did researchers conclude?

Students' **action competence**

"The knowledge and skills necessary for diminishing the environmental footprint in the areas of water and energy consumption in households"
(Cincera & Krajhanzl 2013: 118)

(Cincera & Krajhanzl 2013)

Phenomena

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What do the researchers want to find out about?

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Czech Republic, 2012

7th–9th grade students

EcoSchools program

EcoTeam members

What did researchers conclude?

HOW ECO-SCHOOLS WORKS

The Eco-Schools programme consists of three structural elements - The Seven Steps Framework, the Eco-Schools Themes, and Assessment for the Green Flag. To be successful the programme requires support from school leaders and the Board. Active involvement of staff is imperative as well as long-term commitment and the willingness to involve students in decision-making.

(Cincera & Krajhanzl 2013)

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Context

What do the researchers want to find out about?

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Which students, teachers? Doing what?

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What methods did the researchers use?

Survey (n = 1219)

measured action competence

What did researchers conclude?

measured perceived participation in decision-making

reported student information including EcoTeam membership

(Cincera & Krajhanzl 2013)

Phenomena

Context

Methods

What do the researchers want to find out about?

Which students, teachers? Doing what?

Where and when?

What methods did the researchers use?

Findings

Significant difference in action competence for EcoTeam members, other students

Positive correlation between action competence and perceived participation in school decision-making

What did researchers conclude?

Phenomena
Context
Methods

Findings

Significant difference in action competence measure for EcoTeam members and other students

Positive correlation between action competence and perceived participation in school decision-making

(Cincera & Krajhanzl 2013)

"Pupils who can participate in schools' decision-making have more opportunities for developing their action competence."
(Cincera & Krajhanzl 2013: 119)

-OR-

"When pupils have a higher level of action competence, they believe more in their ability to participate in schools' decision-making processes."
(Cincera & Krajhanzl 2013: 120)

What did researchers conclude?

(Barton & Tan 2010)

Phenomena

What do the researchers want to find out about?

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Which students, teachers? Doing what?

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What methods did the researchers use?

relationship between **learning science** and **agency in science**

What did researchers conclude?

"Agency with and in science implies that students use the knowledge, practices and contexts of science *to develop their identities, to advance their positions in the world, and/or to alter the world towards what they envision as being more just.*"

(Barton & Tan 2010: 195)

(Barton & Tan 2010)

Phenomena

What do the researchers want to find out about?

Context

Methods

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Which students, teachers? Doing what?

Where and when?

What methods did the researchers use?

United States, 2007
Children ages 10-14
GET-City: after school club outside of school
Facilitated by educational researchers
“Voluntary” participation

What did researchers conclude?

(Barton & Tan 2010)

Phenomena

Context

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Findings

What do the researchers want to find out about?

Which students, teachers? Doing what?

Where and when?

5-week unit on urban heat island phenomena
3 meetings per week; 2,5 hours per meeting
Instruction, controlled experiments, fieldtrips, mini-documentaries

What methods did the researchers use?

GET-City: after school club outside of school

What did researchers conclude?

(Barton & Tan 2010)

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Critical ethnography

"Given that urban education is marked by layers of inequalities from how schools are staffed and funded to the kinds of courses and resources that are available to students, the analysis and transformation of inequalities is particularly important in urban science education research. " (Barton & Tan 2010: 196)

(Barton & Tan 2010)

Phenomena

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Which students, teachers? Doing what?

Where and when?

What methods did the researchers use?

Findings

Participating youth as **community science experts**

"Youth actively positioned themselves as individuals who were knowledgeable in science, in particular about the UHI phenomenon–in what it is, in how to generate and interpret evidence about the phenomenon at the local level, and in why this is important for their community to understand." (Barton & Tan 2010:)

What did researchers conclude?

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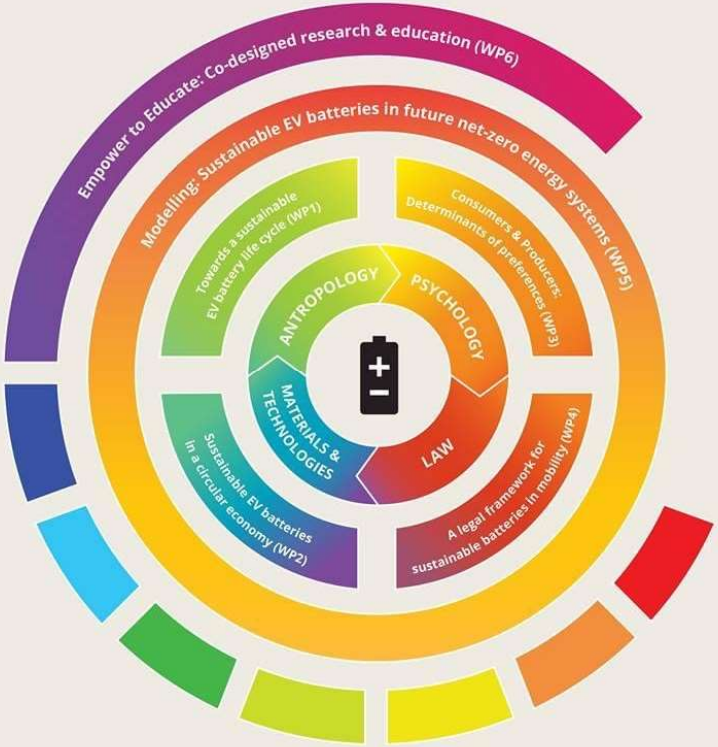

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