Transformative geography education: A critical analysis of pedagogies for environmental and sustainability education (ESE)

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Theoretical Context

- The challenge of embedding the complex mix of skills, knowledge and values of ESE into the curriculum (Cotton et al., 2007).
- Constructivist pedagogical approaches e.g. discussion; place-based learning; and problem-based enquiries.
- Strategies presented rarely offer anything by way of critical reflection upon their effectiveness in developing trainees’ pedagogic content knowledge, values or conceptual understanding (Evans et al., 2017).
Transformative learning as an approach to ESE? *(Mezirow, 1991; Sterling, 2010-11)*

- Sterling *(2010-11)* hierarchy of learning:

<table>
<thead>
<tr>
<th>Order</th>
<th>Description</th>
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<tr>
<td>First order learning</td>
<td>more of the same</td>
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<td>Second order learning</td>
<td>significant changes in thinking based on an examination of assumption and values through meta-cognitive processes</td>
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<td>Third order learning</td>
<td>epistemic, in that it causes us to profoundly challenge and reconstruct our deeper held beliefs and values</td>
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Research Questions

• How do undergraduate trainee teachers’ understandings of the value and nature of ESE develop across a conference event?
  ▫ Trainee teachers develop their own curricula and pedagogies so that they are congruent with their existing understandings, perspectives and ideologies (Curtner-Smith, 2007).

• To what extent do pedagogies within the conference support transformational learning for ESE?
The project

- Interpretive, multiple methods case study underpinned by a broadly social constructivist epistemology.

- Environmental and Sustainability Education: Making Connections conference.

- Online questionnaires, spoken reflection and commentary, focus groups.
The Conference
Transformational learning for ESE?

- First order learning (more of the same)
  - Definitions of sustainability from environmental to multi-dimensional

  “minimise the damage we do to the environment”

  “Balancing the social, economic and environmental demands of today's population whilst not compromising the needs of future generations”
Transformational learning for ESE?

- Second order learning (developing more perspectives and metacognition)
  - Re-consider the human-nature binary
  - Re-thinking concept of nature / city as nature

“A lot of the time ... people think that EE is about going to green areas or being in the countryside with trips organised to different forests and woodlands, [but] even in a big city it's a huge environmental ecosystem and there's a lot you can get from this outdoor environment”
Transformational learning for ESE?

- Third order learning (epistemic change)?
  - Re-framing understanding of sustainability
  - Challenge and discomfort
  - Changing behaviour

“I struggled with that ... for me the spirituality part was something that was tough, it was hard to listen to ... those nitty gritty questions about the quality of education and you know what do we actually need to do? How do we need to teach children?”
Reflections

1. Relevance of conference format

- Inspirational experiences
- A space for thinking

“Because you've got such a diversity of things on one day it made you think about them being connected a lot more ... There's kind of a separateness of doing it one week after the other [within a module]”
Reflections

2. Empowerment of trainee teachers

Empowerment as an individual
“I've always had the opinion that one person is not going to make much of a difference, but ... the negative image of me saying that 'oh, one person is not going to change this' is actually wrong”

Empowerment as a trainee teacher
“it's quite empowering to think I could do that or we could do that in schools and classrooms”
Reflections

3. Affective, arts-based pedagogies

• Critical reflection and emotional sensitivity (Rovengo and Kirk, 1995)

• Facilitate emotional connection with learning (Wilson, 2010)

“children are given a voice to lead the way”.
4. Tension between focus on knowledge and pedagogy

• *Importance of knowledge:*
  - What is the significance of knowledge for facilitating transformational experiences?

• *Nature of knowledge*
  - What is powerful ESE knowledge for trainee teachers?
Thank you

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