OPEN SCHOOLING FOR SUSTAINABLE CITIES AND COMMUNITIES

AN ANALYTICAL FRAMEWORK FOR DIDACTIC RESEARCH

ECER, Hamburg | 3 September 2019 | Katrien Van Poeck & Leif Östman
HISTORY: PRIOR PROJECT

Formas-funded research project (2017-2019/20) on experiential learning in urban sustainability transition initiatives

- ‘Learning-by-doing & doing-by-learning’: non-formal learning

- Cases:
  - Housing Roar Uppsala
  - Solidarity fridge Gothenburg
  - Upscaling short food supply chains in Ghent: workshops
  - Short-chain distribution platform Business-to-Business
SOME FINDINGS FROM PRIOR PROJECT

- **Review**: sustainability transitions (ST) literature on ‘learning’:
  - Omnipresent references to the importance of ‘learning’ (+ why?)
  - Lack of conceptual clarity
  - Lack of empirical underpinning
- **Conceptual framework** drawing on Dewey’s work on education, experience and democracy
SOME FINDINGS FROM PRIOR PROJECT

Some of the empirical findings (30SES14B, Symp. Public Pedagogy & Sustainability Challenges, Friday, 09:00-10:30) inspired us to design follow-up research:

- Learning without (intentional) teaching?!
  - Learning from/through argumentation: building on others’ reasoning
  - Facilitators’ interventions
  - Learning environment (social and material)

- Importance of the practical and the aethetical as drivers for interesting learning processes
  - Practical knowledge and experiences
  - Engagement in the issues at stake
FOLLOW-UP PROJECT

Formas-funded research project (2019-2021) ‘Open schooling for sustainable cities and communities’

- Teaching and learning in schools and universities in Sweden and Belgium
  - 10 schools (2*5) working with LORET (Locally Relevant Teaching)
  - CEMUS (Uppsala University)
  - Urban Academy (Ghent University)
- Educational practices with explicit ambition to connect teaching and learning to identifying, exploring and addressing key sustainability problems in the community in collaboration with local stakeholders
FOLLOW-UP PROJECT

Research questions:
1. **Theoretical:** How can insights from ST studies be connected to pragmatist educational theory in a way that deepens the understanding of the learning that takes place when schools and universities collaborate with stakeholders to identify, explore and tackle SD problems in local communities?
2. **Empirical:** How can teaching and learning in schools and universities foster a sustainable transformation of structures, cultures and practices in niche initiatives in local communities?
3. **Practical:** How to prepare teachers and local stakeholders to design and perform learning practices that serve as resources for more sustainable cities and communities?
CONCEPTUAL FRAMEWORK: TRANSACTIONAL THEORY OF TEACHING AND LEARNING
TRANSACTIONAL THEORY OF LEARNING

Short learning loop

- Habit
- Human non-reflective transactions
- Surrounding world

Disturbance → Problematic situation

Consolidation or enrichment of the habit

Long learning loop

- Inquiry
- Defining the problem
- Experimentation

Solution: new knowledge, skills, values...

Re-creation of the habit

New habit

(Östman, Van Poeck & Öhman 2019)
FACTORS INFLUENCING LEARNING

The intrapersonal

Students’ earlier acquired knowledge, previous experiences, opinions, values, ideas, feelings, habits, etc.

The interpersonal: social interactions: communication, dialogue, negotiation, power relations, deliberation, etc.

The institutional: narratives, traditions, discourses, world views, curricula, epistemological beliefs, etc.

The physical: physical objects that students encounter in the learning activity: leaves, air, book, computer, etc.

(Östman, Van Poeck & Öhman 2019)
THE PROCESS OF LEARNING

– Frida: Here, look at ‘Atom: with as many protons as electrons’. Yes, there should be an equal number. With as many protons and electrons?
– Ulrika: No, but this is an atom and that’s an ion.
– Frida: Yes, but how do you tell the difference?
– Ulrika: I don’t know.
– Frida: I think that smaller one is an atom.

- Stand fast: ‘number’, ‘equal’, etc.
- Gap: how to tell the difference?
- Relations: atom – that smaller one
TEACHERS’ INFLUENCE ON LEARNING

The intrapersonal
Students’ earlier acquired knowledge, previous experiences, opinions, values, ideas, feelings, habits, etc.

The interpersonal: social interactions: communication, dialogue, negotiation, power relations, deliberation, etc.

The institutional: narratives, traditions, discourses, world views, curricula, epistemological beliefs, etc.

The physical: physical objects that students encounter in the learning activity: leaves, air, book, computer, etc.

(Östman, Van Poeck & Öhman 2019)
TEACHER MOVES

- Creating a learning environment: objects in the world to pay attention to
- Make the students to do something with the environment: inquiry
- Achieving a purpose
# TEACHER MOVES

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- **Epistemological moves** *(Lidar, Lundqvist & Östman 2006)*
- **Political moves** *(Van Poeck & Östman 2018)*
- **Ethical moves** *(Van Poeck, Östman & Öhman 2018)*

(Östman, Van Poeck & Öhman 2019)
Hierarchisation move:

- Teacher: Now I don't know if this ties in somehow with your vision of agriculture? ...
- (He looks around in the group. Students take notes, others look at him. Nobody answers his question.)
- Teacher: Shall I answer how I think you look at this. Then you can contest me if (inaudible)... (laughter)
- Student 1: Agriculture must be productive. So much... not as much as possible, it's still the intention, yes to produce food and to make sure there's enough.
- Teacher: Yes, so for you the P for profit takes precedence?
- Student 1: Yes (nodding)
CASE STUDIES:
ANALYTICAL APPROACH
FIRST PHASE

DATA

DOCUMENTS, TRANSCRIPTS OF OBSERVATIONS & INTERVIEWS

ANALYTICAL METHODS

PRACTICAL EPISTEMOLOGY ANALYSIS

THEORETICAL MODEL

Teacher move analysis
Argumentation analysis
...

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SECOND PHASE

RESULTS
EMPIRICAL ANALYSES
PHASE 1

THEORETICAL MODEL SUSTAINABILITY TRANSITION STUDIES
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