Design research, participation and the built school environment.

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What can we learn from research on design?

- Three strands of existing research on design
  - Normative
  - Naturalistic
  - Design-as-art

- What do schools need to productively co-create?
  - Notions from existing research? Craft wisdom? Colloquial evidence?
    - Know-what
    - Know-how
    - Know-why
    - Know-when
Understanding stakeholders

Considerations
• In the school: children, teachers, leaders
• Outside the school: parents, designers, policy
• Short-term and long term participation

Empathy and participating in designing (the building)
• Whose initiative? Whose task is it to shape participation?
• Productive engagement is personal
• Group dynamics change over time
• What are the consequence for the evolution of design space?
Interaction between buildings and curriculum enactment

• Agency of things
  • How much room does a building have to speak?
  • Is its voice:
    • Objective? (the artefact has its own message of intent)
    • Subjective? (intent is a product of co-creation between artefact and user)
  • What do we want to expect from a building? From ourselves?

• How do physical spaces influence learning experiences?
  • Do we need to understand this better?
  • Could such understanding help us explore how knowledge about learning experiences could/should influence configuration of physical spaces?
Interaction between buildings and curriculum enactment: Example*

To gain deeper insights into how spatial and material aspects of technology (re)organizes educational practice

- 12 primary schools in Flanders
- Different types of classroom layouts were identified.
- Teachers were selected and interviewed based on they typology
  - Classroom layout is in transition from one central display (blackboard) to multiple screens;
  - Because of physical access to technology, the educational practice is spatially dispersed over different locations within the school; and
  - Specific positioning of ICT affects the pedagogical use of technology in teaching and learning activities.

What is educational design research?

“…a genre of research in which the iterative development of solutions to practical and complex educational problems also provides the context for empirical investigation, which yields theoretical understanding that can inform the work of others.”

- McKenney & Reeves, 2012
Goals of EDR

Solutions to real and complex problems (e.g.)

• Programs
  • Trainer development

• Processes
  • Learning model

• Products
  • Learning resources

• Policies
  • New organizational structures

Scientific understanding (e.g.)

• Describe
  • What is present or happening

• Explain
  • Why things are such

• Predict
  • Cause and effect

• Prescribe
  • How to manipulate phenomena
Design research processes

(McKenney & Reeves, 2012)
Design research processes

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Design research processes

(McKenney & Reeves, 2012)
Constant connections with practice

(McKenney & Reeves, 2012)
Ideally also…

(McKenney & Reeves, 2013)
What might design research in this context look like?

Some basic processes

- **Analysis & exploration**
  - Key issues warranting investigation? According to whom?
- **SWOTS**
- **Design & construction**
  - Common design framework addressing key issues
  - Manifestations in multiple settings
- **Evaluation & reflection**
  - Compare/contrast results
  - Hypothesize/test mediators

Participation considerations

- **Analysis & exploration**
  - Stakeholder roles?
- **Design & construction**
  - Who designs? constructs? how much? with whom else?
- **Evaluation & reflection**
  - Internal perspectives?
  - External voices?
What might design research in this context look like? (potential themes)

• Analysis & exploration
  • Tensions: community ⇔ personal choice
  • Challenges: school & classroom orchestration

• Design & construction
  • Artefacts: Discussing intent through diagrams
  • Processes: Distilling educational vision through design brief creation

• Evaluation & reflection
  • Compare: student-student and teacher-teacher cooperation; continuous co-creation; student responsibility; bringing in outside expertise; sense of community; (preparing for) citizenship
  • Contrast: school maturity; roots (e.g. head/heart/hands, learning cycle)
  • Hypothesize/test: patterns (e.g. pedagogical vision-spatial orientations); explanations (e.g. why this school (inc. built environment) appeals to teachers, to children, to parents; productive strategies (e.g. intervention approach)
Thank you!
For discussion beyond today…

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