Researcher ↔ Practitioner Collaboration in Educational Design Research: Examples and reflections

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Today’s session

- Inventory your concerns
- Introduce three valuable lenses
- Share three EDR stories

- Discuss the stories in light of:
  - Your concerns
  - Ideas from literature

- Discuss potential considerations for your own work
Let’s inventory your concerns…

• When it comes to researcher ↔ Practitioner interactions in general, and especially in EDR:
  • What are your impressions?
  • What questions do you have?
  • What issues would you like to discuss?

• How do you think today’s session might (not) be relevant to your own work?
3 Lenses

Remembering that EDR can accommodate various...

• Ontologies (What is reality?)
  • Objective
  • Subjective

• Epistemologies (What is knowledge?)
  • Empirical observation
  • Community-created insights

• Methodologies (How is research conducted?)
  • Qualitative methods
  • Quantitative methods

In what spaces shall we choose to operate? What are some options?
Ponterotto: Research paradigms

- **Positivism**
  - Same basic goals and methods as natural sciences
  - Hypothetic-o-deductive methods; single, objective reality

- **Post-positivism**
  - Similar to positivism but accepting that reality cannot be completely captured; emphasis on theory falsification (as opposed to verification)

- **Constructivism-Interpretivism**
  - Relative positions, multiple realities (based on own perspectives)
  - Hermeneutical approach – interaction to yield deep insights

- **Critical-ideological**
  - Disrupt and challenge the status quo: emancipation and transformation
  - Researcher’s proactive values are central to the task, purpose and methods
Lincoln & Guba: Quality indicators

<table>
<thead>
<tr>
<th>Transparency</th>
<th>Soundness criteria</th>
<th>Trustworthiness</th>
<th>How to achieve (in EDR), e.g.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal validity</td>
<td>“truth” (warrants for causality)</td>
<td>Credibility</td>
<td>Prolongued engagement</td>
</tr>
<tr>
<td>External validity</td>
<td>Findings can be informative elsewhere</td>
<td>Transferability</td>
<td>Thick descriptions</td>
</tr>
<tr>
<td>Reliability</td>
<td>Findings are consistent and repeatable</td>
<td>Dependability</td>
<td>Reuse of design frameworks, transplanting interventions</td>
</tr>
<tr>
<td>Objectivity</td>
<td>Findings shaped by respondents, not researcher bias, motivation or self-interest</td>
<td>Confirmability</td>
<td>Triangulation of data collection methods</td>
</tr>
</tbody>
</table>
## Wagner: Cooperation forms

<table>
<thead>
<tr>
<th>Expert roles</th>
<th>Data extraction agreement</th>
<th>Clinical partnership</th>
<th>Co-learning agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Process</td>
<td>Direct, systematic, inquiry designed, conducted and reported by researcher</td>
<td>Systematic inquiry cooperatively designed and reported by researcher and practitioner</td>
<td>Reflexive, systematic inquiry stimulated in part by ongoing collegial communication</td>
</tr>
<tr>
<td>Researcher as researcher; practitioner as practitioner</td>
<td>Researcher as researcher and collaborator; practitioner as practitioner and collaborator</td>
<td>Researcher as researcher-practitioner; practitioner as practitioner-researcher</td>
<td></td>
</tr>
</tbody>
</table>
What shapes our thinking?

• The values and culture in which we work
• Our backgrounds and experiences
• Our personalities
• …

• What has influenced you?
• What do you wonder about?
## Interactions in EDR: Some stories from the field

<table>
<thead>
<tr>
<th>Project</th>
<th>Type</th>
<th>Country</th>
<th>Setting</th>
<th>Main participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cascade-Sea</td>
<td>PhD</td>
<td>Southern Africa</td>
<td>Secondary level science and mathematics</td>
<td>Facilitator teachers</td>
</tr>
<tr>
<td>PictoPal</td>
<td>PostDoc</td>
<td>Nederland</td>
<td>Early literacy</td>
<td>Kindergarten teachers, children</td>
</tr>
<tr>
<td>Maitri</td>
<td>PhD</td>
<td>India</td>
<td>Remedial teaching</td>
<td>Para-teachers</td>
</tr>
</tbody>
</table>
Cascade-Sea: Background & Goals

• Need for teacher guides
• Need for support to create them Human support limited
• EPSS as a supplement?

• What are the characteristics of a valid and practical support tool that has the potential to impact the performance of (resource) teachers in the creation of exemplary lesson materials for secondary level science and mathematics education in southern Africa?
Cascade-Sea: Overview of the process

5 Tenets
- Local relevance
- Collaboration
- Authenticity
- Mutual benefit
- Continuous (re-) analysis
Cascade-Sea: Landing the helicopter
Cascade-Sea: In light of your concerns?
PictoPal: Background & Goals

- Lack of pedagogical models for technology integration, especially with young children;
- Literacy education in NL is very strong in the technical aspects of reading and writing; also strong in storybook understanding and listening comprehension; but the functions of written language (a large area of national interim goals) is relatively under-represented in the curriculum, and not at all present in technologies.
- Challenge: Explore innovative ways for technology to address these issues
# PictoPal: Overview of the process

<table>
<thead>
<tr>
<th>Researcher (assignment)</th>
<th>Prototype &amp; Year</th>
<th>Tool &amp; Implementation</th>
<th>Teacher Design &amp; Teacher Learning</th>
<th>Pupil Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developers</td>
<td>0 - 2003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carolina (B)</td>
<td>1 - 2004</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tjeerd (B)</td>
<td>2 - 2005</td>
<td></td>
<td></td>
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<tr>
<td>Andrea (B)</td>
<td>2 - 2004</td>
<td></td>
<td></td>
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<tr>
<td>Marita (B)</td>
<td>3 - 2006</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Marc (B)</td>
<td>3 - 2006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AnnaMarie (M)</td>
<td>4 - 2007</td>
<td></td>
<td></td>
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<tr>
<td>Design Class Team (B-D)</td>
<td>5 - 2007</td>
<td></td>
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<tr>
<td>Nikki (B)</td>
<td>5 - 2008</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Amina (D1-4)</td>
<td>6 - 2009-12</td>
<td></td>
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<td></td>
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<tr>
<td>Ferry (D1-4)</td>
<td>7a - 2010-13</td>
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PictoPal: Landing the helicopter
PictoPal: In light of your concerns?
Maitri: Background & Goals

- Slums of Ahmedabad almost 5 million people
- Remedial classes to improve learning and keep kids in school
- Designed to supplement, not supplant the government school system
- Classes run by ill-qualified volunteers with limited resources;
- How to provide good quality teaching and learning?
Maitri: Overview of the process

<table>
<thead>
<tr>
<th>Analysis &amp; Exploration</th>
<th>Design &amp; Construction</th>
<th>Evaluation &amp; Reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning needs and context analysis;</td>
<td>Design 1 evaluation (pilot)</td>
<td>Impact evaluation 24 months support subsided</td>
</tr>
<tr>
<td>Design framework underpinning professional development program</td>
<td>Design 2 evaluation (institutionalization)</td>
<td>Systematic reflection to distill design heuristics</td>
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<tr>
<td>- Management interviews</td>
<td>Design 3 evaluation (summative)</td>
<td>- Structured self-report</td>
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<tr>
<td>- Teacher interviews</td>
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<td>- Classroom observation</td>
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<td></td>
<td>- Pupil pre/posts tests</td>
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<tr>
<td>- Literature review</td>
<td></td>
<td>- Teacher interviews</td>
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<td></td>
<td></td>
<td>- Management interviews</td>
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Maitri: Landing the helicopter

- Workshop
- Lesson Planning
- Lesson Reflection
- Lesson Enactment
- Coaching
- Micro-teaching
- Organizational conditions
Maitri: In light of your concerns?

Teacher to Harini:
“I have often encountered a feeling that our fuzzy ground realities are almost a botheration and a hindrance to the researchers in seeking their objective, as if it compromises their quest, as if they have to come and first clean up my kitchen to be able to work in it, and that often leaves us practitioners feeling undermined and in an unequal position with them; but this experience truly put us on an equal platform.”
Now back to you…

When it comes to researcher ↔ Practitioner interactions in EDR:

• What are your impressions?
• What questions do you have?
• What issues would you like to discuss?

• What about when it comes to researcher-respondent ideas in your own work?
Thank you!
For discussion beyond today…

Susan McKenney

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Ranges of views
Social design of educational research

• Social design of research
• The ‘social design’ of educational research in general (cf. Wagner 1997) and design research in particular (cf. Barab et al. 2007; Reeves et al. 2005) plays an important, if not determining role in shaping the research activities and—though we might not like to admit it—sometimes even the findings. Researchers and practitioners take on multiple roles during design studies, which is one way to facilitate the flow and uptake of new knowledge. For example, by taking on the role of designer, researchers may become more sensitized as they gather parameters within which solutions will have to function. Simil- larly, by taking on the role of researcher, teachers may take a fresh look at phenomena in their classroom, enabled by a new lens or...