Designing for Scale: How relationships shape curriculum change

Natalie Pareja Roblin\textsuperscript{1, 2}, Gemma Corbalan Perez\textsuperscript{3}, Susan McKenney\textsuperscript{2, 4}, Nienke Nieveen\textsuperscript{3}, Jan van den Akker\textsuperscript{3}

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\textsuperscript{1} Ghent University, Belgium
\textsuperscript{2} University of Twente, the Netherlands
\textsuperscript{3} Netherlands Institute of Curriculum Development
\textsuperscript{4} Open University of the Netherlands
Purpose: Informing large-scale design

• Currently:
  – Large-scale curriculum reform in resurgence
  – Scholarship exists on scale innovation/change, especially on implementation
  – Scholarship exists on curriculum design, especially at micro level
  – Research and literature lacking to guide the design of large-scale curriculum reform

• Ultimate aim:
  – Inform the design of large-scale curriculum reform through
  – Development of a framework for understanding large-scale design
  – Start by understanding relationships among key players
Theoretical foundations: Coordination and cooperation among system actors is crucial.
Probing relationships between actors: Research approach

• Retrospective analysis of 8 prominent curriculum innovations

• Three types identified:
  – National reform (top-down approaches to change, macro)
  – Research and development projects (intermediaries’ approaches to change, meso)
  – School-based responses to national reform (bottom-up approaches to change, micro)

• Research questions:
  – Which relationships were particularly salient and why?
  – How were these relationships initiated and sustained?
## Cases studied

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Country</th>
<th>Type of initiative</th>
<th>Educational Level</th>
<th>Subject Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>River City</td>
<td>USA</td>
<td>R&amp;D project</td>
<td>Secondary education</td>
<td>Science</td>
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<tr>
<td>SimCalc</td>
<td>USA</td>
<td>R&amp;D project</td>
<td>Secondary education</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Twenty First Century Science</td>
<td>United Kingdom</td>
<td>National reform</td>
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<tr>
<td>Assessment is for Learning</td>
<td>Scotland</td>
<td>National reform</td>
<td>Primary and secondary education</td>
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<tr>
<td>Nature, Life and Science</td>
<td>The Netherlands</td>
<td>School-based responses to national reform</td>
<td>Secondary Education</td>
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<tr>
<td>Gifted Students</td>
<td>The Netherlands</td>
<td>School-based responses to national reform</td>
<td>Primary Education</td>
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</tr>
<tr>
<td>Mother tongue and Math</td>
<td>The Netherlands</td>
<td>School-based responses to national reform</td>
<td>Primary and secondary education</td>
<td>Mathematics</td>
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<tr>
<td>Subject renewal in science and math</td>
<td>The Netherlands</td>
<td>School-based responses to national reform</td>
<td>Secondary Education</td>
<td>Science and Mathematics</td>
</tr>
</tbody>
</table>
Data sources & analysis

- Document analysis
  - Scientific reports (e.g. journal articles)
  - Evaluation reports
  - Related media (websites, materials, etc.)

- Semi-structured interviews (+/- 75 min)
  - Identification of most salient relationships (RQ1)
  - Strategies and/or activities to initiate and sustain those relationships (RQ2)

- Themes in data:
  - Summarized according to interview question
  - Emerged across cases
Findings: Salient relationships (RQ1)

- Proactively establishing strategic partnerships with local/national organizations
  - Enable spread
  - Give local presence and legitimacy
  - Demonstrate shared commitment to change

- Identifying individuals within partner organizations who act as:
  - linking pins
  - program champions

- Teacher involvement in innovation design
  - Proactively (e.g. co-design)
  - Reactively (e.g. feedback during pilot)
Findings: Strategies for initiating and sustaining relationships (RQ2)

• Visible presence
  – Being active and visible nurtures and strengthens relationships even when no clear need or plan for cooperation has been identified

• Alignment of project goals with stakeholder goals
  – Some win-win situations naturally exist, others were created

• Trust and sustained communication
  – Working through conflict, sensitive to the (intra)personal nature of co-operative professional relationships
Conclusions & discussion

• Conclusions
  – Attending to relationships is both crucial and complex
  – Personal/political approaches needed, not just functional/task-related ones
  – Themes in the findings identify specific areas for attention

• Discussion
  – Failure to attend to these issues are known to contribute to failure in implementation; it would seem this may also be true in design.
  – Can we educate large-scale designers? How?

• Moving forward
  – Toward developing a framework for understanding large-scale design, what other elements warrant attention?
We welcome comments

- Natalie Pareja: natalie.pareja@gmail.com
- Gemma Corbalan Perez: G.Corbalan@slo.nl
- Susan McKenney: susan.mckenney@ou.nl
- Nienke Nieveen: n.nieveen@slo.nl
- Jan van den Akker: j.vandenakker@slo.nl