Evaluating Research Projects – Different Perspectives and Actions

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Examining Mathematics Coaching (EMC)  
Project Description

EMC is a 5-year research and development project funded to examine the effects of a coach’s knowledge for coaching on a diverse population of K-8 teachers.
Knowledge Domains

- Mathematics Content Knowledge
- Coaching Knowledge
- Knowledge of Student Learning
- Knowledge of Teacher Learning
Professional Development

Two one-week professional development courses:

- **Knowledge of mathematics content**, specifically in the area of number and operation, with a focus on ratio and proportion.

- **Coaching knowledge**, addressing eight themes identified by coaching experts.
Evaluation
Evaluation

- An external evaluation of the research project was required by the funder.
- The current evaluation team was contracted midway through the third year of the project.
- The evaluation involved mostly document review without other data collection activities to provide evidence for typical evaluation purposes.
Evaluation Approaches

- Often, external evaluations provide
  - **Formative feedback** to improve projects and suggest mid-course corrections
  - **Summative reporting** of project outcomes and impacts
  - **Project monitoring** for accountability

- This evaluation consisted of review of documents generated by project, including
  - The proposal and annual reports to the funding agency,
  - PI and research team meeting minutes,
  - Advisory Board documentation,
  - Research protocols and data analysis reports,
  - Project newsletters and website, and
  - Other electronic artifacts

- With a limited budget and no on-site collection of data, what rationale should be used for the evaluation of the research?
## Measuring Research: Key Rationales

<table>
<thead>
<tr>
<th>Advocacy</th>
<th>Demonstrate the benefits of supporting research, enhance understanding of research and its processes among policymakers and the public, and make the case for policy and practice change</th>
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<td>Accountability</td>
<td>Show that money and other resources have been used efficiently and effectively, and to hold researchers to account</td>
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<tr>
<td>Analysis</td>
<td>Understand how and why research is effective and how it can be better supported, feeding into research strategy and decision-making by providing a stronger evidence base</td>
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<td>Allocation</td>
<td>Determine where best to allocate funds in the future, making the best use possible of a limited funding pot</td>
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EMC Evaluation Framework

- Includes review of project documentation for
  - Accountability
  - Analysis
  - And as a by-product, Allocation of resources

- Intended to
  - Improve processes,
  - Increase potential for impact, and
  - Provide some oversight
Support for research team with regard to:
- What’s going right
- Key project decisions

Verification that:
- The research team is doing what they proposed in the way they proposed it
- There are challenges requiring mid-course corrections to implement longitudinal multi-site educational research

Changes in:
- Research team processes
- Analysis of the project’s research data
- Allocation of resources and funds
## Key Lessons Learned

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<th>Evaluation</th>
<th>Research</th>
<th>Project</th>
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<td>• Low-cost evaluation of research with targeted rationale can have considerable impact on research processes and outcomes</td>
<td>• Research requires flexibility to account for unanticipated factors that influence designs, analysis, and outcomes</td>
<td>• Reflective practice allows multiple external experts to help oversee, inform, and guide key project decisions</td>
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<td>• External evaluators’ responsiveness and expertise play crucial roles in quality of feedback</td>
<td>• The contributions of feedback from external “eyes” on the project strengthened quality of research</td>
<td>• Communication across many sites and project teams with diverse roles requires careful orchestration</td>
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Keys to Evaluating Research

- Agreement on the Purpose
- Clear Expectations
- Open and Effective Communication
- Responsiveness
THANK YOU!

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