

Perspectives on Dissemination and Adoption of Educational Innovations in STEM



by Brandon Muramatsu, MIT OEIT

This presentation based on: McMartin, F., Muramatsu, B. and Tront, J.G. (2010).
Report on Disseminating CCLI Educational Innovations. Manuscript in Progress.



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Dissemination & Adoption of Educational Innovations: Overview

- Summary from U.S. NSF-funded project reviewing dissemination of CCLI (TUES) grantees
- High-level results
 - Dissemination not leading to desired outcomes
 - **Adoption of innovation** is driver for dissemination, but mechanisms used (papers, workshops, websites) aren't particularly effective.
 - Disconnect between Principal Investigators (PIs) and NSF Project Directors (PDs) on what constitutes “successful dissemination”

Interpretation: What's typically disseminated is the content and a project's history, and not the “why” or “how”.

Mechanism: Papers (Conference and Journal)

➤ Papers

- PIs surveyed thought conference papers more effective than journal papers
- But workshop participants observed that the most “successful” dissemination activities reflected the reward system for faculty members
- Most workshop participants did what they “know” — they were less knowledgeable about other potentially “effective” or successful mechanisms

Survey of ~2500 Principal Investigators (1999-2009), 55% response rate, n=1285

Mechanism: Workshops

➤ Workshops

Question to ask: What makes a successful workshop experience to encourage adoption?

- About of 50% PIs surveyed thought workshops were successful dissemination methods, to encourage adoption (top box score)
- But NSF PDs surveyed thought workshops were always (100%) successful dissemination methods

Survey of ~2500 Principal Investigators (1999-2009), 55% response rate, n=1285
Survey of 28 Project Directors, 50% response rate, n=14

Mechanisms: Websites and Social Media

➤ Websites

Interpretation: Static websites do not necessarily match the goal of “adoption of innovation.”

- About 50% of PIs surveyed thought that websites are effective means of dissemination
- Few PIs (in the 10% range) thought that contributing to digital collections, NSDL, etc. were effective means of dissemination

➤ Social Media

- Almost no use of Social Media for dissemination by PIs surveyed

Survey of ~2500 Principal Investigators (1999-2009), 55% response rate, n=1285

Dissemination & Adoption of Educational Innovations: Three Recommendations

Recommendation



Share the process of creating the innovation publicly.

Keep a “diary” or blog.

1. Tell the story of the innovation

➤ Interpretation: What’s often missing is the “how” and “why” certain choices were made in the design and development, more important than “project background” –or– the “organization”

2. Clearly define “dissemination” (from Granting Agency perspective); show many effective models of dissemination so grantees have methods to emulate (or not)

➤ Interpretation: Understand what’s meant by “dissemination”

3. Build dissemination in from the start

➤ Interpretation: Dissemination of educational innovations is more than presenting on the project at a conference, it’s about guides and support materials to help others use the materials.

Some Guiding Questions Regarding Dissemination and Adoption of Educational Innovation

Recommendations



- Ask the following questions:
 - Would another professor be interested in implementing my work?
 - What would I want or need to help me use this innovation if it was developed by another faculty member?
 - *More than just content, what else?*
 - Are we making specific design decisions that unnecessarily complicate adoption or adaptation of this innovation elsewhere?

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