Perspectives on Dissemination and Adoption of Educational Innovations in STEM

by Brandon Muramatsu, MIT OEIT

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”.

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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
Workshops

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

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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