A theoretical perspective on sustaining an education change initiative

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Problem Statement

Educational change initiatives develop programs focused on transforming learners' experience are often initiated with grant funding.

What happens when the funding ends?

What are characteristics of programs that are sustained beyond initial external funding?

Organization-based psychological ownership (Pierce, et al., 2001)

What motivates ownership?

What pathways are taken to develop ownership?

The consequences of psychological ownership include establishing the *rights* to or *responsibility* for the object of psychological ownership

Organization-based psychological ownership (Pierce, et al., 2001)

What pathways are taken to develop ownership?

- Coming to know or understand the 'object' to be owned

- Investing time in the 'object'

- Controlling the 'object', that is , determining what is needed to influence the 'object'

Illustrative example: Family-owned businesses (Ceja & Tapies, 2011)

Characterization of the next generation's psychological ownership

- <u>Genesis</u>
  - Family climate
  - Relationship with members of senior generation
- <u>Pathways</u>
  - Significant familiarity with family business (*coming to know*)
  - Structured and planned entry into the family business (*investing time*)
  - Having a say on the family business (*control*)

SCHOLARSHIP OF TEACHING AND LEARNING (SoTL)

SoTL is scholarly inquiry by faculty into questions about their teaching and their students' learning that is peer-reviewed and made public for others to build upon..
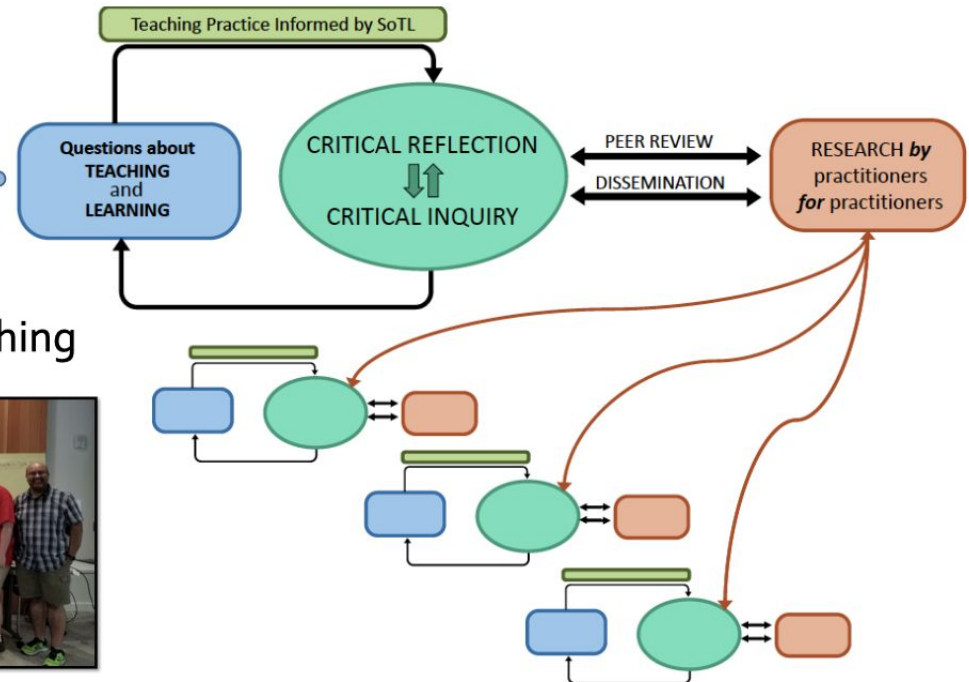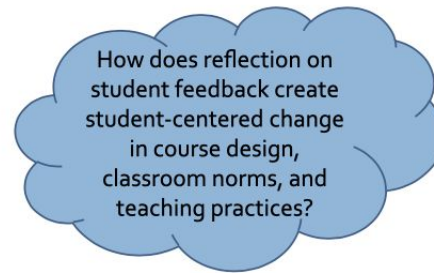
Supports six fellows through a SoTL program focused on Teaching and Learning in Introductory Mathematics

- SoTL Workshop
- Collaboration via online platform
- Monthly video meetings
- Meetings at AMATYC Annual Conference

AMATYC and Project SLOPE Relationship

Project SLOPE PIs

PI: Originally a member of AMATYC's Research Committee
- Now, also the organization's Grant Coordinator

Co-PI1: Chair of AMATYC's Research Committee
    Now, also a PI on another grant-funded initiative under
       AMATYC's umbrella

Co-PI2: Colleague of Co-PI1 on other projects with an
    organizational change focus
    Science educator with an undergraduate minor in
      mathematics

AMATYC Leadership
All volunteer

Executive Board: President (include Past President and President Elect), Secretary, Treasurer and 8 regional Vice-Presidents *[one of these VPs has been the program liaison]*

Committee and Network Chairs

Coordinators of established organizational programs or routines: Project ACCCESS

AMATYC and Project SLOPE Relationship

What's involved in developing a relationship that leads to sustaining an externally-funded initiative?

Learning the ins and outs of the organization's routines

While at the same time…

The organization learns more about the new externally-funded initiative as the initiative's needs and the organization's policies become a topic of discussion

Methods
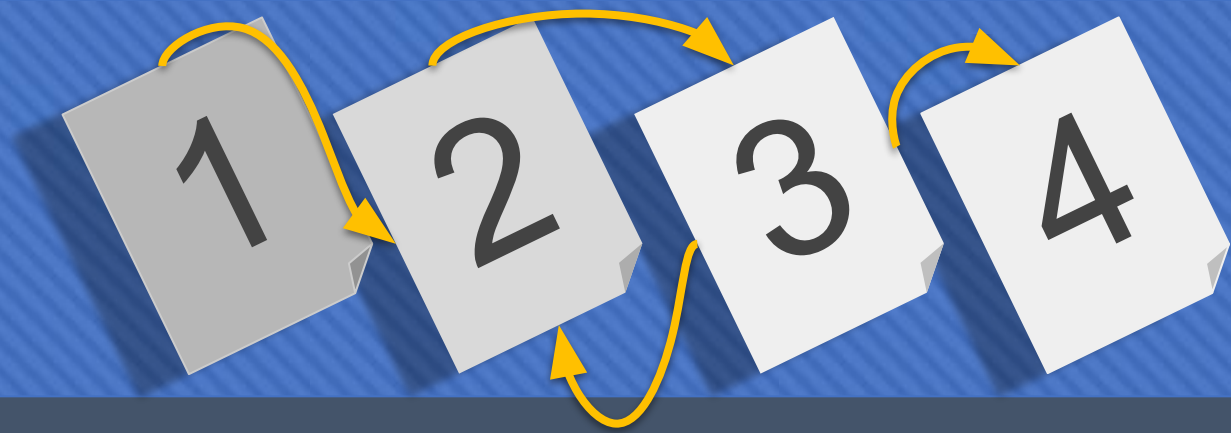
Interview Professional Society Leadership (e.g., President, Project Liaison to the Board)

Research Questions:

★ **In what ways do organizational leaders articulate psychological ownership of Project SLOPE?**

★ **What motivations do leaders indicate are served by psychological ownership of Project SLOPE?**

★ **What pathways do leaders indicate led to their psychological ownership of Project SLOPE?**

Goal - Begin to understand the state of ownership of Project SLOPE by leadership during the pilot of the project to identify future actions and consider what ownership may entail for professional society leadership (e.g., Stanford et al., 2017)

Operationalization of Psychological Ownership

	Definition	Interview Indicator
Notion of Mine	A state in which a leader feels that Project SLOPE is theirs or is part of the professional society (or the opposite feeling, not theirs)	First-person pronouns (or the opposite, third-person pronouns) description of Project SLOPE
Rights	An expectation for control of Project SLOPE	Expectation of the leader or professional society controlling the future of Project SLOPE
Responsibilities	A sense of duty toward sustaining Project SLOPE	Expectation of the leader or professional society for sustaining Project SLOPE

Operationalization of Motivation

	Definition	Interview Indicator
Identity	A need for self-understanding or for the object of ownership to be a vehicle of self-expression	Connection of Project SLOPE to the leader's or the professional society's identity, goals or mission
Efficacy	A need to influence Project SLOPE to produce a desired result and be successful in doing so	Connection of Project SLOPE to realizing desired impacts of the professional society or of the leader (e.g., professional development of faculty)
Sense of place	A need to have space, physical or not, in which to exist	Connection of Project SLOPE to a sense of home

Operationalization of Pathways

	Definition	Interview Indicator
Controlling	Having influence over Project SLOPE	Providing input on design decisions for Project SLOPE
Coming to Know	Understanding the details of Project SLOPE	Learning about features of Project SLOPE, such as SoTL
Investing	Expending effort to enact Project SLOPE	Participating in activities that support the work of Project SLOPE

Project SLOPE Findings and Interpretations

Findings

★ One leader discussed future iterations of the project (responsibilities).
  ○ Many leaders gave some indication of ownership (sense of mine).

★ One leader asked the PI to simplify the description of Project SLOPE and this increased their support of it.
  ○ The similarity of Project SLOPE to other professional development offered by the professional society helped the leaders interpret Project SLOPE

★ Reviewing applications helped a leader come to know the project

Interpretation

★ Work remains to build feelings of ownership

★ Leaders build ownership around projects they they can understand and describe in simple terms.
  ○ Aligning with other programs and the society's mission builds understanding

★ Initial tasks that involve leaders can build ownership

What activities have you used to sustain your program?
Was your effort guided by a theory or framework?

Guidelines for sustainability of change initiatives

	Activities
Prior to development	Align mission and strategic plans (according to leaders) with the pilot program.
	Develop simple descriptions of the program and be consistent in their use. Align program features with previously existing programs.
During implementation	Involve leaders in small (but important and simple) program-related tasks
	Identify a leader as a liaison
	Make connections to mission or strategic plans
	Notice when leaders begin considering responsibilities for the future of the program(s) and share ownership with these leaders

In your work, what would it mean for your efforts to be "sustained"?