

STEM Faculty Development Research Agenda: **Placing Equity Front and Center in STEM Faculty Development Research**

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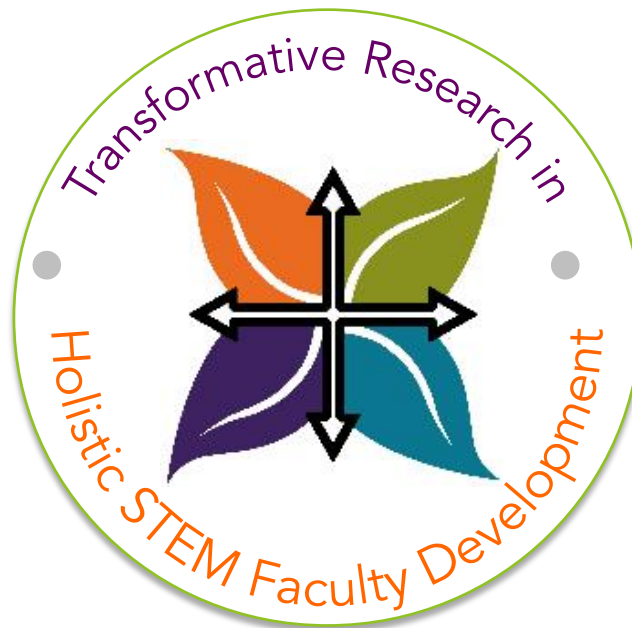
Contact: stemfacdev@clemson.edu



Activity	Time	Participant Engagement
Overview	5 min	Understand the workshop organizational structure
Guided Individual Reflection	15 min	Participants will reflect on their institution model of FD
Holistic STEM Faculty Development Research Agenda	15 min	Participants will engage with the coordinators
Guided Individual Feedback	10 min	Participants will start to provide individual feedback
Guided Group Work	30 min	Participants will work in groups to incorporate individual reflection ideas
Report out	10 min	Participants will share with the other attendees
Wrap-Up	5 min	Participants will complete an exit survey

Holistic STEM FD

four areas of teaching, research, service, and leadership





STEM Faculty Development Collaboratory



teaching

research

service

leadership



How Many Hats Do You Wear:

Building Research Capacity for STEM Faculty Development Workshop



February 17-18, 2017
Clemson University



Research & Workshop Team



Karen High



Cindy Lee



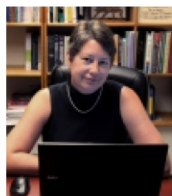
Sandy Linder



Shannon Stefl



Faiza Jamil



Cindy Roper



Dennis Lee



Kimbell Dobbins

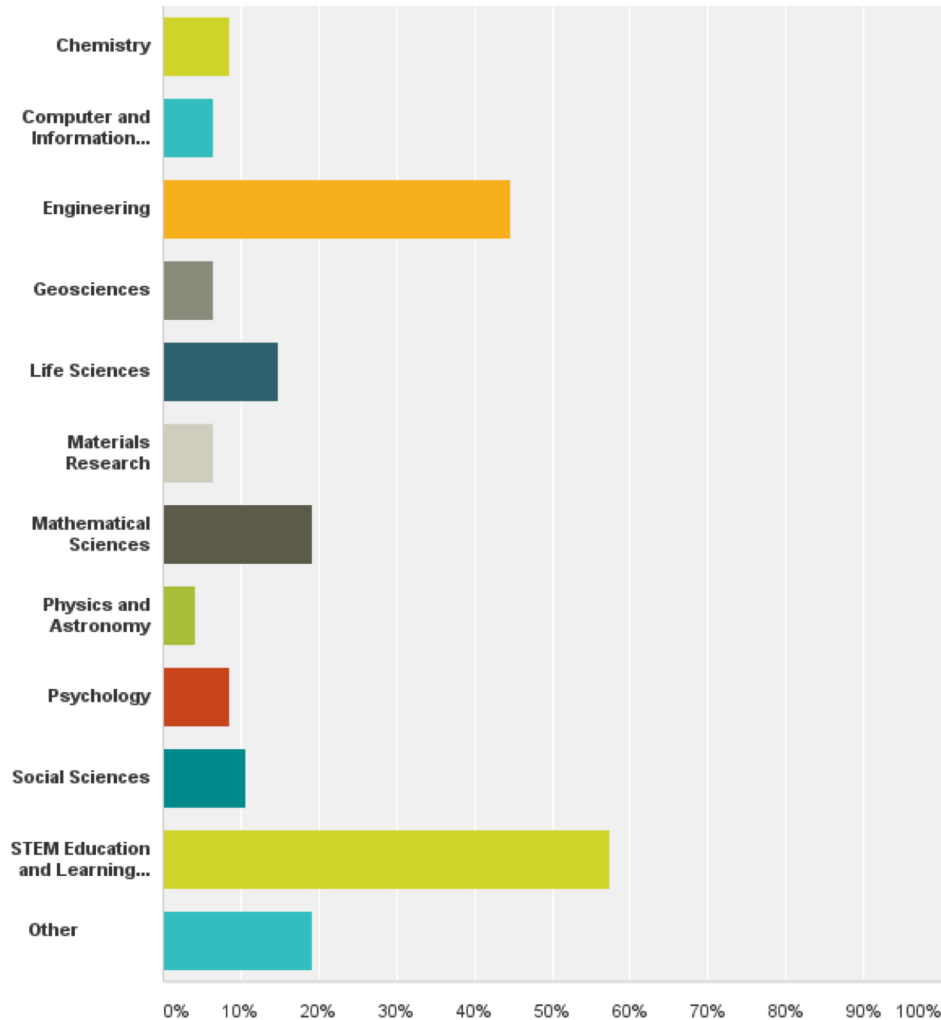


Teri Garrett

The STEM Faculty Development Collaboratory (SFDC)

- ▶ The STEM Faculty Development Collaboratory (SFDC) at Clemson University was established in 2015 to provide transformative research and service in the holistic areas of teaching, research, service, and leadership
- ▶ The SFDC focuses on transformative research and service to advance holistic faculty development focused on the STEM disciplines
 - ▶ **Please fill out the Affiliate Recruitment cards if you are interested in joining the collaboratory or contributing to the further development of the research agenda**

Workshop Participant's Areas of Expertise



STEM Faculty Development Workshop Discussion Threads

Thread 1 Inputs

- Motivation & Engagement
- Expectations & Policies
- Context & Characteristics

Thread 2 Processes

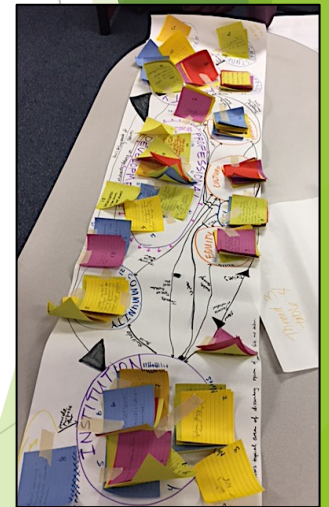
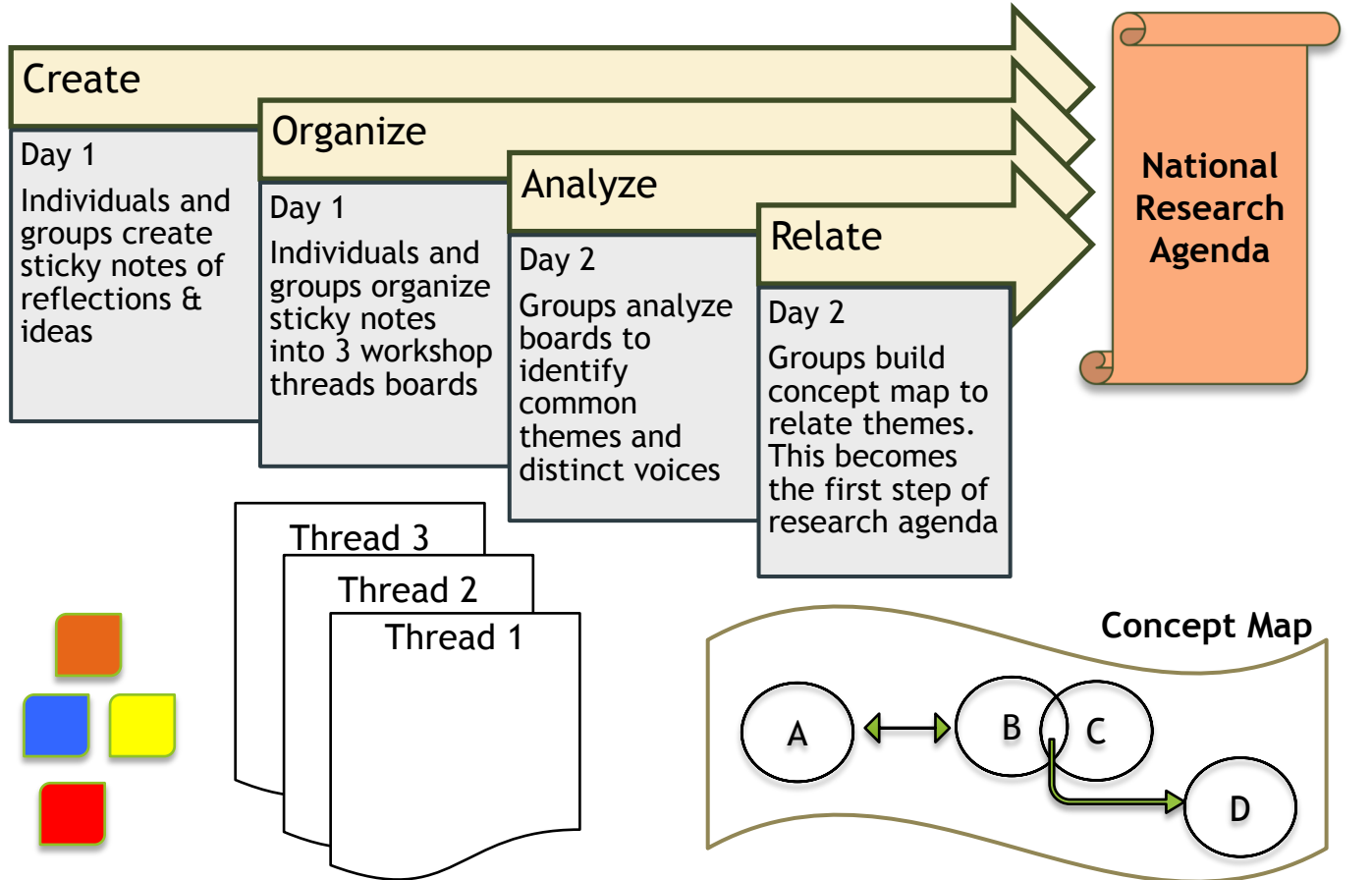
- Mechanisms & Models
- Implementation Fidelity
- Data Usage

Thread 3 Outcomes

- Faculty Identity
- Metrics & Productivity
- Cultural Norms

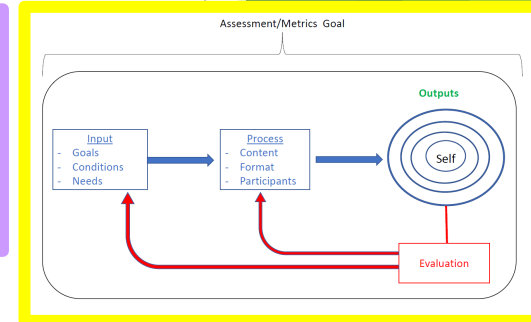
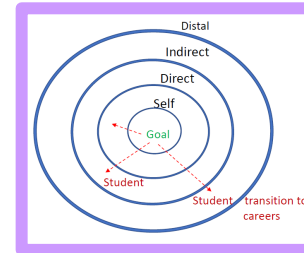
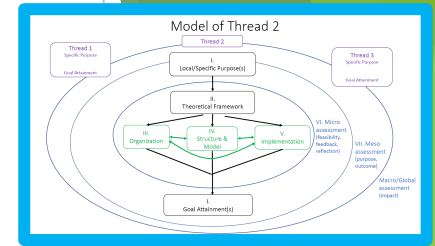
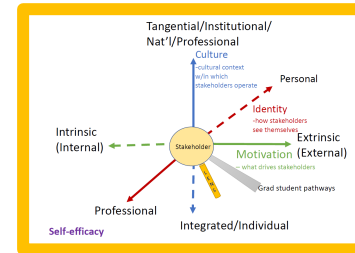
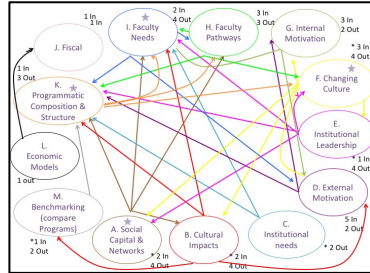
Slack.com Pre-workshop Engagement

Development of national research agenda during workshop



Martin, J.P., Stefl, S.K., Slaton, A. (2017). *Developing a National Research Agenda: A Data Collection and Community Engagement Model*. In Proceedings of the 2017 American Society for Engineering Education Annual Conference and Exhibition.

Current State of the Research Agenda



outcomes

Category
1

Category
2

Category
3

Category
4

Category Description

Identified *seven overarching outcomes* for research in Holistic STEM FD.

- (1) Metrics/Instrument Development for STEM FD
- (2) Impact on Students,
- (3) Generalizable Models of Holistic STEM FD
- (4) Impact on Faculty
- (5) Equity
- (6) Cultural and Community Context, and
- (7) Institutional Policy and Context

To move the needle on these outcomes, we identified *four potential categories of research* that make up an emergent agenda of research for holistic STEM FD.

Category	Themes
1. Cultural and Contextual considerations	<ul style="list-style-type: none"> Importance of Context Institutional Value External Forces Who's Responsible Addressing bias
2. Processes of Conducting STEM FD	<ul style="list-style-type: none"> Delivery Innovation
3. Assessment of Models	<ul style="list-style-type: none"> Formative Assessment (Micro- inform the model/feasibility) Summative Assessment (Meso- results of the model) Systematic Assessment (Macro/Global- overall change/sustainability) Implementing Assessment
4. Who Are the Learners?	<ul style="list-style-type: none"> Self-Regulatory Development Motivation Identity Student Outcomes Aligning Personal and Institutional Goals Aligning Goals Across Academia

Learning more about the research agenda and SFDC

- ▶ Research Agenda & SFDC Website:
www.clemson.edu/ese/stemfacdev
 - ▶ Key items available:
 - ▶ Workshop info, ASEE paper, NARST paper, FIE paper, SFDC collaboratory members contact info, draft of agenda
- ▶ Email contact: stemfacdev@clemson.edu