

What is holistic STEM Faculty Development?

Demands on 21st century STEM faculty are vast and come from multiple directions. However, faculty development has focused either exclusively on teaching and learning or in a fragmented manner with one unit responsible for grantsmanship and other units on leadership. Holistic STEM faculty development will address all aspects.

- Research
- Teaching & learning
- Service
- Leadership

Objective for presentation

The preliminary results from a two-day NSF-funded workshop that drafted a national research agenda in support of holistic STEM FD are presented.

“How Many Hats Do you Wear?” took place in February 2017 at Clemson University with 63 experts contributing ideas.

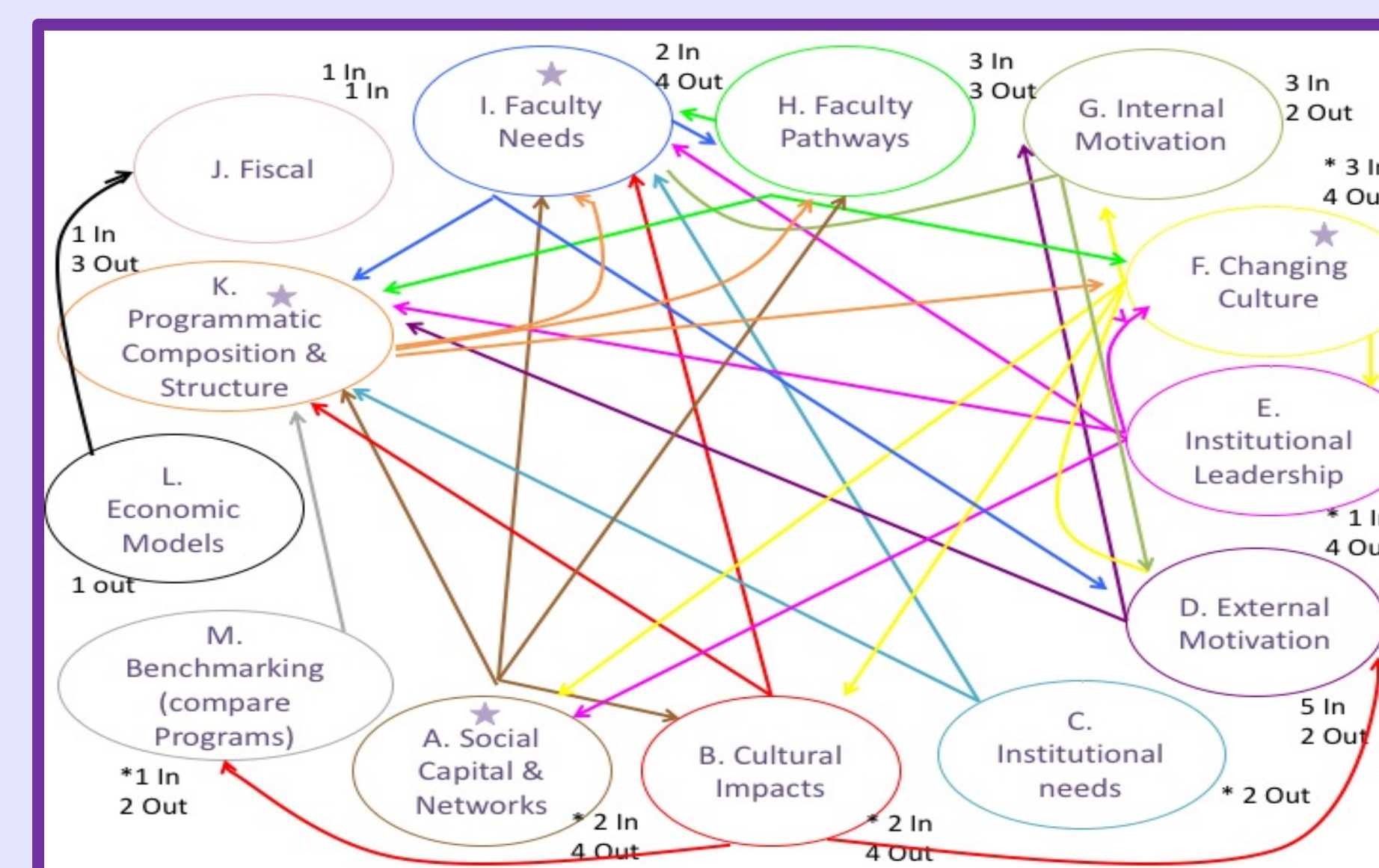
This work is supported by the National Science Foundation under Grant No. EEC-1638888.

Methodology

Day 1: participants generated ideas about research questions, theoretical frameworks, and potential methods to investigate the questions around three threads of inputs, processes, and outputs.



Day 2: small groups produced 2 concept maps per thread to categorize and relate all the sticky notes accumulated on day one pertaining to a single thread



A few weeks later, some participants and workshop leaders combined the concept maps into a single map for each thread.

Results to Date

Three broad themes emerged from the inputs thread.

- Motivation
- Identity
- Culture/context

The processes thread analysis produced four categories of research.

- Contextual considerations
- Processes
- Assessment of models
- Who are the learners

The outputs thread explored four measures for future research.

- Impact on values, community, knowledge, and attitudes
- How to make outputs synergistic and emergent
- Non-traditional measures of impact
- Improvement of student learning through holistic STEM FD

Next Steps

The research agenda for holistic STEM FD is a process not just a document. If you wish to provide your perspective or receive a copy of our NARST manuscript, send it to stemfacdev@Clemson.edu.

