

Description of Workshop Threads

Threads for the How Many Hats Do You Wear workshop

“How Many Hats Do You Wear?” is a workshop designed to generate a new research agenda for holistic STEM faculty development. Holistic means all facets of faculty life will be addressed in professional development that includes research, service, and leadership as well as teaching. Enabling success in all these areas will broaden participation and change the culture around student learning, improve faculty productivity and retention, and support faculty scholarship and leadership.

The workshop consists of three threads that are explained below (Inputs for Holistic Faculty Development, Mechanisms/Processes for Holistic Faculty Development, Outcomes of Holistic Faculty Development). Each thread will focus on identifying and refining research questions, potential methods and pathways for exploration and potential limitations. Within each thread, supporting strands will explore various aspects of the concepts.

Thread 1. Inputs for Holistic Faculty Development

- a. Motivation
- b. Engagement
- c. Institutional Expectations

This thread of holistic faculty development inputs focuses on topics related to the characteristics of faculty members and institutions that serve as barriers or supports to the adoption and implementation of holistic STEM faculty development programs. Such inputs could include issues at the institutional, administrative, and individual level, for example, conflicts between institutional expectations and faculty expectations for holistic development, potential mediators of faculty engagement, faculty motivation, financial support, or the policies of administration regarding STEM faculty development. In this session, we seek to explore the factors that may influence STEM faculty development adoption and implementation.

- *What are the characteristics of policymakers who support or advocate for faculty development opportunities? What are the characteristics of policymakers who deter faculty from seeking development opportunities?*
- *What are the characteristics of faculty members who seek faculty development opportunities? What are the characteristics of faculty who avoid faculty development opportunities?*
- *What faculty development programs exist for developing research skills (e.g., setting up laboratories, recruiting graduate students, writing proposals, managing grants) and scholarship skills (writing manuscripts; collaborating with other scholars and graduate students; disseminating knowledge, discoveries, and innovations; publishing; conducting peer reviews)?*
- *What faculty development programs exist for understanding how to effectively engage in service activities (e.g., departmental committee work, serving in a faculty senate, committee work for professional societies)?*
- *What faculty development programs exist for developing leadership skills for STEM faculty?*
- *How can existing teaching and learning faculty development programs inform the establishment or expansion of programs in other areas such as research, service, and leadership?*

- *What programs exist outside of STEM that could translate into faculty development programs within STEM?*
- *What types of faculty development do faculty pursue?*
- *What are the types of faculty development that faculty wish were available?*
- *Do all types of institutions of higher education (post-high school) offer faculty development?*
- *What are the characteristics of STEM disciplines, departments, colleges, and universities that offer faculty development opportunities? What are the characteristics of higher education entities that push or advocate faculty development?*
- *What incentives exist for engaging in faculty development? What are the disincentives? Are there schools that factor faculty development into tenure/promotion/reappointment considerations? Are sabbaticals seen as a method for faculty development? Are sabbaticals encouraged or discouraged?*
- *What are the benefits of faculty development for students, faculty, and administrators?*

Thread 2. Mechanisms/Processes for Holistic faculty development

- Implementation Structures
- Assessment/Evaluation Procedures
- Fidelity of Implementation

The mechanisms/processes thread focuses on topics related to the actual implementation of STEM faculty development. In this session, we consider the potential models or structures of STEM faculty development that are currently in place or conceptualized in theory. In addition, we expect to explore issues of fidelity within these structures and how it is tracked, potential models for assessment and/or evaluation and how assessment data feed back into improving or refining the faculty development processes, and logistical issues related to these structures.

- *Who is responsible for implementing faculty development?*
- *How do implementers determine that the adopted approach reflects theoretical frameworks?*

Thread 3. Outcomes of Holistic Faculty Development

- Faculty Identity and Wellbeing
- Productivity and Metrics
- STEM Cultural Norms

This thread focuses on identifying and refining research questions, potential methods and pathways for exploration, and potential limitations for topics related to how to best understand the influence of STEM faculty development on various factors. These factors include, but are not limited to, STEM faculty identity in relation to faculty development, and how faculty development influences overall faculty wellbeing, career satisfaction, and work-life balance. This thread will also consider levels of faculty productivity, the qualitative and quantitative metrics used to measure it, and the cultural norms in STEM that are validated by STEM faculty development efforts. In these sessions, we will seek to identify additional topics that relate to outcomes of holistic STEM faculty development and discuss the broader impacts of STEM faculty development.

- *How is faculty productivity currently defined and evaluated? How could this definition and evaluation of productivity be expanded or reconceptualized to reflect a broader and more holistic approach to assessing faculty performance?*
- *What are the current cultural norms surrounding faculty development? Should current cultural norms be reinforced or overturned or modified? Might the current cultural norms stand in the way of broadening participation?*