CULTIVATING HEALTH SCIENCE EDUCATION INNOVATION IN INDIVIDUALS AND IDEAS

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Innovating Education for Better Health

Background

- Cultivating **health science education (HSE) innovation** requires a complementary, 2-component process of (1) developing individuals as innovators and (2) enabling innovative ideas.
- **Research. Innovation. Scholarship. Education. (RISE**) has developed a guiding framework for assessing three main pillars for HSE innovation **ideas:**[1-3]

Impact	Scalability	Translation
HSE innovation represents a continuum of adjustments, modifications, or transformations of resources, processes, or systems.	HSE innovations can be adopted by others at single institutions, multiple ones, or broadly across the nation (and beyond), and can also scale across the learner continuum.	HSE innovations should aspire to translate findings into improved learning outcomes (T1), health/science practice (T2), that leads to real change in health and science outcomes (T3)

- **RISE** also **created and adopted** seven HSE innovation competencies to assess **individual** development of the innovator:[4-6]
  - **Creativity**: thinks beyond traditional, and often dogmatic ideas, rules, and patterns to generate meaningful alternatives
  - **Critical Thinking**: pinpoints the actual nature and cause of problems and the dynamics that underlie them to logically identify strengths and weaknesses of alternative approaches
  - **Initiative**: independently or collaboratively develops, assesses, and operationalizes ideas that foster positive changes, while overcoming real and perceived constraints that often impede the launching of ideas
  - **Intellectual Curiosity**: acquires new knowledge, challenges beliefs and knowledge constructs, and seeks explanations - even when the applications of that new learning is not immediately apparent
  - **Intelligent Risk-taking**: weighs potential benefits and disadvantages of an action or choice to assume calculated risks
  - **Teamwork**: effectively and efficiently collaborates with others in a diverse group and works with stakeholders to assimilate ideas and needs towards outcomes and solutions
  - **Visioning**: assesses future directions and risks based on existing and potential opportunities and threats to implementation.

Methods

- RISE selected fellows and mini-grants based on their HSE innovation ideas (guiding framework) and their propensity toward development as an innovator (competencies).
- Innovators received 18-months of support from RISE, which included pilot funding, development program, feedback, and access to a network through an Advisory Council.
- We implemented a development program to support both idea and personal innovation development.
  - Translational Education– Guest speaker, William McGaghie[2] invited to present on topic and guide participants in developing plans for translating their innovations into real health or science outcomes.
  - Theory of Change – Participants received introduction to Theory of Change process and guidance on designing a conceptual blueprint for change that can help ensure innovation activities map to all expected outcomes.[7]
  - Change Management – Three-seminar series based on Kotter's model for Leading Change[8]: Part I - Case for Change/Value Proposition, Part II - The Powerful Coalition: Diverse Teams and Teamwork, Part III - Implementation Science and Scaling.
  - Other Topics – Design Thinking, Measuring Innovation, Fostering Innovation Networks.

Results

- Six HSE innovators selected as the inaugural cohort.
- Innovators represented a balanced portfolio of learners, staff, and faculty working to advance health and science across the continuum of health sciences education at Michigan Medicine.

cultivating interdisciplinary teaching skills for biomedical science graduate student instructors	launching an app to enhance the delivery of confidential risk screening to adolescent patients for long-acting contraception	creating a new course and collaborations within Michigan Medicine to promote heath, clinical practice, sustainability and climate change
implementing a pilot in time-variable training for late internal medicine residency and early cardiology fellows	applying a competency-based approach to early graduate student education that enhances professional development.	improving patient care through critical reflection on unconscious bias in health care practices

Lessons Learned

- Defining the HSE innovation and competency framework is an iterative process, and definitions evolved as we invited feedback. This required clearer communication as we were developing the program.
- Innovators need guidance on how to apply the HSE and competency frameworks—e.g. how do innovators translate their ideas into practice? How do you self-assess creativity?
- Innovators want opportunities to share their ideas with others—including those with outside perspectives. Leveraging the networks developed by and with RISE were important for building and sustaining innovation.

Connect with RISE

- **Sign up** to join our Community of Practice open to ALL (faculty, staff, learners)
- **Follow us** on Twitter @UMichRISE
- **Visit Website** @ https://rise.med.umich.edu/

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