Teaching and Learning Rounds: Designing a faculty development course using elements of the learning environment

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Highlights in Medical Education
Innovation

We set out to create a faculty development course grounded in educational theory that is learner- and community centric by analyzing elements of our institutional learning environment. We are finding faculty change their practice with more of a focus on learner-centered activities and now have a “safe space” where faculty can share best practices in teaching.

ABSTRACT BODY:

Purpose: The most successful faculty development (FD) programs involve teachers in learning activities similar to ones that they will use with their students: a “learning by doing” strategy (Bransford, 2000). However, formal FD programs in medical education tend to be contradictory to major research and theory behind learning: workshops are rarely longitudinal, present superficial information, don’t target needs of teachers, and mainly use didactics (Bransford, 2000; Leslie, 2013). We set out to create a longitudinal FD course for internal medicine teaching attendings at a community teaching hospital, grounded in educational theory. The goal is to create a FD curriculum that is learner-centered, community-centered (Bransford, 2000), and helps our faculty to grow professionally.

Approach/Methods: We organized monthly 60-minute sessions with voluntary participation. We based the course within a constructivist epistemology, creating sessions that were: experiential (Dewey, 1986), social (Vygotsky, 1980), include elements of observation, reflection, and action, and based on preexisting understandings and knowledge (Piaget, 1952). Each session was structured around clinical learning environment artifacts (resident notes, evaluation forms, bedside teaching, posted material in hallways and workroom, etc). A facilitator guided participants in describing and analyzing artifacts, sharing of interpreted challenges faced by the creator of artifacts, and sharing solutions. Each session ended with reflection about participants reaction to the exercise. We mapped artifacts and activities with institutionally predetermined behaviors expected of a teaching attending such as assessment, feedback, bedside teaching, etc.

Our evaluation focuses on our three main objectives. First was to create a learner-centered course. As a product of an experiential process, the group would explore relevant topics which would be based on their own prior knowledge and would meet their needs. We recorded these concepts. Second was to create a community-centered course which was evaluated by reviewing “best practices” shared by faculty during the session. Finally was to create a course that allowed our faculty to grow professionally, which will be evaluated by an end of course survey about change of practice perceptions.

Results/Outcomes: Initial qualitative data indicate that participants acquire three types of content. First, faculty learn and share discrete teaching tips and best practices, which are compiled in a Google document that can be accessed online. Second, the sessions create a sense of community; faculty regard the exercise as a “safe space” to explore best practices at our institution and ways to improve their own teaching. Finally, faculty recognize and explore the critical concepts behind our learning objectives. One participant in our third session noted, “It became apparent to me when I was reflecting on the exercise that I know myself better as a learner...I can also train myself to understand how another person learns by asking them to reflect on a learning exercise.”

Discussion: We have implemented a FD course grounded in educational theory with a with a learner- and community-centric atmosphere. We are beginning to hear faculty describe changes in how they teach.

Significance: We are hopeful that qualitative data will continue to demonstrate that FD courses can be created that are based in educational theory and can be engaging for faculty members. Each institution will have its own and varied artifacts of the learning environment but the process by which they are used in this curriculum are reproducible at other institutions.


**Level of Audience:** Mid-career  
**Focus of Presentation:** UME, GME, CME, Continuum  
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Purpose: The work of psychologist Carol Dweck and colleagues reveals that approximately 80% of people endorse one of two outlooks called "self-theories". Half hold an entity theory and consider human qualities such as intelligence and talent to be fixed, while the other half have an incremental theory and view these traits as dynamic and malleable. This study will apply Dweck's insights by investigating whether medical students hold analogous self-theories about health. We will determine whether entity and incremental "health theories" exist and explore their impact on medical education and, in future research extended to patients and to healthcare providers, on health literacy and healthcare outcomes.

Approach/Methods: Medical students in years 1-4 (n = 688) will be invited to answer a confidential questionnaire to determine whether they endorse an entity or an incremental health theory. We will measure the frequency of each theory, correlate with self-theories of intelligence and talent, and assess relationships between health theory and year in school and aspects of socioeconomic background.

Results/Outcomes: This study is currently being launched, so the results are pending as the study is presently ongoing. Data collection will complete by 1 February 2017. Data will be presented demonstrating the presence and nature of self theoreies, health theories, and their correspondence with demographic data of students. Results will be presented in the following format:

- Frequency of entity and incremental heat theories among students.
- Correlation between health theories and self-theories of intelligence and talent.
- Correlation with demographic data.

Discussion: To our knowledge, this is the first study reporting on students self-theories and health-theories in medical education. We will summarize our findings briefly and hold the results against the literature produced by Dweck over the last 35 years. We will compare and contrast our findings to those of others and relate them to a theory/framework of medical education and motivational psychology. We will discuss strengths and limitations of our research.

Significance: Dweck's groundbreaking work on self-theories in the domains of intelligence and talent has shows than self theories correlate strongly with (and, arguably, are the cause of) differences in resilience and perseverance in the face of initial difficulty or failure. Entity theorists embrace performance goals (they must appear smart and avoid making errors), avoid challenge, fear failure, and their performance and effort rapidly deteriorate if they encounter initial failure. Incremental theorists pursue learning goals, thrive on challenge, are immune to a fear of failure and value errors because they provide insight and direct efforts to improve, and redouble their effort and persevere after initial failure or difficulty. We will explore how health theories impact medical education. Later research focusing on disparities vs. parities in health-theories between students and teachers, students and patients, and patients and healthcare providers will assess the effects on learning and healthcare outcomes. Future studies will investigate the malleability of health-theories.


Level of Audience: Expert
ABSTRACT BODY:

**Purpose:** As new medical schools, Oakland University William Beaumont (OUWB), Central Michigan University (CMU), and Western Michigan University (WMU) employ a large number of junior basic science faculty teaching in the foundational sciences. At CMU and OUWB, these junior faculty have limited mentoring opportunities as they outnumber tenured faculty. It is important to help faculty connect with regional colleagues teaching in similar disciplines to provide research guidance, teaching and learning advice, and scholarship collaboration options. In addition, basic science faculty teaching in the foundational sciences need opportunities to present their research regionally to meet tenure and promotion requirements.

By making discipline specific connections, junior faculty can develop peer relationships that lead to mutual coaching. Peer-to-peer coaching or peer coaching offers junior faculty the support they need to succeed and thrive as teachers, researchers, and scholars. Peer coaching is a process of helping others improve performance now and into the future (Friedman, 2010). It’s a reciprocal relationship that benefits both parties by helping them explore ideas, collaborate on projects, and support each other in their faculty roles.

**Approach/Methods:** Using a Community of Practice model (Cambridge, Kaplan, and Suter, 2005), OUWB and CMU propose developing a peer connections program to serve junior faculty at OUWB, CMU and WMU. A peer connections community of practice will explore ways to help basic sciences junior faculty develop coaching relationships that will enable them to survive and thrive in their faculty roles at these new medical schools. Offering this program in a virtual format allows faculty to engage with minimal time commitments.

Faculty completed online profiles indicating discipline background, institutional roles, areas they wished to develop, and expertise they could offer. Profiles were analyzed and matched with peers, and introductory virtual meetings were set up. Surveys are sent every other month to monitor activities, obtain feedback, and gather data on the program. Survey data and instructor feedback was reviewed to determine program success and opportunities for change.

**Results/Outcomes:** A total of 39 faculty from the three institutions completed the online profile, and 31 faculty connected with peers to begin the coaching process. This project started in September 2016 and is ongoing. Survey results for the first academic year will be available June 2017.

**Discussion:** Initial indications point to success for virtual peer coaching. Faculty have already reported making positive connections and meeting with peer coaches to exchange ideas. Some teams have even traveled to peer institutions to meet in person, see facilities, and collaborate on projects.

**Significance:** This project is significant because of the impact peer coaching can have on an early career faculty member. Oftentimes, these types of relationships continue throughout one’s career. It is also a viable option to provide support to early career faculty at a crucial point in their careers when senior faculty are not available to guide them. In addition, it gives faculty a different perspective from someone outside their institution. Finally, it is a great way to bring people from regional institutions together to collaborate, share resources, and promote best practices for medical education.


**Level of Audience:** Early-career

**Focus of Presentation:** UME

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Purpose: To assess the stability of community faculty over the first decade of a new medical school and to establish the factors which contribute to their satisfaction and retention.

Approach/Methods: The study consisted of two phases: establishment of retention rate for community based physician faculty and construction of an instrument to measure faculty satisfaction and factors contributing to satisfaction and retention. Faculty retention was calculated using a rolling 5-year retention rate (the number of faculty maintaining their faculty appointed at the end of 5 years divided by the number of faculty initially appointed 5 years earlier, adjusted for retirement, geographic relocation, and death.

A faculty satisfaction survey was developed based on a literature review and community faculty focus group inquiry. A content analysis was completed of the focus group responses and used to develop a likert scale survey assessing satisfaction and factors contributing to satisfaction, along with factors impacting likelihood of retention. Items covered included: faculty role, importance of tangible, personal, and altruistic benefits of being clerkship faculty, importance of administrative support, and professional development and personal factors contributing to participation in the teaching program. The survey was distributed to all clerkship faculty via an e-mail invitation from their regional campus dean. Descriptive analysis was used for respondent demographics, professional characteristics (e.g., primary medical specialty, number of years in practice, practice type), faculty role (e.g., primary teaching role) and satisfaction/retention factors.

Results/Outcomes: A 92% adjusted 5 year retention rate was found and 87% of the respondents reported being satisfied or very satisfied with their role as a clerkship faculty. Most respondents (68%) had received requests to provide clinical medical education to non-FSU COM students and 61% were active teachers for these other programs. Our clerkship faculty's level of satisfaction teaching FSU students was found to be higher (87% satisfied/very satisfied) than teaching non-FSU students (57% satisfied/very satisfied). The factors found to contribute the most to satisfaction were: altruistic benefits and various elements contributing to personal satisfaction. Tangible benefits were rated lower but found to contribute to satisfaction and retention. These included in order of importance: access to medical library, stipend, CME opportunities, and faculty development.

Discussion: A combination of benefits has provided a stable and satisfied faculty over the first decade of a new medical school. Given the usual and expected growing pains of any new program, it is significant to have such a period of stability at all of the six regional campuses. The factors contributing to the stability include altruistic benefits (giving back to the profession) personal benefits (intellectual stimulation) and tangible benefits (access to digital medical library, teaching stipend).

Significance: As competition for community based faculty members increases with the proliferation of new medical schools across the country, it will be important for institutions to develop incentives that result in long term faculty retention.


Level of Audience: Mid-career
Focus of Presentation: UME
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