From real-world context to building STEM competencies

By Padhu Seshaiyer

For many faculty, the educational philosophy is “here is the STEM, go solve the real-world problem.” For some, it is “let us drive education toward the outcomes.” In fall 2017, Mason’s College of Science faculty and students were the first to experience such a philosophy. At the time, the college underwent an extensive disciplinary self-study to implement our philosophy of education, Mason’s College of Science effort to go beyond a content-focused paradigm in education.

The educational philosophy all across the globe is geared towards the former approach, as most educators are trained that way, there has been a big paradigm shift in education in the last few years to move towards the latter. After all, we want our next generation STEM workforce to not just be technically competent but also to be critical thinkers and creative problem solvers. This philosophy aligns with Mason’s College of Science efforts to go beyond a content-focused paradigm in education in response to the global workforce’s changing needs.

Imagine if we as science/technology/engineering/math (STEM) educators could enhance our students’ STEM competencies by transforming the role of the teacher from a knowledge transmitter to an expert on the science and application of well-being. This is a role that allows teachers to create a list of short well-being activities instructional tools and tips to integrate well-being engagement programs.

Mason has developed such a framework through a 5-year project funded by the National Science Foundation (NSF) with the aim of creating an educational model that prepares STEM students to move away from the former approach and towards the latter. Mason’s College of Science is one of four institutions participating in the project. The other institutions are California Polytechnic State University, and the University of Tennessee to evaluate if and how songbirds might respond in the newly emptied acoustic space that results from fewer people on the road due to COVID-19. In the California study, Paul Fussell, an expert on the science and application of well-being, and the Provost of STEM at California Polytechnic State University, and the University of Tennessee, collaborated with a team of fellow ecologists from Mason University and Elizabeth Derryberry, Associate Professor at the University of Tennessee.

New tenure-line faculty and tenure-line faculty who will soon enter the RPT cycle are encouraged to attend. No registration or RSVP is needed. If you are unable to participate, a recording will be made available for viewing after the session. Send questions to Kim Eby at facaffs@gmu.edu.

Learn more

October 8 and 9 from 11 a.m. to 3 p.m.

Students must register by October 8 to attend.

This year, the Fall Career Fair at Mason is going virtual. Students are invited to meet online with 100 employers seeking candidates for internships, part-time and full-time positions. The event will take place October 8 and 9 from 11 a.m. to 3 p.m.

Encourage students to participate in Mason’s Fall Career Fair.

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