

Thursday, October 26, 2023

Refreshments at 3:15pm outside PSF 101
Colloquium from 3:30pm - 4:30pm in PSF 101

Beyond "Active Learning" in the Physics Classroom: How Different Forms of Student-Centered Instruction Can Yield Different Levels of Understanding

Professor J. Bryan Henderson
Arizona State University



Abstract:

Part of understanding how to maximize the use of technology in the promotion of active learning is that the term “active learning” is often used loosely, and this lack of a precise definition poses challenges for making an effective pedagogical intervention in one setting efficacious in another setting as well. We will examine a conceptual framework garnering a surge of attention in the learning sciences in which active learning does indeed have a precise definition. Through the lens of this framework, participants will have an opportunity to get hands-on exposure to a free technology that seeks to harness the power of feedback loops to motivate students to interact with their peers in the learning of science. Such interactive learning, as we will discuss, is distinct from merely “active” learning.

Biography:

Dr. J. Bryan Henderson is interested in the utilization of educational technology to facilitate critical, peer-to-peer science learning. His classroom-based research on critical speaking and listening intersects with his psychometric development of assessments that gauge how students learn science through evidence-based argumentation. Dr. Henderson received his Ph.D. from Stanford University and is currently an Associate Professor of Science Education at Arizona State University, where he is a recipient of the ASU Centennial Professorship Award for outstanding teaching, leadership, and service. In 2018, he was named a National Academy of Education/Spencer Fellow. He has published in the Harvard Educational Review as well as in the Journal of Research in Science Teaching (JRST), which is the most prestigious science education research journal and for which he serves as an Associate Editor. Dr. Henderson also serves on the Editorial Board of Educational Researcher, which is one of the top-ranked journals in all of educational research. He has been elected as Program Chair of the American Educational Research Association (AERA) Science Teaching and Learning Special Interest Group (SIG).

Host: Prof. Patricia Rankin

View our Fall 2023 Physics Colloquium schedule at <https://physics.asu.edu/colloquia>