

The Honorable State of Being STUCK in PROWESS Classrooms: Demystifying Mathematics

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We instructors must aim to convey to students that mathematics is a way of thinking about problems and issues in the world and help them develop a productive disposition toward it. This article delineates a teaching and learning environment, called PROWESS classroom pedagogy, designed to achieve the preceding objective. Research-based pedagogical strategies that promote students' deep engagement in their own learning process and the guiding role of the instructor in students' development of their "learning-to-learn" ability are combined to create a learning environment that fosters **PR**oficiency, **OW**nership, **E**ngagement, and **S**tudent **S**uccess (PROWESS) in mathematics. An explanation of the need for this pedagogical research and a summary of the literature on which PROWESS classroom pedagogy is based are presented first and then an episode from Calculus 1 class sessions exhibits the experimentation with it. The results of pre- and post-semester assessments using The Mathematics Attitudes and Perception (MAPS) instrument are presented, and the article concludes with a discussion of its effectiveness. The author encourages further experimentation and welcomes feedback for potential broader applications.

Keywords: PROWESS classrooms, active learning experiences, thinking mathematically, teaching/learning environment



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