Effective Teaching in Large Classrooms

WORKSHOP DESCRIPTION

There has been a recent call for a paradigm shift in undergraduate education from traditional (teacher-centric) methods to learner-centered practices.Learner-centered teaching requires students to be active and responsible participants in constructing their own learning and offers several benefits over traditional methods such as higher gains in learning, better long-term retention of concepts, and improved motivation for learning [1, 2, 3].

Instructors in large classrooms often struggle with how to integrate learner-centered methods into their classes. This workshop introduces research-based instructional strategies proven to increase learning outcomes, and focuses on their practical implementation in large classrooms.

WORKSHOP OBJECTIVES

At the end of the workshop, participants will be able to:

- Design course activities to address different learning styles in large classrooms
- Introduce a variety of active learning strategies into large classes
- Use cooperative learning to promote positive interdependence and individual accountability among team members
- Adopt a variety of practical strategies to create a sense of community in the classroom, reduce instructor's grading load, increase student motivation, and enhance learning outcomes

INTENDED AUDIENCE

The workshop is appropriate for new and experienced faculty. Graduate students with some teaching experience are also encouraged to participate.

WORKSHOP INSTRUCTOR

Dr. Stephanie Farrell is an Associate Professor of Chemical Engineering at Rowan University (USA). She obtained her PhD in Chemical Engineering from New Jersey Institute of Technology in 1996. Prior to joining the faculty at Rowan in 1998, she was an Assistant Professor of Chemical Engineering and Adjunct Professor of Biomedical Engineering at Louisiana Tech University until 1998. As a pioneer of inductive teaching methodology in engineering courses, she has made significant contributions toward project-based learning and novel laboratory experiences to engage students in the scientific discovery process. Dr. Farrell has been recognized nationally and internationally for significant contributions to engineering education through her work in experiential learning and faculty development. In 2012 she was awarded *Honoris Causa* in Engineering Education from the Internationale Gesellschaft für Inginieurpädagogik. She has been honored by the American Society of Engineering Education (ASEE) with several teaching awards such as the 2004 National Outstanding Teaching Medal and the 2005 Quinn Award for experiential learning. With over a decade of experience in leading workshops domestically and internationally, she has conducted workshops on a variety of topics including effective teaching, inductive teaching methods, and the use of experiments and demonstrations to enhance learning. Dr. Farrell is the Vice President Member Affairs for ASEE, and she serves on the Executive Committee of the International Federation of Engineering Education Societies (IFEES).

[1] R. Hake, 1998, Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses, *Am. J. Phys.* 66: 64-74

[2] M. Prince, "Does Active Learning Work? A Review of the Research." *J. Engr. Ed.*, 93(3), 223-231 (2004).

[3] Smith, K.A., S.D. Sheppard, D.W. Johnson, and R.T. Johnson, "Pedagogies of Engagement: Classroom-Based Practices," *J. Eng. Ed.*, 94(1), 87 (2005).