SCHOLARSHIP OF TEACHING AND LEARNING

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LEARNING OBJECTIVES

- By the end of this interactive workshop, you will be able to:
  - **Describe** the scholarship of teaching and learning (SOTL)
  - **Recognize** important benefits of SOTL
  - **Create** a plan to develop a SOTL project
FOCUS ACTIVITY

- Take **30-seconds to reflect on** the following questions:
  - If you conduct research and publish, what was the topic of a recent publication?
  - What was the topic or focus of your dissertation/thesis?
WHAT IS SOTL?

- Refers to the study of effective teaching and learning through research and reflection as well as disseminating findings through publications and presentations.
Beth Dietz (2016) provided a powerful quote: “I paid little attention to how I could approach my teaching in a scholarly fashion or even how my classroom could be a source of scholarly interest” (p. 1).
WHAT IS A NON-SOTL PROJECT?

Evaluation of the Meaning in Life Questionnaire and Dispositional Hope Scale With Latina/o Students

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In this study, the authors investigated the psychometric properties of measures of meaning in life and hope among Latina/o students. Participants completed the Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006) and Dispositional Hope Scale (Snyder et al., 1991). A confirmatory factor analysis was used to evaluate structural validity. For the Meaning in Life Scale, internal consistency was good and acceptable as measured by coefficient alpha and a modest 2-subscale structure was confirmed. For the Dispositional Hope Scale, internal consistency was good and acceptable as measured by coefficient alpha and a modest 2-factor structure was confirmed. The authors discuss the importance of these findings as well as implications for counselors and researchers.

Keywords: assessment, culture, meaning in life, hope, Latina/o students
Keeping It Short and Sweet: Brief, Ungraded Writing Assignments Facilitate Learning

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Can short, ungraded, free-writing assignments promote learning of course material? We randomly assigned introductory psychology recitation sections (N = 978 students) to writing or thinking conditions. For all sections, teaching assistants presented students with a discussion topic based in current coursework. Students either wrote or thought about the topic for 5 min. All sections then discussed the topic for approximately 10 min. Exams included questions related to the discussion topics. Students in the writing condition attended class more often and performed better on factual and conceptual multiple-choice exam questions than students in the thinking condition, even after controlling for measures of student quality. The results suggested that brief free writing improved factual and conceptual learning.

Active learning, described as more learner- than response to a specific question, such as what students found unclear or most valuable from a previous lecture (Angelo & Cross, 1993; Dunn, 1994). Minute papers confer many of the benefits of writing described earlier (Stead, 2005). In addition, because minute papers are not graded, students are more likely to focus on content and clarity of expression, rather than formal aspects of writing, such as spelling and grammar (MacKinnon-Slaney, 1991).

Little research has examined modifications of the minute-paper technique. A notable exception (Butler, Phillmann, & Smart, 2001) combined minute papers and the think-pair-share technique to create CARDS, so named because students use index cards with this strategy. Specifically, students write responses to a question that addresses a specific psychological concept, ex-
Effective Use of Pause Procedure to Enhance Student Engagement and Learning

ABSTRACT

Introduction: Active learning strategies have been documented to enhance learning. We created an active learning environment in neuromuscular physiology lectures for first year medical students by using ‘Pause Procedure’.

Materials and Methods: One hundred and fifty medical students class is divided into two Groups (Group A and Group B) and taught in different classes. Each lecture of group A (experimental Group) undergraduate first year medical students was divided into short presentations of 12-15 min each. Each presentation was followed by a pause of 2-3 min, three times in points they remembered about the lecture (free-recall). Fifteen days after completion of the lectures a 30 item MCQ test was administered to measure long term recall. Group B (control Group) received the same lectures without the use of pause procedure and was similarly tested.

Results: Experimental Group students did significantly better on the MCQ test (p-value<0.05) in comparison to the control Group. Most of the students (83.6%) agreed that the ‘pause procedure’ helped them to enhance lecture recall.

Conclusion: Pause procedure is a good active learning strategy which helps students review their notes, reflect on
Active learning increases student performance in science, engineering, and mathematics

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To test the hypothesis that lecturing maximizes learning and course performance, we metaanalyzed 225 studies that reported data on examination scores or failure rates when comparing student performance in undergraduate science, technology, engineering, and mathematics (STEM) courses under traditional lecturing versus active learning. The effect sizes indicate that on average, student performance on examinations and concept inventories increased by 0.47 SDs under active learning (\(n = 158\) studies), and that the odds ratio for failing was 1.95 under traditional lecturing (\(n = 67\) studies). These results indicate that average examination scores improved by about 6% in active learning sections, and that students in classes with traditional lecturing were 1.5 times more likely to fail than were students in classes with active learning. Heterogeneity analyses indicated that both results hold across the STEM disciplines, that active learning increases scores on concept inventories more than on course examinations, and that active learning interventions varied widely in intensity and implementation, and included approaches as diverse as occasional group problem-solving, worksheets or tutorials completed during class, use of personal response systems with or without peer instruction, and studio or workshop course designs. We followed guidelines for best practice in quantitative reviews (SI Materials and Methods), and evaluated student performance using two outcome variables: \((i)\) scores on identical or formally equivalent examinations, concept inventories, or other assessments; or \((ii)\) failure rates, usually measured as the percentage of students receiving a D or F grade or withdrawing from the course in question (DFW rate).

The analysis, then, focused on two related questions. Does active learning boost examination scores? Does it lower failure rates?

Results
WHY ENGAGE IN SOTL?

Vermont Medical School Says Goodbye To Lectures
August 3, 2017 - 4:57 PM ET
Heard on All Things Considered
STANDARDS AND RIGOR OF SOTL

- Clear research goals
- Adequate preparation
- Appropriate research methods
- Appropriate data collection methods and analysis
- Accurate interpretation and effective presentation of results
- Reflective critique
WHAT ARE SOTL STEPS?

- Gain IRB approval
- Identify the research question
- Illustrate the importance of the research question
- Design the study
- Collect the data
- Analyze data
- Interpret data and draw conclusions
- Present and publish findings
WHAT ARE IMPLICATIONS FOR SOTL PROJECTS?
FOCUS ACTIVITY

- Take 7-minutes to work with individually or with a partner and answer the questions on the handout, “Scholarship of Teaching and Learning Worksheet.”
  - We will ask groups to report out!
UPCOMING CTE WORKSHOPS

- How to Create Rubrics
- Hitting Pause to Create Dynamic Lectures
- Designing Effective Group Projects
- Collaborative Learning
- Team-Based Learning

*We will announce these workshops soon!*
REFERENCES AND HELPFUL SOURCES


