

Education



NOT ANOTHER BORING LECTURE: ENGAGING LEARNERS WITH ACTIVE LEARNING TECHNIQUES

Margaret Wolff, MD,^{*†} Mary Jo Wagner, MD,[‡] Stacey Poznanski, DO,[§] Jocelyn Schiller, MD,^{*†} and Sally Santen, MD, PhD^{*||}

^{*}Department of Emergency Medicine, [†]Department of Pediatrics, University of Michigan, Ann Arbor, Michigan, [‡]Department of Emergency Medicine, Central Michigan University, Saginaw, Michigan, [§]Department of Emergency Medicine, Wright State University, Kettering, Ohio, and ^{||}Department of Medical Education, University of Michigan, Ann Arbor, Michigan

Reprint Address: Margaret Wolff, MD, Department of Emergency Medicine, University of Michigan, TC B1 380, 1500 E. Medical Center Drive, Ann Arbor, MI 48109-5305.

Abstract—Background: Core content in Emergency Medicine Residency Programs is traditionally covered in didactic sessions, despite evidence suggesting that learners do not retain a significant portion of what is taught during lectures. **Discussion:** We describe techniques that medical educators can use when leading teaching sessions to foster engagement and encourage self-directed learning, based on current literature and evidence about learning. **Conclusions:** When these techniques are incorporated, sessions can be effective in delivering core knowledge, contextualizing content, and explaining difficult concepts, leading to increased learning. © 2015 Elsevier Inc.

Keywords—emergency medicine; education; resident

INTRODUCTION

Traditionally, didactic sessions are lectures that rely on the instructor delivering information to learners through passive learning, with the goal of knowledge acquisition. These sessions are widely used in medical training programs to deliver core content and are considered an appropriate learning method to include in an emergency medicine (EM) curriculum (1). However, active learning results in improved knowledge retention and creates a deeper understanding of material than passive learning

can achieve by shifting the focus to the learner's needs and requiring active participation of learners (2,3). This fosters engagement and encourages self-directed learning (4,5). The last few decades of problem-based and team-based learning at medical schools have generated strong evidence in support of using these techniques for understanding evidence-based medicine, communication skills, and self-directed learning (6). These skills are well aligned with the overarching goal of EM residency programs to train residents to become competent EM physicians capable of independent practice by the completion of training.

We describe techniques and provide examples that can be used by medical educators to create active learning sessions both within the context of traditional didactic sessions and through more innovative approaches (Table 1). The diverse menu of techniques described enables medical educators to choose the most appropriate method to achieve the desired learning outcome while considering their available resources (Table 2). In addition, the review of the references will provide further information about these techniques. When active learning techniques are used, didactic sessions can be an effective tool to contextualize content, explain difficult concepts, and improve student learning from simply remembering to applying and analyzing (7).

Table 1. Matrix of Active Learning Techniques

Technique	Definition	Resources Needed	Faculty Requirement	Preparation	Didactic or Cooperative
Pause procedures	A brief pause in a learning session to allow learners to clarify and assimilate information.	None	One per any sized group	Minimal	Didactic
One-Minute Paper	A type of pause procedure. Pose a question to the group related to the information that was just presented and ask them to write down their response.	None	One per any sized group	Minimal	Didactic
The Muddiest Point	A type of pause procedure where learners reflect on and share areas of confusion.	None	One per any sized group	Minimal	Didactic
Think-Pair-Share	Pose a question to the group and have learners consider their response individually. Next, instruct learners to pair with a neighbor to compare responses and reach consensus. End by randomly calling on pairs to share with the group.	None	One per any sized group	Minimal	Didactic
Case-based learning	A technique that use vignettes of real or hypothetical patients to facilitate a discussion.	None	One per any sized group	Moderate	Didactic
Concept maps	A technique that involves visualizing relationships between concepts by creating a diagram. Can be done individually or in groups.	If being used as a note-taking aid, a partially completed concept map will need to be provided.	One per any sized group	Moderate	Didactic or cooperative
Role-play	Learners act out a part or a particular viewpoint to better understand the concepts and theories being discussed.	None	One per any sized group	Moderate	Didactic/can be cooperative
Commitment activities	Exercises that force learners to make a decision. Can be done individually, in pairs or groups.	Audience response system – flash cards, clickers or online audience response program IF-AT® cards	One per any sized group	Moderate	Didactic
Jigsaw	A topic is divided into several smaller, interrelated pieces. Each member of the team is assigned to read and become an expert on a part of the topic. After each person has become an expert, they teach their team members about their piece. After each person in the group is finished teaching their portion, the puzzle is assembled.	Prereading	This can be done with one faculty member, but additional faculty members can be helpful facilitating small groups	Extensive	Cooperative
Team-based learning	Small-group learning that involves preclass preparation so that learners are ready to learn. This is followed by a classroom portion where learners are tested on the preclass material and then challenged to apply core content to scenarios as a team.	Prereading Test materials Cases	One faculty member facilitating multiple small groups	Extensive	Cooperative
Problem-based learning	Case-based learning in small groups.	Cases	One faculty member for each small group	Extensive	Cooperative
Thinking Hats	During this exercise, learners wear different metaphorical hats that represent a different way of approaching a problem or topic.		One faculty member for small-medium-sized group	Extensive	Cooperative

Download English Version:

<https://daneshyari.com/en/article/3246090>

Download Persian Version:

<https://daneshyari.com/article/3246090>

[Daneshyari.com](https://daneshyari.com)