The Research Behind Active Learning

Stacey Pylman PhD, Assistant Professor – OMERAD, CHM

In the flipped classroom model of the SDC curriculum, the weekend learning is independent. It is in weekly small groups that students are given the opportunity to engage in social learning. However, just because students are in a social group of eight tackling the content, are students necessarily actively engaged or learning?

What is active learning?

Active learning is based on the sociocultural theory of learning - that people learn in a social context (learn from each other). Lev Vygotsky (1978, 1987) found that with collaboration, direction, or support, learners were always able to do more and solve more difficult tasks than they could independently. Active learning contrasts a passive type of learning where students simply listen to information being presented to them. According to Vygotsky, learning has its basis in interacting with other people. Once this interaction has occurred, the information is then integrated on the level of individual cognition. The learner is not merely a passive recipient of adult guidance and assistance; the active involvement of the learner is crucial to development (Bruner, 1968). Active learning can take on many forms that encourage students to apply new knowledge to current understanding or to authentic situations, to synthesize information, and create new ways of understanding and creating.

How do I know active learning is effective?

Because learning is a social act, it is important that students are given the opportunity to engage with others while learning content. Chickering and Gamson (1987) who summarized research on effective classroom practices listed seven principles for good practice in post-secondary education including encouraging cooperation among students, encouraging active learning, and using active learning techniques. Kuh and colleagues (2011) concluded that student engagement was key to academic success. They noted that students learn more when they are intensely involved in their own education and have the opportunity to think about and apply what they are learning. Research and reviews of research from Faust and Paulson (1998) Pascarella and Terenzini (1991, 2005) Prince (2004) and Springer, Stanne, and Donovan (1999) show cooperative learning strategies produce overwhelmingly positive results for students in increased academic achievement, development of critical thinking skills, and in enhanced social and psychological benefits. Umbach and Wawrzynski (2005) found that students reported greater learning when faculty utilized active and collaborative learning pedagogies. Bodensteiner (2012) found students were better able to retain content and were more confident in their knowledge when engaged in active learning strategies. Numerous additional studies found that active participation in classroom discussion led to greater student learning (Astin 1985; Johnson, Johnson, & Smith 1998; Kember & Gow 1994; McKeachie 1990).

Developing critical thinkers In addition to increased learning, participation in class discussion also leads to the development of thinking skills. Smith (1977), Crone (1997), Garside (1996), Greenlaw and DeLoach (2003) found that student participation and peer-to-peer interaction were consistently and positively related to the development of or improvement in students' critical thinking skills. Critical thinking is a skill doctors need in order to be successful. It is important for clinician educators to build active learning into their teaching to encourage all

students to talk critically about their thinking. A shared discovery medical education involves more than sharing experiences. Learning implies active and collective engagement with ideas and developing strong listening and reasoning skills through engagement with ideas.

The first step – letting students talk

Discussion is one form of cooperative, active learning. Kuh and colleagues (2011) found when students are actively participating in discussion they learn more than when they merely listen. Working in pairs makes it virtually impossible for students to avoid participating, thus making each person accountable for thinking, learning and adding to collective learning of the class. Results from Smith, Wood, Adams, and others (2009) indicate that peer discussion enhances understanding, even when none of the students in a discussion group originally knows the correct answer. Additionally, cooperative learning helps learners think out loud about their understanding, identify misconceptions or gaps in knowledge, and gives them an opportunity to teach the information to another person - known to help knowledge retention and deeper understanding.

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