MINNESOTA STATE UNIVERSITY
MANKATO

10 Strategies for Engaging Students through Active Learning

Overview

Teaching strategies that facilitate active learning differ greatly from passive modes of instruction. Passive teaching strategies typically hold the instructor responsible for presenting students with all of the information that they need to know (Michel, Cater, & Varela, 2009; Smith & Cardaciotto, 2011). Active learning requires that students take an active role by engaging with the material, reflecting on what they have learned, and applying the information in different contexts and activities (Diamond, Koernig, & Iqbal, 2008; Michel et al., 2009; Niemi, 2009; Smith & Cardaciotto, 2011; Thomas, 2009). Recent research indicates that active learning may help students learn better than traditional, passive modes of instruction (Michel et al., 2009).

This document outlines 10 teaching strategies that may be used to facilitate Active Learning. This is not an all-encompassing list of active learning teaching strategies; we simply describe some of the common strategies that may be used to facilitate Active Learning in the classroom.

10 Strategies to Facilitate Active Learning

Strategy #1: Give Students a Problem to Solve
The Basics: Giving students a problem and asking them to develop, create, or examine a possible solution involves many active learning components. According to Deborah E. Allen, Richard S. Donham, and Stephen A. Bernhard (2011), "Problems may intentionally pose cognitive challenges by not providing all the information needed, thereby motivating a self-directed search for explanations" (p. 23). Students can be asked to solve problems on their own, in pairs, groups, or even as a class; allowing students to develop collaboration skills at very different levels. Problem-solving activities can also help students develop better research and communication (Allen et al., 2011).

*IT Solutions *offers an elaboration in* [Teaching Strategies: Case-based learning and Problem-based Learning](#)

Variations on the Strategy: Case studies; individual and group projects; and peer instruction can also provide students with opportunities to apply course content

Tools to Use to Employ this Strategy:
- [OneDrive](#)- Online file storage and cloud-based applications that are perfect for on-the-go usage and online collaboration.
- [D2L Brightspace](#)

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Strategy #2: Immediate Feedback from Students

The Basics: Audience Response Systems can be used in any size classroom to help instructors gather real-time information from students. Instructors can use this to guide classroom activities and discussion. Students can provide immediate feedback to instructors on their understanding of the course content. *IT Solutions offers an elaboration in Teaching Strategies: Audience Response Systems*.

Variations on the Strategy: Just-in-Time Teaching uses pre-class activities to gather feedback from students that you can use to plan and guide instruction and classroom activities. *IT Solutions offers an elaboration in Teaching Strategies: Just-in-Time Teaching (JiTT).*

Tools to Use to Employ this Strategy:
- Poll Everywhere- This enterprise tool allows students to answer true/false, multiple-choice, and short-answer questions created by the instructor.
- D2L Brightspace - The survey tool can be used to gather feedback from students in face-to-face, blended, and online courses.
- Qualtrics - A survey creation tool available to MNSU students, faculty, and staff for free. Depending on your classroom needs, Qualtrics can be used to create anything from a simple before class question to an advanced survey to gather Simple to advanced data collection options available depending on your classroom needs.

Strategy #3: Use Think, Pair, Share and/or Peer Instruction Models

The Basics: Think, Pair, Share (Lyman, 1987) and Peer Instruction (Mazur, 1997) are similar pedagogical strategies in which instructors pose a mastery challenge question to learners. Learners first commit to an answer -- either by using a student response system (see above) or just on paper. Then they pair up -- "turn to their neighbor and talk" -- and explain why they thought their answer was correct. The group then comes back together, and learners are asked to recommit, either changing their initial response or holding fast. The larger group may share/discuss the outcomes of their paired meetings.

Variations on the Strategy: It might be possible to form groups larger than a dyad, but we recommend keeping the groups small (four or fewer) if at all possible. Instructors sometimes choose to require their groups to resubmit their group answer together after their small-group interaction. One note is that popular wrong answers tend to become more popular after the small group discussions; if you are using a polling system and you notice a popular wrong answer, we recommend letting the groups know that the most popular answer is incorrect before they discuss so they don't spend time convincing each other of the tenacity of the incorrect answer.

Tools to Use to Employ this Strategy:
- Poll Everywhere - Use Poll Everywhere to gather student responses quickly for Think, Pair, Share activities
- D2L Brightspace - The quizzes and survey tools can be used to gather student responses while

housing all collected data in Minnesota State, Mankato's learning management system.

Strategy #4: Have Students Create a Blog
The Basics: Incorporating blogs and wikis into the classroom may seem like an arduous task, but it does not have to be. Students can be asked to reflect on specific topics in blog posts, share recent or outside resources with their peers, or collaborate to build a knowledge-base for the course. According to a recent study (2013), "When used effectively, blogs have a potential to improve student outcomes by fostering deeper learning and engagement in an interactive environment as it directly impacts how students use the web to interact in teams, and use social computing for increased learning" (Hazari, Brown, & Rutledge, p. 107).

Variations on the Strategy: A wiki is a website that allows multiple users to add, modify, or delete content using rich-text editors or simplified markup language, allowing the users to co-construct papers, knowledge bases, or web sites around a topic. Both blogs and Wikis can be integrated with other forms of media and even other technology tools.

Strategy #5: Create a BYOD Policy and Activities.
The Basics: 'Bring Your Own Device' or BYOD encourages students to bring their computers, tablets, and phones into the classroom and use them as a learning tool. For example, short individual or group activities can be integrated into lesson plans to encourage students to explore further issues surrounding a particular topic. Mobile devices, such as tablets, provide students with their own "personalized learning environment, with all the resources, tools, and other materials they need on a single device" (Johnson et. al, 2013, p. 16).

Tools to Use to Employ this Strategy:
- [Poll Everywhere](#) - Poll Everywhere is an excellent tool for BYOD. Students can use Poll Everywhere on a computer, a tablet, or a phone to submit answers via an internet browser or even text in their answers.

Strategy #6: Play a Game
The Basics: Incorporating games or elements of games in the classroom has can be used in the classroom to help students learn important course content. The 2013 NMC Horizon Report stated that, "In the context of higher education, when students are expected to think critically in order to solve problems, game-like simulations can be leveraged in any discipline to reinforce the real world applications of concepts" (Johnson et. al, p. 21).
IT Solutions offers an elaboration in [Teaching Strategies: Gamification](#).

Variations on the Strategy: There are a number of ways to bring elements of gamification into your classroom. In fact, you may already have some of these elements integrated into your course. According to Karl M. Kapp (2012), "Instructors, trainers, and professors embed stories in the form of case studies to

wrap experiences for learners, create challenges to engage learners, and set goals and provide feedback on progress while providing a safe environment for learners to practice skills. All of these are elements of gamification" (p. 13). Incorporating games or game elements into a course can help you meet your learning objectives and provide your students with a fun opportunity to learn the content. Existing online games and simulations may align with course objectives. If you cannot find an existing game that aligns with or improves a particular lesson, you can develop one that does.

Strategy #7: Activity Breaks During Lecture

The Basics: There are definitely times when lecture is appropriate. Phillip Wankat and Clifton L. Lovell (2006) suggest that, "We don't have to completely abandon lectures to gain many of the advantages that active learning and cooperative groups offer. If lecture classes are interactive so that students are not passive for long periods of time, they can be good learning experiences" (p. 4). Be sure to choose activities that support your student learning outcomes and course objectives.

Variations on the Strategy: Many of the suggestions in this document and our other 10 Strategies documents can be used to enhance lecture-based lessons or courses. You may view our entire catalog of engagement materials in our 10 Strategies for Engaging Learners series.

Tools to Use to Employ this Strategy:
- Poll Everywhere
- OneDrive

Strategy #8: Brainstorming

The Basics: The use of brainstorming activities in the classroom can help, although considerations should be made for the duration of time spent on these and the impact of group sizes (Coskun, 2011). You can integrate smart phones, tablet computers, and cloud-based whiteboarding tools to help facilitate sharing ideas synchronously. Using cloud-based whiteboarding allows students the opportunity to review is that completed brainstorming documents will be available after class time.

Variations on the Strategy: In an analysis of seven major research studies, Laura H. Clayton (2006) found that, "The use of concept maps was shown to enhance academic performance by enabling students to synthesize and retain complex information, thus promoting meaningful learning. concept maps have had positive effects" (p. 202). Concept maps, mind maps, and other visual diagrams "can be used in complementary ways to enhance motivation, attention, understanding and recall" (Eppler, 2006, p. 202). The use of brainstorming and visual diagrams integrates well with many of the other active learning strategies discussed.

Tools to Use to Employ this Strategy:
- Zoom – Zoom is a video conferencing tool for live meetings with audio, video, text, screen share,

group white board, annotations and many other features

Strategy #9: Collaborative Document Writing
The Basics: With the use of tools like OneDrive, students can easily co-create documents and their understanding of the course material. From simple brainstorming to formal document creation, OneDrive offers a versatile platform that students can use to work together.

Tools to Use to Employ this Strategy:
- ∉ [OneDrive](#)
- [Zoom](#) – Zoom is a video conferencing tool for live meetings with audio, video, text, screen share, group white board, annotations and many other features

Strategy #10: Request to use an Active Learning Classroom
The Basics: Some classrooms on campus are specifically designed to support collaborative work among students. Round tables and technology enhancements can make working together and sharing with peers more efficient.

Variations on the Strategy: Even if you are unable to get an Active Learning classroom, you can still integrate Active Learning into your classroom. Make the most of your classroom space! If students cannot turn around or rearrange their desks, make the most of the space by having them work with 1 or 2 people sitting next to them or form small groups around the room.

[Telepresence classrooms](#) are also available on campus. TelePresence is a high definition, immersive video conferencing experience that allows learners and instructors to connect across hundreds of miles as if they were in the same room. Use a Telepresence classroom to connect your students with other Telepresence classrooms around the world.

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