

TEACHING METHODS

Teaching methods are used to help students achieve learning outcomes, and their activities are the different ways of implementing these methods. Teaching methods help students:

- master the content of the course
- learn how to apply the content in particular contexts

Instructors should determine which teaching method(s) will properly support a particular learning outcome. Effectiveness of teaching and course delivery depends on this **alignment**. Instructors should consider learning outcomes, student needs and the learning environment to select the most appropriate method.



Consider the following **example**:

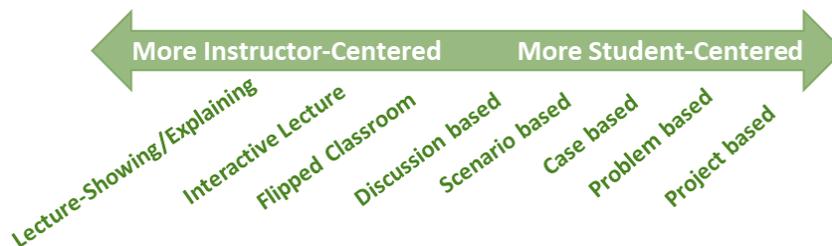
Learning outcome: Solve a complex math equation.

Learning environment: A face-to-face, upper-level math course with 20 students.

Teaching method: Guided instruction. First, the instructor facilitates learning by modeling and scaffolding. Students are expected to ask questions and receive clarifications. Next, students practice applying these skills together and then independently. The instructor uses formative assessment to check for understanding.

This example demonstrates alignment of what the instructor wants students to do, and how they are supported in these tasks. If the instructor chooses a different teaching method, such as a traditional lecture, students would need to process the lecture's content and apply principles simultaneously, which is very difficult to do.

Choosing the appropriate teaching method brings instruction to life while encouraging students to actively engage with content and develop their knowledge and skills.



Below are the definitions of several teaching methods and relevant student activities. Teaching methods vary in their approach; some are more student-centered while others are more instructor-centered. Instructors should choose methods that will best guide their students to achieve the learning outcomes and remember that their teaching approach, teaching methods and activities all work together.

Teaching Method	Definition	Activities
Interactive Lecture	<p>A lecture that includes 2–15-minute breaks for student activities every 12-20 minutes.</p> <ul style="list-style-type: none"> • In order to retain student attention and facilitate learning, consider integrating a variety of activities into a lecture-based course. • Start by finding natural breaks in the content material and break up the lecture into shorter segments. • In between the lectures, add activities that require the students to review and apply their new learning and interact with each other. • Mix it up by incorporating different activities each week. The change of pace, interaction, and variety will help to enliven the classroom atmosphere and encourage deeper learning for every student. 	<p>Multiple-choice items, solving a problem, comparing and filling in lecture notes, debriefing a mini case study, pair-compare, pair-compare-ask, reflection/reaction paragraph, solve a problem, concept mapping activities, correct the error, compare and contrast, paraphrase the idea, answer knowledge and comprehension questions.</p> <p>Some more activities are listed here.</p>
Directed Discussion	<p>Class discussion that follows a pre-determined set of questions to lead students to certain realizations or conclusions, or to help them meet a specific learning outcome</p>	<p>Direct, specific, or open-ended questions that are connected to learning outcomes and include varied cognitive processes.</p>
Direct Instruction	<p>Lecturing, but includes time for guided and independent practice</p>	<p>Create mind/concept maps, free writes, one-sentence summary, one-minute papers</p>
Guided Instruction	<p>Direct and structured instruction that includes extensive instructor modeling and student practice time</p>	<p>Showing and explaining examples, model strategies, demonstrate tasks, classify concepts, define vocabulary, scaffold steps</p>
Experiential Learning	<p>Students focus on their learning process through application, observation, and reflection.</p> <p>By engaging students in hands-on experiences and reflection, they are better able to connect theories and knowledge learned in the classroom to real-world situations.</p>	<p>Debates, panel discussion, symposium, reflection journals, lab experiments, internships, field work</p>
Case-based Learning	<p>Students apply course knowledge to devise one or more solutions or resolutions to problems or dilemmas presented in a realistic story or situation</p>	<p>Case study analysis, collaborative scenario-based discussions</p>

Problem-based Learning	<p>Student groups conducting outside research on student-identified learning issues (unknowns) to devise one or more solutions or resolutions to problems or dilemmas presented in a realistic story or situation.</p> <p>The difference between Project-based and Problem-based Learning.</p>	<p>Reviewing and critiquing research studies, work in groups/teams to solve a specific open-ended problem, labs</p>
Project-based Learning	<p>Students applying course knowledge to produce something.</p> <p>The difference between Project-based and Problem-based Learning.</p>	<p>Group work/team project – design or create something – e.g., piece of equipment, a product or architectural design, a computer code, a multimedia presentation, an artistic or literary work, a website, research study, service learning</p>
Role Plays and Simulations	<p>Students acting out roles or improvising scripts, in a realistic and problematic social or interpersonal situation. Students playing out, either in person, or virtually, a hypothetical social situation that abstracts key elements from reality.</p>	<p>Real-life situations and scenarios, debates, interviews, frame simulation</p>
Fieldwork and Clinicals	<p>Students learning how to conduct research and make sound professional judgements in real-world situations.</p>	<p>Internships, assistantships, community service, shadowing</p>

Adapted from: Nilson, L. B. (2016). Teaching at its best: A research-based resource for college instructors. John Wiley & Sons.