



Obtain Students' Prior Knowledge to Inform Course Adjustments

Students come to us with a wide range of preexisting knowledge, skills, and experiences. Because learning new knowledge is dependent on preexisting knowledge and skill, knowing what students know and can do before beginning a new course or new topic can help you adjust the course to address gaps and misconceptions and to build on the existing skills and interests of your students. Very early in the term, give students activities and assignments that make them retrieve, articulate, and organize what they already know (or think they know) about your course material (Nilson, 2016).

Preparing Your Students

- Before conducting a preassessment, be sure to share the purpose with your students, including what you plan to do with the results.
- Share with students that they may very well not know the content on the preassessment, which is fine. It is an opportunity for you to know how to best meet their needs.
- Consider not grading or providing minimal points for the assessment or making it anonymous using class response systems.

Creating Your Assessment

1. Use the following questions to prepare your prior knowledge assessment:
 - What do you assume students already know?
 - These are often concepts from prerequisite classes or prior units of study.
 - What are some common misconceptions related to the course subject or topic of study?
 - Use your prior experience with teaching the course or consult with colleagues to identify misconceptions that students often have.
 - What experiences or interests may students have that could influence their work in the course?
 - For example, have they worked or volunteered in the field? Or do they have a unique interest in a particular area?
2. Select an assessment type that will uncover student responses to the questions above.

Knowledge Surveys

Knowledge surveys asking students to rate their level of confidence with core concepts and skills that are addressed in your course or that are considered prerequisite skills for your content are a useful tool to determine prior knowledge and skills (Pallas & Neumann, 2019). The feedback received from knowledge surveys is helpful in adjusting course content while also helping students recognize their own level of confidence.

The example of a knowledge survey below is used in a course on inclusive teaching practices. A similar survey may be distributed to students to assess confidence with the content at the start of the course or before a module, unit, or learning activity.



On a scale of 1–10, with 1 being not at all confident and 10 being totally confident, rate your level of confidence with each of the concepts listed below:

1. The definition of microaggression.

Not at all Confident

Totally Confident

1 2 3 4 5 6 7 8 9 10

2. The relationship between identity and privilege.

1 2 3 4 5 6 7 8 9 10

3. Responding to microaggressions.

1 2 3 4 5 6 7 8 9 10

True/False Questions

Create true or false statements representative of prerequisite skills and misconceptions and ask students.

Multiple-Choice Questions

Multiple-choice questions are an efficient way to help students understand the relationship between what they know and what you plan to teach. By providing information for both the correct and incorrect responses, you can also help students quickly identify and correct misconceptions. This can be done online and built into your LMS, or you may consider providing information on correct and incorrect responses during class time, or as a handout that is provided to students.

The example below shows an online multiple-choice question from a political science course. The instructor has set up automated feedback for every possible response.

What is democracy?

- A. A system of government by and for the whole people.
 - Feedback: Correct! A popular description of democracy in the United States is “of the people, by the people, for the people.”
- B. A system of government in which one family rules and the position is inherited.
 - Feedback: Incorrect. Democracy is a system in which government is by and for the people it serves. Dynasties are ruled by a line of hereditary rulers.
- C. An indie movie released in 2019.
 - Feedback: Incorrect. This should be a freebie! You know your movies! Although *What Is Democracy?* is the title of a 2019 movie, the question is asking that you identify that democracy is a system of government by and for the whole people.
- D. A system in which there is no government, and no one rules.
 - Feedback: Incorrect. Anarchy is a society in which no one rules. Democracy is a system of government in which the people rule directly and through representatives.



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Free Recall

In a free recall, also known as a “brain dump,” you simply ask students to write down everything they know or think they know about an upcoming topic. Remind them to include any experiences and areas of interest they have with the topic.

Pre-Lecture Quiz

Assess and prompt reflection on students’ prior knowledge with a quiz before an interactive lecture, asynchronous video, or other learning activity. These assessments or assignments are also activating students’ previous mental models, which can help them integrate new thinking (Boettcher & Conrad, 2016). True/false, multiple-choice, and fill-in-the-blank questions are particularly useful in large classes or when you are using clicker or other response systems.

Sources

Boettcher, J. V., & Conrad, R.-M. (2016). *The online teaching survival guide: Simple and practical pedagogical tips* (2nd ed.). Jossey-Bass.

Nilson, L. B. (2016). *Teaching at its best: A research-based resource for college instructors* (4th ed.). John Wiley & Sons.

Pallas, A. M., & Neumann, A. (2019). *Convergent teaching: Tools to spark deeper learning in college*. Johns Hopkins University Press.