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The R.I.S.E. Guide to Creating Assessments that Gauge Students' Prior Knowledge

Introduction

Assessing student learning is a fundamental necessity of any course, and it is also a great way to foster students' sense of inclusion and belonging in a course. You may be asking yourself – How can an assessment do this? This type of assessment differs from the formative and summative assessments that instructors give students *after* discussing a topic or completing a lesson. This type of assessment assesses students' prior knowledge.

As instructors, we are well aware that some of our students are not sufficiently prepared for college-level work. Have you ever found yourself thinking the following?

- How did this student get into college without learning X?
- I can't believe that I have to teach students how to do X in my class! Why do my students not already this?

While many may inadvertently blame the student for their lack of preparedness, we all know that it is not their fault. "A variety of reasons account for students' lack of prior knowledge: the disparity in public school funding that compromises educational quality, the cultural devaluation of education, teacher burnout, students' mental health issues, and their lack of interest in learning" (Weimer, 2021).

Nevertheless, these students are enrolled in our courses and their lack of preparedness and prior knowledge could exclude them from the course in many ways. Therefore, creating assessments that gauge students' prior knowledge so that it can be corrected and/or built upon is a great way to enhance students' sense of belonging in the course and their understanding of the material.

Explanation

Any activity that assesses students' prior knowledge will help you to better structure your classroom activities and materials so that all students feel included regardless of their prior knowledge or lack thereof about the topic. "Determining what students already know allows you to: target knowledge gaps and misconceptions, become aware of the diversity of backgrounds in your classroom, and create a bridge between students' previous knowledge and new material" ("Assessing Prior Knowledge, n.d.).

Assessing students' prior knowledge and skill level can be accomplished in any course regardless of discipline. Such assessments can take many forms, and it's a good idea to try out a few to see which works best for your courses. Need some help selecting an assessment? Consider using one of the activities below.

1. **Background Knowledge Probe:** a diagnostic pretest that you can administer at the beginning of the course or when you begin a new course topic. This pretest can take a variety of formats (i.e., multiple choice, short answer, essay, etc.) and should be brief. See the following resources for ideas and tips for using background knowledge probes in your courses:
 - [Teaching Technique 31: Background Knowledge Probe](#) (video)
 - [Background Knowledge Probe](#)
2. **Focused Listing:** an oral or written activity that asks students to list all related concepts and ideas about a given topic. This activity is great to gauge students' prior knowledge and review what they learned before a formative or summative assessment. Check out the following resource for ideas and tips for implementing this type of activity in your courses:
 - [Focused Listing](#)
3. **Problem Posting:** an activity that "asks students to think about and jot down either problems they expect to encounter with a specific course topic or issues they think the lesson should address" (Nilson, 2016, p. 87). This activity would work well at any point during the semester, but it would be especially helpful to complete during the first week of the course.

Remember, any activity that assesses students' prior knowledge will help you to better prepare classroom activities and materials so that all students feel included regardless of their prior knowledge or lack thereof about the topic. For additional tips and ideas for gauging students' prior knowledge, see some of the following resources:

- [Assessing Prior Knowledge](#) (Cornell University)
- [Assessing Prior Knowledge](#) (Carnegie Mellon University)

- [50 Classroom Assessment Techniques](#) (University of Kentucky)

If you have any questions or wish to discuss this teaching strategy in more depth, please contact your [R.I.S.E. scholar](#) or the Learning Academy.

Let's practice!

Using the prompts below, please take a few minutes to consider how you could assess your students' prior knowledge in one of your courses. Remember, the goal is to develop an activity that helps gauge what students already know so that you can fill in the gaps and help them make connections between their existing knowledge and the new content that they learn in your courses.

- What prior knowledge do you want to assess and why? Try to identify 3-5 topics.
- What activity (e.g., background knowledge probe, focused listing, problem posting, etc.) could you use to gauge students' prior knowledge? Consider whether the activity will be completed individually or in groups, in class or outside of class, online or in person.
- Write 2-3 prompts that assess what students already know about your chosen topics. Make sure that your questions/prompts are specific enough so that students understand what you are asking.

We hope that the information on this teaching strategy encouraged you to include assessments that gauge students' prior knowledge as a way to foster students' sense of inclusion and improve student learning outcomes. If you have any questions or wish to receive feedback on your ideas for the practice activities, please contact your [R.I.S.E. scholar](#) or the Learning Academy.

References

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