



Classroom Assessment Techniques: Problem Recognition Tasks

Experts in a field have much more complex mental structures than novices who are encountering content for the first time. For experts, recognizing a particular *type* of problem often feels as if it comes naturally; it has become second nature. This task is much more difficult for novice learners. It is often difficult for students to determine which problems are best solved by which methods. *Problem Recognition Tasks* help students master this challenging type of work. This *Classroom Assessment Technique* also pushes students to think more generally, as opposed to seeing problems as a myriad of isolated types.

Problem Recognition Tasks lend themselves to quantitative and technical fields in which students learn a variety of problem-solving techniques or methods. STEM friends, we're looking at you! But they are also applicable to fields that involve broad approaches to problem solving such as medicine, law, communication disorders, and counseling.

Procedures for implementing *Problem Recognition Tasks* are as follows:

1. Choose examples of several different but related problem types that students find difficult to distinguish.
2. Decide if you will provide information regarding the types of problems that students are to recognize, allowing them to simply match the type with the example, or whether you will ask students to name the problem type as well.
3. Try out your examples. Ask a TA, or a colleague to attempt the task. This will help you assess the difficulty of the task and determine the amount of time students will likely need to complete it.

This technique is ideal for small group work and is especially worthwhile for students who are just beginning to make distinctions among problem types. Make your thinking transparent and share your expertise as you monitor students at work. As an added bonus, by forcing students to make connections across problems, you are helping them learn to apply previous knowledge to new situations.