Classroom Assessment Techniques: Knowledge Survey

What is a Knowledge Survey?

Knowledge surveys provide an opportunity for students to review their level of understanding of key course concepts and for faculty to identify which topics they should emphasize during their teaching. Students are given a term and four descriptors of the depth of their knowledge about the term (e.g., 0 = never heard of this, 3=full understanding). Student's circle the choice that most resembles their understanding. At the very least these surveys can be crafted to provide students with guidance on the depth of learning necessary for a course. Alternately, they can be a discussion starter among small groups of students as they seek to identify where they need the most assistance in class.

How to use Knowledge Surveys

1. List the key concepts. Make a list of the most important concepts, ideas or terms for a specific lecture, group of lectures, book chapter, website or other learning resource. (In a 3-4 lecture course module we usually have 10 items.)

2. Develop a scale. Each knowledge survey item is ranked on a scale that should have 3-5 elements. More elements allow you to identify idealized end-member cases (e.g., no knowledge, perfect understanding) but may not be realistic for your needs. Scales may begin at 0 or 1; use 0 if it is possible that students will not know anything about an item.

3. Create descriptors for scale elements. Decide what level of understanding is most important for each item and make that the high score. The descriptors can be generic and useful in almost any situation . . .

0. I have never heard of this.
1. I have heard of this but don't know much about it.
2. I have some idea about this and can provide a partial explanation.
3. I have a clear understanding of this and can provide a complete explanation.

. . . or be specific to the material . . .

Metamorphism

0. I don't know what this is.
1. I have heard of this but I can't explain it.
2. I can give a general definition of metamorphism.
3. I can give a description of the two basic types of metamorphism and the settings under which they occur.

4. Assessment. The instructor may simply provide the survey to the students for self-reflection of their learning, perhaps as part of a homework assignment or at the completion of a course lesson unit. Alternatively, a short survey may be distributed at the beginning of class to small groups of students with instructions to be able to score at level 3. Students would be given 5-10 minutes for peer instruction to teach each other sufficient to achieve the highest ranking on each item. The class would then be surveyed to identify which topics have remaining questions. These topics would then become the focus of the day's class.

5. Alternative. Provide the survey at the beginning and end of a lesson unit to determine students' prior background knowledge and the depth of their understanding, respectively.