

USING CLICKERS TO HEAR “SILENT” STUDENTS WHILE PROMOTING ACTIVE LEARNING

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We have all taught large or small classes with students that we see but never hear from. We want to know if all of our students understand the content that we are presenting during the lecture, but we never hear a word from our silent students. It is difficult to gauge whether they fully understand the topic or they are completely lost. Understanding where they are is essential to moving forward with the class and maintaining a comfortable pace. But those silent students will not speak. Why aren't they talking? There are several cases to consider.

Case 1: The student understands the content and is shy about answering.

Action 1: It is safe to proceed with the content.

Case 2: They do not have a clue about answering the posed question.

Action 2: I would spend more time on the topic and provide more examples, but I would not move forward just yet.

There may even be other cases that I have not considered, and at this point my problem becomes clear... I need to get them to communicate with me about what they understand.

My first approach was simple. I gave daily quizzes after or during every lecture. This gave me feedback on what they knew. However, I encountered some problems with this strategy. Unless I spent some time during class to look over the quizzes, I wouldn't know that the students did not understand until after class. Also, some students began to complain that they needed additional time to process the information. They became frustrated when their grades were affected by having to demonstrate knowledge immediately. Furthermore, trying to maintain 1 or 2 distinct quizzes in each section everyday felt like most of my time was spent creating and grading daily quizzes. Perhaps this was not my final answer. Having shared my problem with a colleague, she reminded me that the college was very supportive of the use of educational technology in the classroom. We then recalled an introduction to student response systems we had received during faculty orientation. It was definitely worth a try.

Into my life came the student response system (“clickers”). There was some work that was required to get started. I had not used PowerPoint slides regularly in class, but they would be required if I used the clickers. I needed to download the clicker-software and

use it to prepare PowerPoint slides to pose multiple choice questions about the content presented in the lecture. I assigned each student a specific clicker (which I had numbered before class). The receiver fits into my USB drive on my computer, and the student clickers communicate through the receiver to my computer. Once the clicker-question is presented and the responses are entered by the students, the software then generates a report of the responses on the following slide. Both the students and I received immediate feedback on how they responded. I could even program the feedback slide to identify the correct answer. The clickers are about the size of a credit card, and I could tell right away that the students enjoyed using them. This was a promising solution for my problem.

I have found that using clickers during my lectures had many benefits. All of my students were engaged in the course, and every time I used them, 100% of my students responded. I was excited to see that when they were presented with a clicker-question, they worked to demonstrate their knowledge of the content. Every student was actively involved in the lecture. I was finally able to tailor my lectures and demonstrations based solely on the students' responses, which made better use of our class time. Also, because I assigned a specific clicker to a specific student, I could also track the responses of the students. I was able to pinpoint students who answered all or most of the questions incorrectly, and intervene immediately (with suggestions of meeting with me in my office or providing assistance with the development of a study plan). I could also avoid having several quizzes to grade each day from each class, which made better use of my preparation time. Although all these benefits are helpful to me in reaching my students, I would have to say that the greatest benefit to using the clickers during my lectures is that each of my silent students finally had a voice.