

Reflection on Effective Questioning Techniques

Titus Barik (tbarik@ncsu.edu)

September 8, 2011

1 Workshop Description

I attended the two hour workshop, “Effective Questioning Techniques”, on Thursday, September 8th from 3:00 PM - 5:00 PM in Research Building III, Room 230. This FIT workshop was directed by Dr. Barbi Honeycutt. Approximately 15 people attended the workshop. The goal of the workshop was to leave with an understanding of effective versus ineffective questions, and to provide a qualitative framework for analyzing types of questions by classifying ineffective question types. We concluded with techniques that increase student participation when asking questions.

2 Workshop Details and Analysis

The presentation began by watching the first few minutes of a Harvard lecture video by Michael Sandel.¹ During this video, we were asked to observe how the lecturer asked questions to the relatively large classroom. In my case, I noticed that the lecturer had a style of first polling students for a Yes or No show of hands, and then following up with a more detailed question and asking for volunteers from each group. We were also asked if the lecturer did a good job when asking questions. The response was, more or less, evenly divided.

The participants were then provided with the article “Using Questions to Enhance Classroom Learning” by Sondra Napell, and split into groups. The article presents five types of ineffective questions: the “Dead-End” Question, the “Chameleon” Question, the Question with Programmed Answer, the Put-Down Question, and the Fuzzy Question. Each group summarized one of the question types, with my group receiving the “Dead-End” Question.

This was an interesting category of questions to have to discuss, since I am often guilty of using “Dead-End” questions myself. Essentially, these types of questions have a binary, Yes/No, response. The intent is to try to gain an informal benchmark to determine whether most of your students have an understanding of a certain subject or topic. For example, an instructor might ask, “Does everyone remember Snell’s Law?”

However, as I saw from the discussion, such types of questions are counterproductive for many reasons:

¹<http://www.justiceharvard.org/watch/>. The video is Lecture 1.

1. The student has no way to indicate a degree of understanding. For example, a student may understand most of the formula, but have a question about one particular case. The only option for the student is either to answer “Yes”, or “No”.
2. If the instructor does not intend to change the subsequent course content as a result of asking the question, there isn’t a point in asking the question in the first place other than as a filler. Through reflection I have found that I often use dead-end questions in this way.
3. Even if such a Yes or No question is asked, the response is often unreliable. Many students, for example, will not participate in the question at all. Other students will say that they understand the material because they do not want to be singled-out as being the “only student” who doesn’t understand the topic.

That is not to say that Yes or No questions should never be used. Through our discussions, we decided that a polling style of questioning as used in the lecture video is indeed different from a dead-end question, if the response of the poll is used for follow up questions. For example, after taking a poll, you may ask a student from each group a more in-depth question.

It is also the case that such dead-end questions can be made more effective simply with slight changes in wording. Instead of asking “Does everyone remember Snell’s Law?”, one could instead ask, “What does Snell’s Law tell us?”.

The other groups then presented their questions. Some questions, such as Put-Down Questions, should never be used. Although I have seen instructors use all of these types of ineffective questions at one time or another, in the past I have used dead-end questions far more than any of the others, and that has been my focus in this reflection.

With this new context, we again watched the same lecture video. I was now able to observe issues in the lecturer’s question style that I had missed the first time around. I was also able to better characterize the positive elements of the lecturer’s questioning style.

We concluded the workshop with a discussion on techniques that could be used in the classroom. The most important thing is to wait for a response after asking a question. Unlike the instructor, who already knows the answer in advance, students need time to process the question to formulate a response. The simple act of waiting for 10 or more seconds can increase participation drastically. Silence is terribly uncomfortable for instructors, but if you wait long enough, one student will generally respond. Eventually, the silence is something that you as an instructor will get used to.

Another useful piece of advice is to code the questions in advance within your lecture notes. In doing so, you will remember to ask questions at appropriate times, and also have questions that are directly relevant to your lecture objectives.

3 Conclusion

Before this workshop, I had some intuition about effective questions versus ineffective questions, but I did not have the necessary vocabulary to express these ideas explicitly. I found that the discussion has given me a qualitative way to look at my own lectures, as well as the lectures of colleagues, and evaluate the questions in a more meaningful way.

During this workshop, Bloom's Taxonomy was brought up. In doing so, I was reminded of a presentation on learning, particularly on the concepts of "shallow" versus "deep" learning, and that "deep" learning is the key to actually understanding a concept versus memorizing. After today's lecture, I need to work more towards mixing in the latter style of questions, while also providing enough time for students to reflect on these more complex questions. Certainly, deep questions will require much more time than shallow questions.

Since I find myself falling into the habit of asking dead end questions, I should work towards writing questions explicitly in my lecture notes. Then, when I feel the urge to present a "filler" question, I can use a more effective question instead.