Using Questioning to Promote Critical Thinking

Asking questions to promote critical thinking or clinical reasoning skills can be a powerful tool. Questions should be “leveled” appropriately based on the experience of the student and the objectives of the experience. In education, we often classify levels of learning by using Benjamin Bloom’s original or revised taxonomy for the cognitive domain (Atherton, 2011).

The levels of Bloom’s revised taxonomy (Anderson et al., as cited in Emerson, 2007) are:

- Creating                highest
- Evaluating
- Analyzing
- Applying
- Understanding
- Remembering        lowest

Many sources are available that describe each of these levels. As students progress through their programs of study, we must strive to create learning strategies that promote higher order thinking (application or higher on Bloom’s taxonomy). While it may be appropriate for students beginning their program to be focused on remembering and understanding facts, junior and senior level students should be applying, analyzing and evaluating information.

Questions that promote higher order thinking require students to relate multiple concepts to one another. Emerson (2007) recommends the following strategies to promote higher order thinking when questioning students:

- Remember that questioning is NOT meant to make students feel uncomfortable or intimidated. Students will not always have the right answers (that is to be expected—they are still learning)
- Make sure questions are clear
- Ask questions intended to help students progress to higher order thinking
- Remind students to take time to answer. Tell them it is OK to say “I don’t know,” or “I don’t understand the question.”

Common instructor errors when asking questions:

- Asking too many factual questions
- Telling (giving students the answers). Remember, the acronym: TNT: “Telling is NOT Teaching” (Penn, 2008, p. 7)
- Not allowing enough time for the student to think through the problem. According to Bloom & Petrocco-Napuli (2012), most faculty members wait only an average of ONE second for a
response to questions in the classroom. Increasing “wait time” to 15 seconds has been shown to increase the number and length of student responses. It has also been linked to increased student confidence and achievement (Bloom & Petrocco-Napuli, 2012).

- Not actively listening to student responses
- Not clarifying and redirecting students

In order to promote students’ critical thinking and clinical reasoning skills, we must give them opportunities to practice thinking. Active learning strategies can provide these “practice” opportunities in the classroom. This requires a shift in our own thinking as teachers…from the proverbial “sage on the stage” to a “guide on the side.” Check out more on the Virtual Center for Teaching Excellence website for ideas on engaging students in the classroom.

To learn more about Bloom’s Taxonomy:

http://ww2.odu.edu/educ/roverbau/Bloom/blooms_taxonomy.htm
http://www.celt.iastate.edu/teaching/RevisedBlooms1.html
http://www.learningandteaching.info/learning/bloomtax.htm

References:
