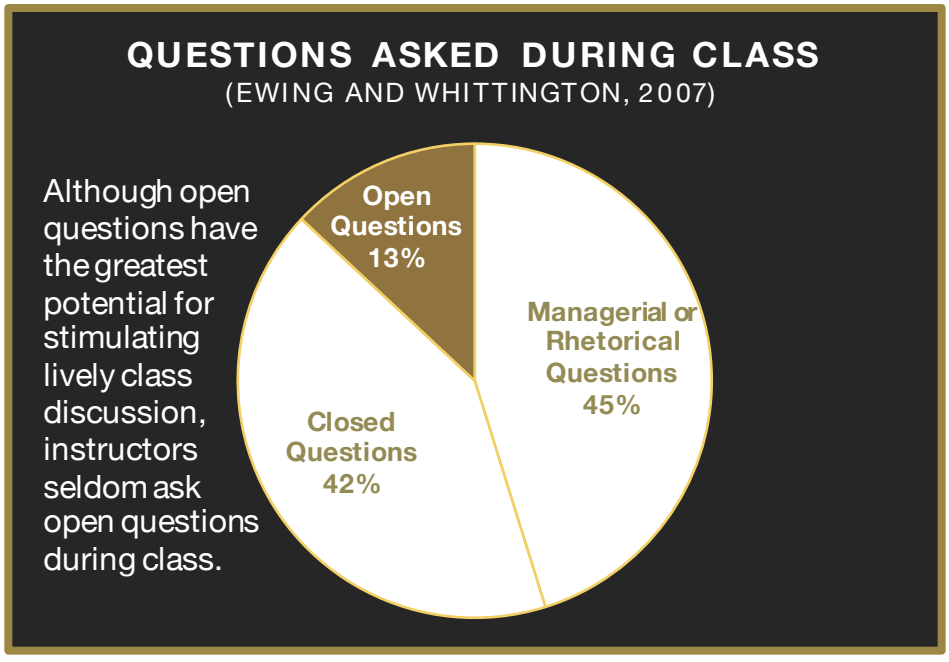
CETL Weekly Teaching Tips presents

Asking Questions for Meaningful Class Discussion

Instructors ask students questions. We ask questions on exams and we ask questions in class. The kinds of questions instructors ask influence the quality of class discussion.

Questions asked during class serve four purposes (Blosser, 1975/2000):

- **Managerial questions** organize and guide class activities (*Does everyone have a copy of the handout?*). We use managerial questions to create structure and organize classroom tasks.
- **Rhetorical questions** emphasize a point or reinforce a concept (*We agreed at our last meeting that Smith's theory posed several problems that require further research, correct?*). We use these questions to create transitions and don't expect students to answer these questions.
- **Closed questions** have few options for answers. Usually only one response is a correct answer to the question (*What kind of chemical bond holds this molecule together?*). Closed questions assess current student understanding. We use these questions to determine whether students retained recent content knowledge well enough for us to build on a concept or move on to the next topic.
- **Open questions** elicit a range of relevant responses and do not have a single "correct" response (*Which of the following three businesses would be the best use for a parcel of land on Nine Mile Road and why?*). Students may answer open questions with opinions based on course principles (what defines "best use"), justify their choices with relevant evidence, apply theory to a specific example, or practice complex problem-solving skills used in the discipline. Open questions create conditions for extended discussion.



Although open questions have the greatest potential for stimulating lively class discussion, instructors seldom ask open questions during class. Ewing and Whittington (2007) found that only 13.4% of the questions instructors asked were open questions. Nearly half the questions instructors asked were managerial or rhetorical questions (45%) and 41.6% were closed questions.

Examine the kinds of questions you ask during class. If you want to promote thoughtful discussions during class, spend some time preparing open questions that require higher-level engagement with course concepts.

Lang (2008) suggests scaffolding a class discussion with a series of questions. Begin with a fact-based question to get students comfortable with answering questions. Then introduce students to questions that require students to apply concepts to practical problems that do not have an obvious solution or discuss the merits of alternative interpretations (e.g., competing interpretations of a novel in a literature class, competing diagnoses for a set of symptoms in a health-related class).

Good discussions require time. Give students time to reflect before they respond. Learn to endure at least 3-5 seconds of silence while students gather their thoughts. Some instructors give students a minute to write a response before inviting students to discuss or asking a specific student to answer the question. Blosser (1975/2000) reports that when instructors create a delay for thinking before they ask for the first student response, students engage in richer discussions. More students participate. They are more likely to include supporting evidence when they respond. Students are more likely to ask follow-up questions and engage in speculative thinking about course content.

If course goals emphasize higher-level cognitive skills (problem-solving, application of concepts), construct class discussions that require students to use these skills. Reinforce the value of complex in-class discussions by asking similar questions on exams. Students will value the in-class practice with complex questions if they encounter similar questions on course exams that require problem-solving and application. If course exams ask only fact-based memory retrieval questions, students will lose interest in class discussions that require higher-order skills and demand that their instructor spend more class time telling them the "facts" they need to know for the exam.

Resources

Blosser, P. E. (1975/2000). *How to ask the right questions.* Washington, D.C.: National Science Teacher Association. (http://www.nsta.org/docs/201108bookbeathowtoasktherightquestions.pdf)
Ewing, J. C., & Whittington, M. S. (2007). Types and cognitive levels of questions asked by professors during College of Agriculture class sessions. *Journal of Agricultural Education, 48,* 91-99. Doi:10.5032/jae.2007.03091
Lang, J. M. (2008). On course: A week-by-week guide to your first semester of college teaching. Cambridge, MA: Harvard University Press.

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