Chapter XXI
Effective Questioning to Facilitate Dynamic Online Learning

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ABSTRACT

Teaching is a complex activity that involves careful preparation, delivery and reflection. As an educator, it is essential to create a sense of community in which students feel significant and are truly engaged as learners. A central focus of the educator is to maximize the capacity of each learner. How does this happen in an online learning environment? This chapter addresses the needs of learners for a learning community that promotes effective discussion; specifically, the practice of questioning that lies at the heart of classroom practice. Just as in a face to face classroom, questioning occurs in a variety of ways for online learners. The chapter shares ideas for effective questioning strategies in an online environment.

INTRODUCTION

In the book, *Technology Literacy Applications in Learning Environments* edited by David Carbonara, Tomei states "Technology plays a significant role in changing the instructional environment by promoting the role of the teacher as a guide in educational discovery, serving as a resource to the student-as-information gatherer." In an online environment, just as in a traditional classroom, you have a spectrum of learners. As an instructor, how do you begin to address the needs of the spectrum of learners in your classroom and create a learning community that promotes effective discussion? Different instructional practices help students learn in meaningful ways. One particular teaching strategy that is utilized in both traditional and online courses is discussion.

Questioning is a significant instructional design element for the promotion of effective discussion (Muilenburg & Berge, 2000). Research on online education consistently finds that high and consistent interaction levels between students and the professor, and high interaction levels between the students themselves, is often seen as a positive variable (Johnson, Aragon, Shaik, & Palmas-Rivas, 2000; Berge & Collins, 1996; Tu, 2000; Muirhead, 2001; Blignaut & Trollip, 2003; Vonderwell, 2003). Akin and Neal (2007) state, "Most online instructors, aware of how important student participation is to online learning, will realize that s/he must produce solid educational discussion questions that also engage. These good questions must also be sound in terms of learning theory, be big enough to engage online classes with possibly 30 or more learners, and long enough to last a module." Questioning provides students with an opportunity to challenge their thinking. As teachers, we are constantly asking questions. Asking questions that require higher level thinking is not an easily acquired skill. Good questioning takes thinking time, planning ahead, and experience. Using effective questioning strategies, teachers restructure their online classroom to engage students in higher level thinking. Questioning can not only help students meet course goals and objectives, but it also engages all students, and improves the quality of teaching and learning at all levels. An excellent first step in differentiating online is to increase the challenge and variety of your class discussions, activities, and assignments through questioning. By paying attention to the kinds of questions you ask, you can stimulate learning with a wide range of learners in your online classroom based on their readiness, interests, and learning style. In order to use the discussion method effectively, it is critical to understand how to design and maintain an online discussion so that all learner needs are met. In order to do so, questioning is an integral focus.

Why Question?

Questions are an important part of communication. It is probably safe to say that questioning is at the heart of classroom practice. Research in classroom behavior indicates that cueing and questioning might account for as much as eighty percent of what occurs in a given classroom on a given day (Marzano, 2001). In Marzano's book, *Classroom Instruction that Works: Research-Based Strategies for Increasing Student Achievement,* he indicated four generalizations as it related to questioning(p.113-114):

1. Cues and questions should focus on what is important as opposed to what is unusual.
2. "Higher level" questions produce deeper learning than "lower level" questions.
3. "Waiting" briefly before accepting responses from students has the effect of increasing the depth of students' answers.
4. Questions are effective learning tools even when asked before a learning experience.

I would propose that these generalizations also hold true for an online learning environment. All students need to be accountable for thinking at higher levels. Some students will be challenged by a more basic question, while others will need more. As in a traditional face to face setting, all students can hear and learn through a wide range of responses and questions; so it is also true in an online setting where students may engage in oral and written responses and discussion.

Who Needs to Ask Questions?

When considering who needs to ask questions in an online classroom, I would include both teachers and students in the **I.Q.** or **I Q**uestion process. Whether in a traditional face to face classroom or in an online environment, teachers must ask questions. Just as important in engaging students

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