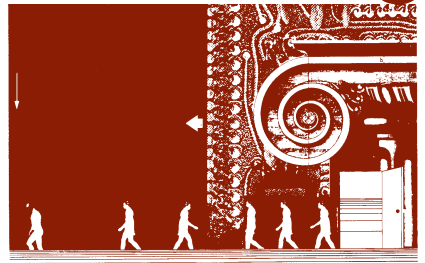


The National Teaching & Learning FORUM



Volume 17

Number 5

September

2008

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First-Day Questions for the Learner-Centered Classroom

Gary A. Smith
University of New Mexico

"Do my students know why I ask them to learn this way?" I said it aloud while reading the teaching evaluations from the previous semester. I had taken the plunge; I had moved substantially away from an almost entirely lecture-and-exam format in the second-semester geology course. Instead, many class sessions featured students working in small groups to apply content, which they first encountered largely through assigned reading, on to authentic geological problems.

Confronting a Problem

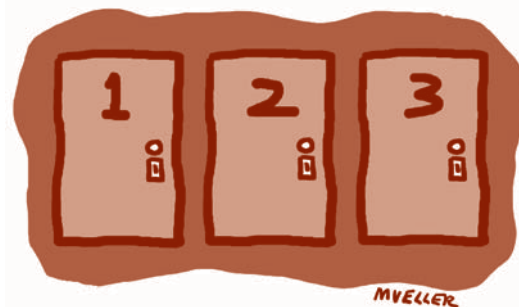
Each weekend, students completed an online assessment. Although low-stakes scores were provided for in-class and online assignments, these were primarily formative opportunities to guide both the students and me. Class sessions had been hugely more energetic and fun, at least for me. No dozing students, blank stares, and constant glances toward the clock. Students were doing things, and I was enjoying my interaction with

them, guiding them when they were stuck and thrilled to contribute additional insights that they requested out of curiosity. My shorter presentations focused on topics that they were struggling with. Grades went up significantly.

So, why did these evaluations reveal so many signs of dissatisfaction? Why had my evaluation scores gone down while student achievement had gone up? The reason became clear as I read the written comments. The students were displeased with the greater work. They were content to ignore reading assignments, assuming that I would lecture over the content that was important. They were content not to review information and construct knowledge except by

cramming the night before exams. However, in my class they needed to come to class prepared to do in-class assignments with their

peers. Moreover, they had to be reviewing and applying what they had learned weekly for the online assessments. There were a few



comments about how much they had learned in the class, but for most students the cost seemed too high. Clearly, although I adopted what I was convinced was a more successful pedagogy for my students, the learners were so used to other approaches that they really did not know what I was doing and, more importantly, why I was doing it. Today, I realize that this is typical, but at the time, I did not know about resources (like Felder and Brent, 1996) to show me how to stay on track. What should I do?

Getting Student Buy-In

As the next offering of the course approached, I thought about what to do differently. Sure, I could make the workload more manageable—focus more on the learning outcomes by covering less content, assigning more succinct and purposeful reading, and giving clearer and shorter assignments and assessments to provide opportunity for reflection. However, was not the real problem that the students did not understand why I taught the course in this apparently unfamiliar style?

I planned to start the first day with a summary of the research on active and reflective learning. That would show them that I knew something about teaching and not just about geology and that they were really taking a “state of the art” course. Wouldn’t they then see that everything I was having them do was really for their own benefit as learners?

As I outlined what I would say and what graphs I would show, I could not help but think that I was really missing the point. What I was planning somehow brought back from childhood memory the admonition of my parents to eat my vegetables. Just because it was good for me didn’t make the food taste

better; I still didn’t like to eat some things. Wouldn’t it be the same for the students? What I needed was a way to engage them to see that how I taught the course mattered to *them*; that learning this way helped them accomplish goals that were important to *them*.

The First-Day Questions

On that anxious August day, I greeted the students and after a minimum of predictable first day review of the syllabus, I projected this text on the screen:

“Thinking of what you want to get out of your college education *and* this course, which of the following is *most* important to you?

1. Acquiring information (facts, principles, concepts)
2. Learning how to use information and knowledge in new situations
3. Developing lifelong learning skills.”

It was a gamble—I had no idea how they would respond. I encouraged them to chat with their neighbors. Then I polled them. Two hands went up in support of option number 1. Twenty-one hands rose in support of option number 2. The remaining 13

students selected the final option. We talked about each one, with advocates for each stating their case. The two students who favored acquisition of information revealed that it was not so much that

this option seemed most important but that it was most basic. They saw the list as hierarchical, and although they thought application of knowledge was more important than memorization, they felt that they had to master the factual information before they could use it. This led to further discussion of why learners needed to meet all three of these goals, even if we each held one as being more important than the other two.

Why had my evaluation scores gone down while student achievement had gone up?

THE NATIONAL TEACHING & LEARNING FORUM

Executive Editor:

James Rhem, Ph.D.
2203 Regent Street, Suite B
Madison, WI 53726

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University of Texas at Austin

Editorial correspondence:

James Rhem
2203 Regent Street, Suite B
Madison, WI 53726

Subscription information:

The National Teaching & Learning Forum
2203 Regent Street, Suite B
Madison, WI 53726

The National Teaching & Learning Forum
(ISSN 1057-2880) is published six times during the academic year by James Rhem & Associates, LLC — December, February, March, May, September, October.

One-year individual subscription: \$59.

Periodicals postage paid at Madison, WI

Postmaster: Send change of address to:
The National Teaching & Learning Forum
2203 Regent Street, Suite B
Madison, WI 53726

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September

Now I had them where I wanted them. I projected a new question on the screen:

“All three of these goals are clearly important. However, let’s think for a moment of how best to accomplish these goals. Learning is not a spectator sport—it takes work; that includes work in the classroom and work that you do outside of the classroom. So, of these three goals, which do you think *you can make headway on outside of class* by your own reading and studying, and which do you think would be best achieved in class *working with your classmates and me?*”

The polling was nearly unanimous that acquiring information was the easiest to do alone and that the other two goals seemed more complicated and would profit from peer and instructor influence. This, then, led to a discussion of how to pursue goals 2 and 3. These goals are not achieved by reading or listening to a lecturer—students must actively do things in order to learn. Students learn best (Davis, 1993) when they take an active role:

- When they discuss what they are reading
- When they practice what they are learning
- When they apply practices and ideas.

They were content to cram the night before exams.

The need for active learning in class in order to reach their goals leads students to accept that they have to read and otherwise prepare before coming to class by making first contact with content on their own.

This discussion became a segue to explaining how the course was structured—that it was about their learning and achieving the goals

that were most important to them. Rather than me lecturing over the assigned reading and leaving them to fend for themselves on homework, they were going to come to

Students desire to accomplish the educational goals that come from deep learning. One colleague, instructing a course of 100 students in a non-majors, general-education

The results that semester were dramatically different. Not only was the active classroom fostering better learning performance on exams and other assignments but also my teaching evaluations rose to their highest levels.

class having read, and sometimes struggled with, the text. The problem-solving that would apply the reading content and develop logical hypothesis statements and testing would take place in class. By completing these assignments and the online assessments, they would always know whether they were mastering both the content knowledge and its application and relationship to how scientists know about the natural world. Moreover, I would be continually reviewing their progress, too, working with individuals where they showed lack of mastery and going back to material when most of the class showed evidence of confusion and misconception.

The Impact

The results that semester were dramatically different. Not only was the active classroom fostering better learning performance on exams and other assignments but also my teaching evaluations rose to their highest levels. Students actually complained if they thought I was lecturing too much. I have since used the first-day questions in every course I teach and at all levels for three years. The strategy has been shared with colleagues through faculty development workshops and I frequently hear back about their experiences. Some use classroom response systems (clickers) to maintain anonymity during polling. The results are very consistent:

science class, has experienced situations where not a single student chose acquisition of factual knowledge as their prime learning objective. More importantly, all students prepare at some level for most classes, participate enthusiastically during in-class activities, and complete the assessments while acknowledging, sometimes with a reminder, that these learner-centered opportunities closely



match their own objectives.

The impact of the first-day questions to engage students with their learning is further enhanced by asking students to assess their preferred learning styles. By administering a free, online learning style inventory (e.g., Felder-Silverman Index of Learning Styles, <http://www4.ncsu.edu/unity/lockers/users/f/felder/public/ILSpa.html>) and spend-

ing a little time in class during the early weeks discussing the results, students commonly encounter for the first time that (a) they have particular learning style preferences, and (b) that different people learn in different ways. This exercise enhances the first-day questions by connecting active and reflective learning strategies in the course to the way the students learn, and it supports the use of a diverse toolbox of learning activities in order to assist a diverse group of learners to succeed.

Students may not have much experience with active learning or expectations placed upon them for their learning. The first-day question activity is important for getting student buy-in to why active-learning strategies are used, and to the partnership responsibilities of instructor and student. Without this introductory dialogue, the expectations of coming to class prepared, working with peers in class, and completing frequent assessments of learning may be foreign to students and seem like too much work compared to listening to lectures and regurgitating facts on exams. However, once students acknowledge the linkage between their goals and the implemented learning methods, they have a new appreciation for why learner-centered instructors do what they do and learners come to value these methods so long as they are used effectively and they can measure their own learning. ■■

Contact:

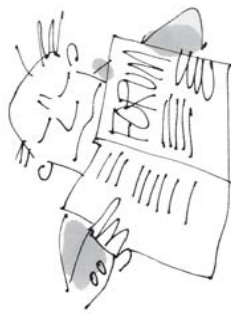
Gary A. Smith
Office of Support for Effective Teaching
MSC05 3400
University of New Mexico
Albuquerque, NM 87131

Telephone: (505) 277-2348
E-mail: gsmith@unm.edu

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