**HOW TO REDESIGN A DEVELOPMENTAL MATH PROGRAM BY
USING THE EMPORIUM MODEL**

X. How to Ensure Student Participation

The most important way to achieve student success in the Emporium Model is to make sure students are doing the work. In this chapter, we address how to introduce the Emporium Model to students, how to get them to do the work, what to do if they are not doing the work, and what to do if they say they don't like the emporium. This chapter is a compendium of ideas about how others have dealt with student acceptance of and resistance to the new way of learning.

Introducing the Emporium Model

Q: For students, what is the most difficult period in the redesign process?

A: Making the change from traditional classroom instruction to new ways of learning involves far more than learning to use a computer. Many students are set in their ways after a lifetime (albeit brief) of passive instruction. They need preparation before making the transition to a more active learning environment. The adjustment period is often difficult, but persistence will win out. The pilot semester can be a difficult transition period as the redesign methodology gets introduced. Most common here are negative student reactions to the perception that the class is an "online class" (i.e., will be impersonal) that they did not think they had signed up for or that it "has no teacher" (i.e., will lack opportunities for student-student and faculty-student interaction.) These challenges can be addressed by up-front engagement with advisers to explain what the course will be like and the development of written materials and orientation sessions that explain the new format. Giving careful thought to how students will learn about the redesigned course will help you avoid a number of problems that can arise.

Q: How should we orient new students to the Emporium Model?

A: Most institutions have found it useful to discuss the new approach to teaching developmental math during new-student orientation. You need to develop—and communicate to students and family members—a coherent and compelling description of the Emporium Model that addresses common misconceptions and concerns. Both students and family members should be able to see a demonstration of the course and learn more about why the Emporium Model works so well. Some institutions have also established a website that includes a demonstration version of the course for students and family members so that they can gain a better understanding of the Emporium Model, the results it has produced, and the benefits that students accrue.

As the institutional memory of how developmental math was taught in the traditional format begins to fade and as more and more students become successful, fewer and fewer students and their family members will question why developmental math is taught in the Emporium Model. However, there will always be returning students who do remember the old way and family members who say, "That's not how I learned math." For that reason and because the Emporium Model is so different from the traditional format of other college classes, many institutions continue to include an explanation of the Emporium Model in their student orientation well after the model has become fully established.

Q: Are there specific things we should be sure to avoid when we introduce the Emporium Model to students and others?

A: The most frequent problem that institutions have encountered is emphasizing the technology over the educational purpose of the redesign. Here is an example: "Initial stories in the campus and local presses emphasized the technology of the course. The radical change in instructional style produced what the team dubbed the *no-teacher syndrome*. The stories frightened many students, angered faculty, and confused administrators as family members phoned administrators to ask for details about a so-called instructorless course that was still in the design stage. In hindsight, a better approach would have been to emphasize that technology was already being used in hundreds of other campus courses and that there would be more in-person help available than ever before. It would have been better from the outset to insist that the press stress educational ends rather than technological means. Although improved math skills will always seem less newsworthy than stories about, say, streaming video, it's nevertheless crucial to keep a clear focus on why the technology has been called into play in the first place."

Attendance/Participation

Q: Should lab/classroom hours be required?

A: Don't even bother to redesign if you are not going to require lab hours.

Q: How many lab hours should be required each week?

A (*fixed attendance*): In most institutions, students are divided into course sections and meet at fixed (scheduled) times in the lab or in a computer classroom with an instructor, which is equivalent to meeting times in the traditional format—that is, two to four times a week.

A (*flexible attendance*): In most institutions, for a three-credit-hour course, three hours are required in the lab (along with one hour required in the computer classroom). For a five-credit-hour course, five hours are required in the lab (along with two 1-hour meetings required in the computer classroom).

Q: How do we get students to go to class and/or to the lab?

A: You will never get all students to attend all class meetings or put in the required hours in the lab, but you can get most students to attend regularly by making class and lab participation at least 10 percent of the final grade. (Some advocate a higher percentage for participation.) This is extremely important. Without course points for participation, success rates will be very low.

Some institutions recognize that giving course points for attendance increases student engagement and learning but are hesitant to do so because they think it will inflate grades. To determine what effect giving attendance credit had on final grades, the University of Alabama analyzed the grades of 3,439 students in five math courses during the fall 2005 semester. Attendance credit had no effect on the grades of 86.8% of the students. For 4.5% of the students, attendance credit increased their grade by a plus or minus. For 0.5%, attendance credit allowed them to pass the course. For 1%, attendance credit caused them not to pass the course, and for 7.3%, attendance credit decreased their grade by a plus or minus. These data show giving attendance credit does not inflate grades.

Q: Should students get partial credit for spending part of the required time in the lab?

A: There is some disagreement on this, but most institutions do not give partial credit. Students must spend all the time that is required in the lab to receive any lab credit for a week. Partial lab credit is time-consuming to tally and calculate, and the goal is for students to spend sufficient time in the lab to complete their weekly assignments and assessments. If you do award partial credit, students will decide what grade they want and spend only that percentage of the required time in the lab. Unfortunately, they often misjudge.

Q: Should all students be required to spend the same amount of time in the lab?

A: There are mixed opinions about whether or not students' required hours should be reduced throughout the semester if they earn a certain minimum grade on each test. Some institutions do not change the required amount of time for any student. Others allow the number of hours to decrease if a particular student is maintaining a designated level of mastery on all assignments, quizzes, and tests. No institutions permit students to reduce the required lab hours to zero.

Q: How can we stop students from doing things other than math in the lab?

A: Internet browsing (such as on Facebook) during class time can be a distraction and interfere with students' time on task. Problem-solving websites create academic integrity issues. You need strict rules, and you need to enforce them. Students caught violating the policy must get a severe penalty such as losing participation credit for the week. Be sure to state that policy in the course syllabus. Lab computers can be set to allow access to only certain Internet Protocol sites, and/or software can be installed that locks down Internet surfing. In addition, watch calculators carefully. Many of the new scientific calculators have symbolic manipulation capabilities, so do not allow those types unless you specifically choose to do so. Also, insist that cell phones and other like devices be disallowed. Instructors and tutors walking around the lab can observe what students are doing.

Q: What kinds of problems can we anticipate regarding student computer literacy?

A: Assuming that students' ability to access Facebook or use a smartphone ensures their ability to use mathematical software is a common mistake. Many students like using computer software, especially because they have the chance to work with the software at home. Others, however, find the computer work very stressful, saying they would rather be in a traditional classroom. Plus, many nontraditional students lack computer skills.

One solution is to develop brief training materials to help students get started using the software. These materials may include resources that have already been developed by the software company. Some students are able to quickly get started using the software and are willing to try different options; others prefer a set of instructions as to how to get started. Some institutions have also developed an online orientation quiz on the software's features that students complete during the first week of the term. In finding answers to the quiz questions, students become familiar with the features of the software that they will use. Other institutions offer workshops at the beginning of each semester for students who need to learn basic computer skills. Instructors and tutors should pay particular attention to technophobes to help them overcome computer anxiety and should work with them more frequently if needed.

Q: Should students be able to do homework and quizzes outside the lab?

A: Absolutely. Encourage students to work as much as possible on math anywhere and anytime, but give participation credit only for the required time spent in the lab with tutors available and with certainty as to who is doing the work. Tests should be taken only in a proctored environment—in the lab or at a designated testing site.

What to Do When Students Won't Do the Work

Q: What do we do if students do not start working immediately at the beginning of the term and they fall behind?

A: It is important to contact students at the end of the first week if they have not attended a lab session/class meeting or have not begun working. Students who start late usually have a difficult time completing the course. The software's tracking feature makes it easy to determine who should be contacted early. Sending an e-mail or making a telephone call demonstrates that the instructor has noticed the student's absence and cares that the student has not begun the course. Some students will respond and will come to class because someone has noticed that they are absent and has followed up. These students will continue to need support and encouragement but may become quite self-sufficient once they experience some success with math and see themselves making good progress.

Others will need more-assertive intervention. Those institutions that have early-intervention specialists may be able to learn more about students' concerns or life issues and address them if possible. It may be that the Emporium Model is not the problem. Several institutions have tracked students who did not come to their developmental math classes—yet did not officially withdraw—and discovered that those students had stopped attending all classes. In those cases, the institution administratively withdrew the students and encouraged them to return once they were ready and willing to attend classes.

Q: What do we do if students are not coming to the lab/class for the required number of hours or to the class meetings or are not doing the work?

A: It is essential to monitor student progress and intervene as needed. Faculty (or others working in the course) should track the students' engagement and contact them by e-mail or telephone to set up a time to talk. Ideally, the contact should be personal and during lab or class meetings. The instructor should try to touch base with every student at least once a week to discuss progress and should be certain to talk with students who are behind. These conversations should determine the problems a student may be having with the content, the technology, or the course in general and help the student overcome whatever the barrier may be. If a student has taken a test and done poorly, the student should be asked to meet with the faculty member in class or in the lab to discuss the errors.

Q: Should we communicate with students about problems only?

A: Absolutely not. It's easy to send out a weekly e-mail to all students in the course with study tips or other encouraging thoughts. At some institutions, when a student has taken a major test and done well, the software sends an automatic congratulatory e-mail to the student.

Q: What do we do if students say they don't like the redesign format?

A: When students arrive in college, they expect a particular way of learning: the traditional lecture format, which requires them to listen, take notes, and take tests. The Emporium Model requires different behaviors: it requires that students engage with the content in an active learning environment and master the content before moving on. Thus, when students declare they don't like the redesign, many are actually objecting to having to do more work in order to pass the course.

Faculty must be prepared to explain clearly why the new model is better and how it has improved the success rates of prior students. Merely explaining how the emporium works is not enough. Faculty need to help students understand that additional work will lead to additional learning and success in college and that they will be supported with personalized assistance in the process. Although students might initially complain that they are working harder than they expected to or harder than their friends did in the traditional courses, their satisfaction with the new format will increase once they acquire the ability to master the course content and experience success. Student complaints will also diminish once they recognize that the new model is here to stay.