

HOW TO REDESIGN A COLLEGE-LEVEL OR DEVELOPMENTAL MATH COURSE USING THE EMPORIUM MODEL

IX. How to Address Specific Faculty Concerns

Clearly, faculty members are key to the redesign and are involved at every stage. Some issues are, however, particular to their situations such as their changing roles, responsibilities, workloads and training, all of which we address in this chapter. Some institutions are fortunate to have all instructors buy into and support the redesign, but most encounter some resistance along the way, resistance that ranges from mild to severe. Thus, we also give you some ideas about how others have dealt with faculty resistance to the new way of teaching.

Q: How does the instructor's role change?

A: Faculty members no longer spend time grading homework or preparing and grading tests. Therefore, they can dedicate more time to helping students. The faculty role becomes one of facilitator of student learning and of guide for each student's study in math. Instructors meet with classes either in or outside the lab, tutor students, counsel students, monitor each student's progress and provide support and intervention as needed. Instructors may also lead small-group discussions on topics particularly difficult for groups of students.

Q: How can students possibly learn the material if we don't teach it to them?

A: Most student learning takes place in the lab setting. The instructor role in the classroom is to guide students individually, pull concepts together and help students avoid common pitfalls rather than being the primary source of all information. You trade your role as sage-on-the-stage for tutor-in-the-trenches while students are doing their work. This is a huge adjustment for many experienced instructors and inexperienced instructors as well. As the same time, it is a very rewarding experience for instructors as reported by experienced redesign teams.

Q: If we meet in a classroom only once a week, how can we possibly teach a week's worth of material in 50 minutes?

A: Don't try to "teach a week's worth of material." For those who have a weekly class meeting, its goal is to focus students' attention on the week's upcoming tasks. Prior to class, the instructor should review each student's status so that the instructor is ready to work--especially with students whose progress is lagging.

Here are some tips for what instructors should do in a weekly class meeting:

- Start out with a short recap of the previous weeks' material, especially if it leads into new material.
- Give an overview of the week's new material.
- Cover important concepts and work especially difficult examples, pointing out common errors.
- Focus on examples that combine multiple skills and concepts.
- Review the schedule of work due for the week.

- Discuss study strategies.
- Be sure to take attendance.
- Above all, do not try to cram in a traditional lecture and do not go over homework.

Q: Doesn't the Emporium Model reduce the interaction between students and instructors?

A: On the contrary, there is *more* interaction between students and instructors than ever before, and that interaction is more meaningful, more individualized and more focused. The main reason students learn better under this model is that they are less passive and more actively involved in doing math, and they receive help based on their individual needs.

Faculty Workload

Q: What redesigned teaching load is equivalent to a traditional three-credit-hour course?

A: There is no simple answer to this question because every institution and every department has a different set of rules (policies and procedures) in regard to faculty load. Redesign will require you to revisit some of those rules because of the way that redesigned courses are structured. A teaching assignment that used to be a three-day-a-week hour-long lecture with paper assessments is now very different because the software both provides most of the lecture and automates most of the assessments.

A common assumption in higher education is that instructors spend two hours outside of class (preparing and grading) for every one spent in class. That means that a three-credit course typically requires the instructor to spend nine hours per week on the course. Because both the in-class time and the preparation and grading time are reduced in the Emporium Model, you need to reallocate instructor time accordingly. This might translate to something like two 1-hour weekly class meetings, 2 hours for preparation and review of student progress and 5 hours in the lab tutoring students each week. You will need to make decisions based on your own institutional rules and the changes you made in the redesigned course structure.

In addition, many institutions ask instructors to schedule some of their office hours in the lab, which adds to the number of hours instructors spend in the lab so that they can provide assistance for all students in the lab when they don't have scheduled appointments with their own students.

Q: Are there tools to help instructors see how much time they are spending in the Emporium Model versus in the traditional format?

A: NCAT has developed a Scope of Effort Worksheet (see Appendix D) to help campuses document that the number of hours faculty devote to the redesigned course will be the same or fewer than those devoted to the traditional format of the course, even if class size increases or the number of sections that faculty carry increases. This is possible because the Emporium Model offloads to the technology certain tasks like grading and monitoring student progress. Explaining how this occurs and documenting the changes by using the Scope of Effort Worksheet allow redesign leaders to help others on campus understand the benefits of redesign for both students and the faculty.

Q: Who should be responsible for the course?

A: Someone needs to take overall responsibility for ensuring that the course works well, that all students have the same learning experiences and assessments, and that all course policies and procedures are implemented consistently. Make sure you have a course coordinator who can offer the necessary leadership. In smaller institutions, the department chair usually has overall responsibility for ensuring that the course works well, that all students have the same learning experiences and assessments, and that all course policies and procedures are implemented consistently. In larger institutions, a course coordinator may assume that responsibility. At the same time, it is important to emphasize teamwork and to involve others in the decision-making process. Instructors themselves are responsible for their individual sections as in the traditional format.

Training

Q: How much training is needed for instructors?

A: Many institutions experience problems because they underestimate the degree of training—both initial and ongoing—that is required in order to implement their redesigns successfully. The new format inevitably requires very different kinds of interactions with students from those of the traditional teaching format. Developing a formal plan for initial and ongoing training of all personnel—rather than assuming they will pick up the new methods on their own—will go a long way to ensuring a successful redesign.

Instructors working in a redesigned setting for the first time need enough training to understand the new philosophy of teaching that is required because a change in the basic mindset must take place. Some people embrace this change immediately; others may have to be dragged along. Here are some tips:

- Plan to get instructors involved as early as possible.
- Involve instructors in curricular decision-making.
- Offer workshops with discussions and presentations.
- Bring in guests from other schools that have successfully implemented an emporium.
- As the semester progresses, meet frequently with all instructors to offer ongoing training. Some institutions meet weekly; others meet on a less-regular basis.

Q: What should instructor training include?

A: The most important aspect of instructor training is how to “teach” in the Emporium Model because the one-on-one assistance the computer-based format requires is very different from the teaching format the instructors have used and/or experienced in the past. Instructors need to be coached in how to facilitate—and engage students in—problem solving rather than in resorting to lecturing or providing answers for students. Training should include:

- A full explanation of the Emporium Model, including its rationale and benefits
- Clear guidelines on instructors’ responsibilities in the new model
- How to use the instructional software
- The importance of maintaining consistency in implementing all elements of the redesign

Q: Do instructors need to work through the course modules?

A: It is helpful for new faculty to work through the modules. Doing so enables them to become familiar with the order in which the material is presented, grow accustomed to the wording of questions and recognize the ways the software expects answers to be entered.

Q: How often do we need to train instructors?

A: The desire to go back to old ways of doing things has to be overcome. Ongoing mandatory training of instructors is the only way to ensure that success will be achieved. All personnel need to be reminded of the policies and procedures and learn about changes in the software. We recommend holding a meeting with all experienced instructors at least once each semester to review old policies and point out any new ones.

As new faculty are brought into the course over time, it is important to help them go through the same steps of accepting a different learning model and to point out ways of creating the type of connections attributed to the traditional lecture format. We recommend holding a workshop for instructors new to redesign at the beginning of each semester and then monitoring their work throughout their initial term of working in the Emporium Model.

Q: How should we train adjunct faculty members?

A: In addition to involving adjuncts in instructor training sessions, full-time faculty need to mentor part-time faculty during the latter's initial term of working in the Emporium Model. Although time consuming, doing so will ensure greater consistency in the redesign. Mentoring is an investment that will ensure continued success of redesign.

Q: How do we ensure ongoing consistency among instructors?

A: Even when initial training is provided for all instructors, most institutions discover inconsistencies in application of the redesign, especially during the pilot period. For example, students may be required to complete guided-lecture notes before taking a quiz, but some instructors do not monitor guided lecture note completion. Despite policies against accessing external resources during lab, some instructors allow students to listen to music with headphones, check email or use non-math-related Web resources while in the lab. Despite policies to the contrary, some instructors permit use of notes on proctored exams.

The faculty need to formulate firm rules about such matters. Faculty need to adjust to the concept that they cannot make a decision based on their individual interpretations; rather all have to follow the same rules and guidelines. If an instructor has an idea for improving student learning and/or the process, the idea should be agreed upon and used by all instructors. Because unforeseen issues arise regularly, weekly staff meetings are necessary with results recorded, published and distributed so that all faculty and staff can consistently implement those decisions. Although time-consuming, this investment ensures the continued success of redesign.

Faculty Resistance

Q: How can we overcome faculty resistance to the redesign?

A: There are a number of ways to overcome faculty resistance:

- *Persuade them.* Some math faculty are sincerely concerned that students cannot learn math by working with instructional software and receiving on-demand assistance. They have spent years lecturing, watching students do homework and grading many, many papers. With greater exposure to situations in which the Emporium Model is working, these sincere instructors will adapt to and embrace the more successful learning environment. The data demonstrating greater student success will persuade them along with the assurances of their colleagues on campus and at other institutions who use the Emporium Model.
- *Train them.* Instructors who want training are not confused. They recognize they are unfamiliar with software that will be used extensively in the redesign even if they have tried using it previously in one or two sections as homework assignments. They know they are used to lecturing and that working with students in a different learning environment will require different approaches, and they seek assistance and training to learn these new methods. Other instructors who are new to using software and the Emporium Model also need training. Both types of instructors know they need greater understanding and practice prior to the full implementation of the Emporium Model. They also want to understand and adhere to the new policies but need training to do so.
- *Mentor them.* As new faculty join the redesign after the initial pilot, they will undoubtedly have questions as the term proceeds. Their confidence will grow with experience, but they will benefit from having a specific person available to help them in dealing with students. Mentors should check in frequently to be sure that new faculty are adapting to the new approaches. Mentoring can occur between full-time faculty, but it is especially important for full-time faculty to mentor adjunct faculty. At most institutions, adjuncts have been permitted to teach however they wanted. The new and consistent redesigned course represents a significant change for part-time faculty. An adjunct who is supervising tutors will need guidance in this role because it is a new one for most. Adjuncts are frequently not on campus when most full-time faculty are. They may not be able to observe the emporium when it is being managed by full-time faculty. Having a full-time faculty mentor or an experienced adjunct mentor will be valuable for all, but particularly for those part-timers who teach in the evening or on weekends. Mentoring will assist adjuncts as they join the new model and will help overcome objections related to change.
- *Reassign them.* Some faculty may never see the benefits of the redesign for both students and faculty. They will refuse to change or they will cause major difficulties for the team and for the administration. Even when the results demonstrate that the Emporium Model is leading to greater student learning and higher completion rates, some faculty will not even agree to try the new approach. These faculty need to be reassigned to other responsibilities in the institution, if they are full-time, tenure-track employees. The preferences of individual faculty to continue to teach as they always have, even when the students are not succeeding, cannot be tolerated by an institution that truly wants student learning and completion to improve.

- *Fire them.* Sad as it may sound, there are some faculty who care more about getting to do whatever they want than about seeing students succeed. Adjunct faculty who are hired from term to term may need to seek employment elsewhere. Again, institutions seeking to provide learning environments in which students succeed must have faculty who share that goal and who demonstrate their shared agreement through their participation in the Emporium Model.

It is important to remind all faculty why the redesign was undertaken. Some may argue that the college should return to the traditional, old way of offering the course, but you need to remind them that to do so would not improve the situation for students because fixing the “old way” is why the redesign began. Faculty need to be reminded of the successes other institutions have achieved and the benefits to faculty: working more closely with students who need their assistance, reducing the tedious task of grading, and so on.