Overcoming Cultural Obstacles to New Ways of Teaching: The Lilly Freshman Learning Project at Indiana University

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Evidence has been accumulating for over a decade that approaches such as collaborative and active learning have potential for creating real increases in student learning. Yet on many campuses these ideas are having little impact on what is actually happening in classes and in the formation of institutional practices. What are the cultural obstacles that are preventing the exploration of new ways of teaching and how can these be overcome? In this chapter we will describe cultural obstacles that prevent the adoption of new ways of teaching. After presenting a few opportunities created by the current sense of crisis in the university classroom that can help offset these obstacles, the Lilly Freshman Learning Project (FLP) is outlined. The main portion of the chapter details the multiple strategies we used to overcome cultural obstacles. The chapter concludes by presenting eight strategic principles for getting new ways of teaching to take hold.

INTRODUCTION

Evidence has been accumulating for over a decade that a series of approaches, including collaborative and active learning, have the potential for creating real increases in student learning (Chickering & Gamson, 1987; Smith, 1996; Sorcinelli, 1991). Yet on many campuses these

ideas are having little impact on what is actually happening in classes and in the formation of institutional practices (Angelo, 2001). What are the cultural obstacles that are preventing the exploration of new ways of teaching and how can these be overcome?

In this chapter we will briefly describe a set of cultural obstacles we found at Indiana University that prevent the adoption of new ways of teaching: 1) the dominance of research over teaching, 2) the academic departments' monopoly of occasions for interaction among faculty, 3) student-bashing, and 4) traditions of faculty independence. After presenting a few opportunities created by the current sense of crisis in the university classroom that can help offset these obstacles, the Lilly Freshman Learning Project (FLP) will be outlined. The main portion of the chapter details the multiple strategies we used to overcome these cultural obstacles. Throughout, our goal was to use the culture itself to change the culture, rather than butting heads to try to force reform. What we did was a response to the particular cultural ecology on our campus, but many of the strategies are relevant or adaptable to various higher education contexts.

CULTURAL OBSTACLES

Obstacle 1: The Dominance of Research over Teaching

On our campus, research is often so dominant that it overshadows other aspects of the university. Faculty on our campus, as probably on all campuses, are very, very busy with their research. This is particularly true in the sciences, where an interruption of ongoing research is perceived as a threat to continued participation in a research community—a perception that is probably correct in many cases. In this context, it is hard to focus faculty attention on teaching issues. Pedagogical innovators are often isolated, and, in some departments, faculty who focus on teaching are actually viewed as eccentrics (Rogers, 1995).

Obstacle 2: The Monopoly of Occasions for Interaction by Departments

The primacy of research is given social form in the departments. As Cuban (1999) has demonstrated in his study of educational reform at Stanford, it is research that brings faculty together as colleagues, and it is research that defines their interactions. Since a great deal of the social, intellectual, and administrative life of the university flows through the department, concerns with teaching have no natural arena for expression.

Moreover, many departments also share the attributes of dysfunctional families. Faculty know what their colleagues are going to say before they say it, and they often share a common jargon that creates the illusion, rather than the reality, of communication. Colleagues will converse in a kind of shorthand without ever having to define terms or justify assumptions. These habits of communication sometimes lead to conflict and an atmosphere of mistrust that makes the department a poor site for discussions of issues as potentially threatening as teaching and learning. In such an environment, teaching is rarely part of the normal cultural exchange. It remains a personal experience, a dirty secret that is excluded from the social space shared with one's colleagues. Thus, there are few occasions in which serious discussions of teaching and learning occur.

Obstacle 3: Student-Bashing

Within the research-dominated environment of the departments, the most common conversation about teaching and learning revolves around attacks on the intellectual and moral deficiencies of students. It is repeatedly alleged, without a perceived need for proof or the examination of assumptions, that the university students lack the preparation for college level work and/or the willingness to do the work necessary for success. It is implied that faculty having this conversation would be wonderful teachers, if they only had better students.

Such perceptions are not entirely without foundation, but, since a transplant of the entire student body is not practical, they provide little assistance in responding to the real pedagogical challenges of a large public institution. And they have a very negative effect on discussions of teaching and learning. In the midst of such conversations about the supposedly inferior nature of the student body, even dedicated teachers may find it difficult to stay focused on potentially valuable explorations of pedagogy, or may even succumb to student-bashing themselves.

Obstacle 4: Traditions of Faculty Independence

Quite appropriately, independence has a high value in faculty culture. The ability to pursue lines of inquiry without seeking society's approval is a crucial element in the modern university. But in the world of research, the disciplines have practices that keep isolated scholars or scientists in touch with what their colleagues are doing and provide regular critiques of their approaches. In contrast, in the world of teaching there are no parallel channels for faculty to learn from each other's successes and

failures or to generate successful strategies for approaching common problems of teaching and learning.

CULTURAL OPPORTUNITIES

Opportunity 1: A Widespread Sense of a Crisis in the Classroom

Counterbalancing the cultural obstacles to educational reform at our university are several opportunities created by the same academic culture. First, there is a perception that something is very wrong with teaching and learning. The ubiquity of student-bashing is in itself a tacit acknowledgment that current strategies are not working. If we can redirect some of the energy being directed at criticizing the student body into a more productive exploration of strategies for increasing learning, real change might be possible.

Opportunity 2: The Lack of Community Among Faculty

The absence of social interactions outside the often-stifling framework of departments offers a second possibility for mobilizing energy behind educational reform. By offering faculty a supportive community organized around teaching, the fulfillment of social needs can be linked with exploring pedagogy, and a nonjudgmental environment can be constructed in which both successes and failures in the classroom can be shared and risks taken.

Opportunity 3: Administrative and Institutional Support

The very power of departmental culture means that administrators who are committed to improving the quality of learning are often frustrated when reforms instituted through normal channels fail to yield real results. Thus, independent programs that promise to bypass the departments and directly affect the culture of teaching are often quite attractive to administrators.

Moreover, on our campus the Teaching Resource Center, Instructional Support Services, and the Teaching and Learning Technology Lab had already created the foundation for our effort. The process of identifying appropriate faculty for our program would have been much more difficult, if not impossible, if these institutions had not already devoted thousands of hours to assisting faculty interested in improving their teaching.

The Lilly Freshman Learning Project: An Overview

Within this particular constellation of cultural obstacles and opportunities, the Lilly Freshman Learning Project (FLP) (www.indiana.edu/~flp) seeks to counter existing norms and to create a space in which a culture that supports new approaches to teaching and learning can be fostered. As Kotter (1995) and others have argued, transforming organizations is a complicated endeavor that requires systematic attention to the process of change, including developing strategies for achieving a vision. The purpose of this chapter is to detail our strategies for overcoming cultural obstacles, but a brief description of the program is necessary to place these in context (Table 14.1 outlines the Lilly FLP activities). For the sake of brevity, this description will present the program's current incarnation and not trace the steps by which we reached this point.

TABLE 14.1
Lilly Freshman Learning Project Activities

I. Spring

- 1) Structured individual interview: Fellows specify, as precisely as possible, what students must be able to do to succeed at various learning tasks in their courses
- 2) Initial meeting/team building: Fellows share a time they were very successful in helping students learn
- 3) Second meeting/team building: Fellows share "bottlenecks" in their courses where students find it difficult to learn

II. Two-week summer seminar

- 1) Fellows complete daily readings and written assignments
- 2) Fellows observe a class in a discipline different from their own
- 3) Fellows interview an undergraduate student panel
- 4) Fellows develop/present an innovative lesson modeling new techniques they learned

III. Follow-up and subsequent years

- 1) Fellows continue to meet to support each other
 - 2) Fellows take steps to spread the ideas they learned about teaching
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Each year the Lilly FLP develops a cohort of eight to 12 faculty leaders committed to student learning from across disciplines. Unlike programs at Miami University of Ohio (Cox, 2001) and the University of Wisconsin, Madison (Sanders et al., 1997), we did not choose to open the competition to volunteers because we sought to bring new faculty into the campus dialogue on teaching and learning, and we feared that if admission to the program was based on a competition, we would end up with the “usual suspects,” that is, those faculty who are already deeply involved in issues of teaching and learning. And unlike programs at the University of Massachusetts, Amherst (Aitken & Sorcinelli, 1994), we chose not to work through department structures. Instead, an advisory board recruited Fellows using criteria that identified faculty who 1) teach large, introductory first-year level courses, 2) are tenured, 3) are open to new ideas about teaching, and 4) are opinion leaders.

The role of research on our campus made the selection process for Fellows particularly important. We sought opinion leaders who were committed to teaching but who also were respected scholars. In many cases we passed over innovators who were far more knowledgeable than their colleagues regarding teaching, but whose contributions unfortunately earned them no respect from their colleagues because their scholarship is not respected. Choosing opinion leaders was a key part of our strategy because when they return to their departments they are more likely to “spread the virus” of the new teaching approaches they learn in Lilly FLP (for more details on our selection process see Middendorf, 2000).

Annual activities commence with FLP staff leading each Fellow through an exploratory interview in which Fellows specify as precisely as possible what students must be able to do to succeed at various learning tasks in their courses. This is followed by two sessions: one dedicated to team building and the other to an informal assessment of roadblocks to learning. In a two-week summer seminar organized around daily questions (Table 14.2), faculty study the literature on student learning and contemporary approaches to teaching, participate in a class in a discipline different from their own, engage in a focus group with undergraduates on what fosters learning, and design innovative lessons that they present to the group. After the summer seminar, Fellows meet occasionally to discuss the innovations they are introducing into their classes, and they work to actively spread ideas from the seminar to other faculty.

TABLE 14.2
Two-Week Summer Seminar: Daily Questions

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- Day 1: What steps in thinking do my students have to do to succeed in my course?
- Day 2: How does the variety of disciplinary cultures affect student learning?
- Day 3: Why aren't other disciplines normal?
- Day 4: Not a *tabula rasa*: How does what students already know impede learning?
- Day 5: What can be done?
- Day 6: What are some active learning tactics?
- Day 7: Can collaborative learning increase student learning?
- Day 8: Can structured problem solving contribute to student learning?
- Day 9: How can assessment improve learning?
- Day 10: How can we share what we learned?
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The program began with a three-year grant from the president of Indiana University with additional funding for years three and four from the Dean of Faculties Office, the College of Arts and Sciences, and the Lilly Retention Initiative. This provided a stipend for each Fellow and administrative salaries. Unlike many other programs, in which faculty are simply window dressing for a staff run program or in which support staff do the bidding of faculty, the Lilly FLP, since its inception in 1996, has been a true and equal collaboration between faculty and staff. The authors of this chapter have served as co-directors of the program since its inception and were joined in the third year by the director of the Teaching and Learning Technology Lab. The assistant chancellor of academic affairs has also played a crucial role in planning the program and acquiring funds. An earlier article details our collaborations with key administrators (Middendorf, 2001).

OVERCOMING THE OBSTACLES

Overcoming Obstacle 1: The Dominance of Research over Teaching

Perhaps the most important of the cultural obstacles that the Lilly Freshman Learning Project seeks to counter is the dominance of research over teaching. On a campus like ours, just getting people to stop and pay attention to teaching, as well as research, is possibly our biggest challenge. To garner their time and attention, we asked them to set aside a two-week block of time during the summer. While the summer seminar was intellectually demanding, we sought to turn it into a positive community event through food and fellowship, and participants have consistently reported being energized by the experience. Even this relatively small commitment of time represented a departure from the normal patterns of the University, since few of the Fellows had ever taken two full weeks to collectively explore new ideas about teaching. In the context of a university in which research is rewarded financially, the fact that we were able to offer Fellows a stipend marked this program as significant. In other contexts, financial support for Fellows might not be necessary, and lack of funds certainly should not prevent the implementation of many ideas in this chapter. Once again, our program was a response to the obstacles and opportunities present on our campus. We encourage others not to let the lack of funds block the development of parallel strategies.

Overcoming Obstacle 2: The Monopoly of Occasions for Interaction by Departments

Many faculty development initiatives focus at the level of departmental chairpersons, and we recognize that this can be a very effective strategy on many campuses (DeZure, 1996; Wright & O'Neil, 1995). These projects, however, assume that department chairs recognize and foster the importance of teaching or that these leaders can be relatively easily recruited for pedagogical reform. This may be true at other universities, but is not generally the case at our campus. Not only are chairpersons generally recruited on the basis of their preeminence as researchers, but they function in the midst of a convergence of institutional pressures that give issues other than teaching and learning priority in selection and reward of faculty for special projects. In addition, in most departments on the Bloomington campus, faculty meetings are not venues that lend themselves to sophisticated and collaborative explorations of innovative teaching.

Therefore, we created the Lilly Freshman Learning Project completely outside departmental structures. In particular, we avoided asking

departmental chairs to nominate Fellows. Chairs are generally under a variety of political pressures and their criteria are not necessarily those of our program. In order to avoid intradepartmental conflicts and miscommunication, we have generally avoided having two Fellows from the same department in the same year. The Fellows themselves reinforced this policy by commenting on how freeing it was to hear fresh ideas from fresh people in an environment in which they did not always have to worry about the political consequences of what they said. As we shall see later, this interdisciplinarity became an important part of the discussion.

As an alternative to the departmental structure, we worked hard to nurture an extra-departmental community. At the beginning, process was more important to us than specific ideas about teaching and learning. Within the first five minutes of the initial meeting, Fellows were talking in pairs. In the first several days of the summer seminar, we used exercises that required Fellows to move around and to interact. For example, teams of Fellows created and performed the worst lecture they could imagine. And throughout, sharing meals was a major element in-group bonding.

Overcoming Obstacle 3: Student-Bashing

Blaming students for the problems faced by higher education is so ubiquitous on our campus that it often becomes a black hole that devours all consideration of the real challenges faced by higher education. To move from seeing the problems students have in mastering material as a sign of their inadequacies to conceptualizing the same difficulties as an intellectual problem to be solved, faculty must recognize the difficulties that their subjects pose for novice learners. Therefore, in designing the Lilly FLP, we created structures within which the Fellows' own disciplines were defamiliarized. Typically, college instructors have been living within the confines of their disciplinary culture for so long that they no longer remember what makes their subject difficult to novices (Brown, Collins, & Duguid, 1989). If they can be induced to view what they teach from the perspective of someone who has no knowledge of the conventions and assumptions of their discipline, faculty can become excited about finding ways to help undergraduates through this transition.

The first step in the process is to lead new Lilly FLP Fellows through a systematic exploration of some of the most basic elements of their courses from a student's point of view. In the months before our summer seminar, Fellows participate in an exploratory interview in which we ask them to explain in detail what students have to do to complete some of the most basic tasks in one of their introductory courses. If, for example,

a geologist tells us that students have to apply the concept of elasticity to rocks, we ask, "What kind of thinking must a student do to conceptualize the elasticity of a rock?" When we are told that students have to visualize the crystalline structures as they bend, we ask, "How do students do that?" As we continue to probe deeper and deeper, the faculty members eventually reach a level at which they find it difficult to articulate what they as professionals do quite automatically when dealing with problems in their disciplines. After an hour and a half of such probing, faculty generally emerge with a clearer idea of what kinds of thinking they need to model for their students, a greater appreciation for the challenges posed by their field, and a new excitement about the adventure that students set out upon every time they begin a course in a new discipline.

We sought to reinforce this process during the summer seminar by creating situations in which the differences in disciplines were highlighted. In a response to an article by Arons (1979), the Fellows individually generated lists of basic operations that students had to master to succeed in their courses. We then moved the sessions to an open area with a grid floor pattern and had the Fellows become data points on a human graph. Signs representing different operations (e.g., visualizing the movement of objects in space versus presenting clear arguments) were placed on two walls, which became X and Y axes. The Fellows then placed themselves on the graph at the point that reflected the kinds of thinking that students had to do in their courses. As the operations were changed, Fellows discussed the role of these operations in their courses, both with those standing nearby and with those who required a very different set of skills. This exercise not only helped bond the group and provided an implicit model of nontraditional ways to teach a class, but it also made them more aware that the kinds of thinking that they expect in their classes are very different than those that their students have to master in other disciplines.

Drawing upon a technique developed by Tobias (1992), we further distanced the Fellows from the forms of learning in their disciplines by sending them to classes in fields very different than their own. Upon their return, they compared their experiences and explored the differences in learning required in the various contexts. The quantitative group, for example, was very impressed with the quality of instruction in a class on the philosophy of art, but they remained puzzled by the failure of the professor to bring everything together in a clear package at the end. The humanists, by contrast, felt that they had to grab onto every word in a genetics course, fearing that if they ever lost the thread, they would

never find their way through the labyrinth. To complete this identification with the challenges faced by undergraduates, we had them take part in small focus groups in which undergraduates described their difficulties in moving from one subject to another and the strategies they developed to master new material.

This process of seeing the challenges of their discipline from the perspective of their students culminated in an exercise that served multiple purposes. We had originally planned for the Fellows to model a lesson using active learning techniques in order to increase the likelihood that they would apply what they were learning in Lilly FLP to their classes. We later realized that this format provided another opportunity for the Fellows to experience learning in another discipline. When the humanists tried to solve a problem in accounting or the scientists sought to identify the phrasing in a Beatles song, they were repeating the daily experience of students as they move from department to department.

Exercises such as these turned the difficulty students have in mastering a discipline into the kind of challenging intellectual problem that faculty are accustomed to solving in the context of their own research. One Fellow described the summer seminar as “the most intellectually stimulating two weeks of my 15-year career at Indiana University.” In such an environment there was little energy devoted to student-bashing, and a path was opened for new and highly creative examinations of ways to respond to the challenges of our classrooms.

Overcoming Obstacle 4: Traditions of Faculty Independence

Faculty tend to be independent individuals, self-starters who engage in opposition discourse on a regular basis. This kind of independence is valuable, but it means that special strategies are needed to create a community and explore new approaches to teaching. The first several times we ran the seminar, we unnecessarily created resistance to the program by assigning readings about the ineffectiveness of lecturing. We seemed to be telling the Fellows that some of their teaching methods were bad, and they quite naturally defended the status quo. We learned that rather than criticizing lecturing and other traditional techniques or even seeming to champion active learning, we should simply present a variety of techniques and leave it for the Fellows to decide which serve their purposes.

In our experience, faculty only begin to think creatively about pedagogy when their vision of teaching is no longer limited to the traditional professor standing at the lectern. Therefore, we sought to put new movies of classroom interactions into the participants’ heads. Fellows from pre-

vious years demonstrated innovative lessons, and other invited guests introduced ideas about the complexity of student learning, while modeling a variety of teaching tactics.

We found that the program worked most effectively when we did not buck the culture. It is natural for most faculty members to enjoy standing up for their own viewpoints. When we initially gave the Fellows the chance to do this in the discussion of a reading assignment, they often spent half the morning critiquing the work. Instead of trying to limit the discussion, we learned to divert the energy that was going into verbal arguments into written exercises. Each day we asked them to write one to two hundred words in response to a specific question based on the reading. They spent the first 15 minutes each day reading one another's brief, but articulate, commentaries. This not only saved time but also built upon an activity that was natural in an academic context.

None of this would work unless we succeeded in creating strong social bonds among participants. We paid particular attention to icebreakers, exercises that had them move around, work together in different combinations, and perhaps most importantly, share meals. Within the first five minutes of the initial meeting, we had them talking in pairs about successful teaching experiences they had had, and on many occasions, we made a point of leaving the room so the faculty will focus on one another and not us.

Throughout, we encouraged them to make the program their own. We carefully structured the seminar in advance, but we readily adapted our plans to their needs. For instance, when the schedule called for the creation of two subgroups to view the model lessons, we rearranged our plan to accommodate their request to keep the group together. Guided by the tai chi principle of serving the other's intention, we had to repeatedly remind ourselves that our purpose was not to impose a set of preexisting practices on the Fellows, but rather to do what we could to further their goals. In each of the four years there has been a crucial moment when the participants "revolted" against the structure we had created, and each time we privately welcomed this as a sign that they were making the program their own.

ASSESSMENT

At the fourth year of the Lilly FLP, we are in the midst of an assessment, but there are already multiple indicators that the program has been successful. Faculty reactions have been uniformly positive. One fellow wrote that:

The FLP has empowered me to take risks in the classroom, to experiment with new ways of learning—and to feel that it is “all right” if sometimes I fall flat on my face. I have learned a great deal about the freshmen who sit in my large lecture classes—things that I did not know even as a sociologist with 25 years of experience. In particular, I have committed myself to avoiding the “easy bargain” that is all too common at universities like IU: Professors and students agree together to do less, to be less ambitious, to burden each other with fewer obligations. Looks like a win-win situation, until you realize that students are simply “learning” less and that they become resentful when they do end up in a course that really challenges them.

An accounting professor wrote:

Some student changes over time are bad. However, some student changes over time are not necessarily bad, they’re just changes. Maybe I could capitalize on those changes by changing my teaching and maybe some unfavorable student characteristics would be eliminated in the process.

Such comments are typical following participation in the Lilly FLP.

A different measure of efficacy of the program may be seen in the varied ways faculty are sharing with colleagues what they have learned in the program. A Fellow from religious studies invited the authors to lead an FLP-like session for his department about explicitly teaching the skills students need to do well on exams. A mathematics Fellow allowed five colleagues to copy and use the web-based warm-up exercises he developed as a result of Lilly FLP. A chemistry professor presented a seminar on computer-aided learning as part of a medical science colloquium. An economics Fellow presented her model lesson at new faculty orientation. Other Fellows have gone on to play an important role in key university committees dealing with teaching related activities, such as the design of new classrooms.

CONCLUSION

Our experiences in working with the Lilly Freshman Learning Project have convinced us that if instructional support personnel, faculty, and administrators want new ways of teaching to really take hold on their

campuses, they must pay close attention to faculty culture and work within that culture even as they subvert it from within. As we operated within the particular social configuration at our university, a set of strategic principles emerged.

- 1) Defining the cultural obstacles to educational reform
- 2) Inviting well-respected mainstream faculty into a dialogue about teaching and learning
- 3) Creating a cultural space for exploring teaching outside the departments
- 4) Framing obstacles to student learning as an intellectual challenge to faculty
- 5) Structuring activities that bring out the most constructive aspects of faculty inquiry and minimize tendencies toward being overly critical
- 6) Placing faculty in the role of novice learners in their disciplines
- 7) Using the events of the program themselves as occasions to model a variety of new ways of teaching without always making that explicit
- 8) Giving great attention to the nurturing of a faculty community constituted around teaching and learning
- 9) Respecting the integrity of faculty goals and values, while serving the evolving needs of faculty rather than seeking to impose change on them

Such an approach requires strong administrative support and the devotion of great time and energy. It requires carefully developing strategies, identifying appropriate faculty to work with, and creatively planning activities. Perhaps most of all, it requires a faith in the willingness and the ability of faculty to respond to the challenges of the classroom when given a real opportunity.

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