

WHAT IS GOOD COLLEGE TEACHING?

KEY NOTES

Those of us who give lectures and lead seminars flatter ourselves that there is something unique and potent that happens in our classrooms. We hope that the courses we teach change students minds, and their lives. The task we face now is to find out if we are right.

Three elements, all focused on how to encourage students to think and participate in class discussions, are essential to a transformative college classroom experience:

- the chance to think like an expert
- the chance to come up with new ideas
- the chance to be part of an intellectual group

An intellectually transformative college experience not only will enable students to land a white collar job or reach a higher social class, but it can also serve as the very cornerstone of personal and communal well-being.

If one were to eavesdrop on typical professors' daily conversations, one might think that their main concern was for conveying information (Can we cover all the material? Does the syllabus present the necessary topics in a logical order? Did my students know the answers on the exam?). But underneath that concern is a far more ambitious goal: many professors want to change the way their students see the world, and some want to have a lasting effect on the way their students live the rest of their lives. Susan Engel, senior lecturer in psychology and director of the Program in Teaching at Williams College, considers how to teach a course so that it changes a student's way of thinking, and changes it for good. She notes that any experts can lay out a sequence of topics that presents central information in their field, or can devise catchy ways to teach their disciplines' techniques. But a class can and should add up to far more than the mere dispensing and acquisition of information—which, after all, can be gleaned from a book or the internet. Engel asks what can happen in a college classroom that will actually help to transform students?

Transforming the College Classroom

Three elements, all focused on how to encourage students to think and participate in class discussions, are essential to a transformative college classroom experience.

The chance to think like an expert.

Perhaps unsurprisingly, students are not transformed by the experience of taking in great quantities of information. However, they *are* transformed by the chance to think like an expert within a domain. In fact, research has shown that students' ability to absorb information is greatly

increased when they have some level of expertise within a domain. It seems that expertise leads to knowledge, rather than the other way around.

A few years ago, the faculty of a small experimental elementary school asked me to help them change their approach so that their students would acquire the intellectual tools of actual disciplines rather than mere information about academic subjects. I suggested that the students make a series of hats, each for a specific discipline (a historian's hat, mathematician's hat, writer's hat, and so on). The teacher would present the students with a complex problem to be solved or an ambitious large-scale endeavor to be accomplished. Then each student would don a particular hat to tackle the problem and contemplate the task at hand. Students would work together, but each would use the methods and materials required of the hat they were wearing, forcing them to reflect on the relationship between the tools of a discipline and the problems that discipline could solve. Students could see for themselves how differently the artist and the scientist approach the same problem, for example, yet might also discover the processes and skills that artists and scientists share. But most important, they would be working as novices becoming experts, rather than as bystanders studying the experts. As John Holt said in 1966, "People don't learn to play the violin by studying about it, they have to play it." The only way to learn history, math, or writing is to wear those hats and do that work. College students, too, need the chance to apply the tools of a discipline to the messy phenomena the world presents, to pose questions the way experts would pose them, and to apply the methods of the discipline in a way that leads to answers. These opportunities should



occur during their classes, not as a result of them—even within the liberal arts, we are teaching the tools of our trades.

The chance to come up with new ideas.

The chance to come up with new ideas lies at the heart of the intellectual change we hope our students will undergo in our classes. One essential component of this process is to pose genuine rather than rhetorical questions. In a recent study my students and I conducted on the development of curiosity, we found that teachers typically ask far more questions than students do, and that most of the time teachers already know the answers to

the questions they ask. I call this the *Quiz Model* of teaching. In my field, developmental psychology, a rhetorical question could be: “What does the research show about the effect of poverty on grades and test scores in elementary school” (a question to which I know the answer, and the students know that I know the answer) as opposed to asking a genuine question such as: “Can schools do anything to ameliorate the effect of poverty?” (a question to which I do not have the answer but urgently hope to). We need to assume that our students can help find or construct an answer we

might not find on our own. This approach has the added benefit of making the classroom a rich laboratory for scholarly accomplishment, rather than just the “teaching load” we carry to earn our paycheck. More importantly, the thinking that students engage in when they are genuinely involved in helping to solve an intellectual problem is far more likely to have a real impact on them. Each discipline offers its own real dilemmas and its own set of intellectual tools with which to solve those problems.

Most of us who work in colleges and universities believe, almost devoutly, that a vast quantity of information is not much good if it cannot be used to come up with new ideas. I am not simply referring to that revered, yet ill-defined, skill we call “critical thinking.” Rather than lean on that somewhat protean concept, I prefer to identify several cognitive skills that appear to be essential for serious creative and scientific work, as well as for civic life. These skills include: the ability to reflect rather than rely on automatic heuristics; to engage in counter-factual thinking; to question the source of information; to think about things one has never directly experienced; to think from someone else’s perspective; to change one’s strategy or opinion in the face of new information; and, as Aristotle said, “to be able to entertain a thought without accepting it.”

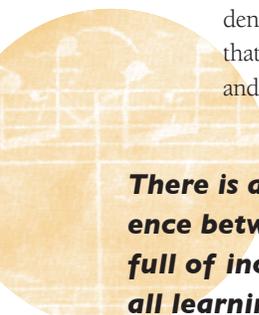
How do we teach these skills? Not by preaching them, but by asking questions and setting tasks that require such thinking. Suzanne Langer, of Harvard University, has done countless experiments showing that learning information well often gets in the way of people’s ability to be thoughtful. And recent research in cognitive psychology shows that in order to be reflective, people need to actively inhibit their reliance on automatic thinking. It is easy to say that we all want our students to learn a lot of information *and* to be thoughtful about that information, but the reality is more complicated than that. I would argue that figuring out how to encourage thinking in a new way often should take precedence over “delivering information” to students. Sometimes one can succeed at this through a brilliantly constructed lecture, but if your students have any inclination towards passivity and conformity, a good lecture will not suffice. Through assignments, the questions you push them to answer, or the way in which classroom discussions are structured, you must guide students to think about the source of information, entice them into constructing counterfactuals, maneuver them to take the perspective of another, and insist that they consider an idea deeply without accepting it. These are habits to be practiced and cultivated each day as they work with you—they are not the prize one earns for having taken the course or for having learned the material well.

The chance to be part of an intellectual group.

A colleague once told me that one of the best evaluations she ever got from a student was, “In this class, we truly felt we were solving an intellectual problem *together*.” There is a vast difference between a room full of individuals all learning the same thing, and a group of scholars solving a problem together. Students need to experience the exhilaration of intellectual collaboration.

Not long ago I attended a meeting where a group of faculty members were debating whether to cancel classes for a day in order to focus on various kinds of tolerance within the college community. One professor argued that it would be a mistake to forgo precious time set aside for academic work in order to address “community matters.” Though it is common to view intellectual pursuits as separate from the problems of social life, the distinction is a fruitless one. If by academics we mean the pursuit of knowledge, then that must always be conducted within a community. This is what Thomas Kuhn meant when he described historically-situated paradigm shifts and it is what John Dewey meant when he discussed the relationship between school and society. As Dewey said, “Education and politics are one and the same thing—the intelligent management of social affairs.”

In the college classroom, much can be gained from creating



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situations in which students must learn from one another. In the 1960s, the social psychologist Elliot Aronson showed that when students from different ethnic groups depended on one another for success, in a structure he called the *Jigsaw Classroom*, they not only learned the material well, but they also began to think more highly of one another and subsequently got along better. Moreover, recent research has demonstrated that students lead one another to higher levels of thinking when they work collaboratively.

That said, an intellectual community will be self-perpetuating only if it is exciting. I recently attended a special celebration for students at Williams who were top varsity athletes and also earned very good grades. One of the students from my large lecture course on education was chosen to speak about her experiences as captain of the women's crew team. Up at that podium, she was a different person from the cautious dutiful student in my large class. She talked about the drive to succeed, the unbelievable high of feeling as if she were part of something larger than herself, the sense that her individual effort was lifted up by the efforts of others, and the determination to improve. I felt stung by jealousy. I wanted from her what that coach had. Seeing that young woman so alive with commitment and passion, but not in my class, made me wonder what I could do differently. Those of us who teach history, science, and mathematics need to draw students into the tasks of our disciplines so that they feel a communal sense of involvement—an eagerness to be part of something bigger than their own personal achievement within the course, and a readiness to lose themselves, if only temporarily, to the process. We don't hold practices five days a week, nor do we have the luxury of selecting the 15 most talented students for our endeavors. Nevertheless, there are important lessons to be learned from coaches and athletics participation.

Accountability

Will the teaching methods I've described lead to transformations we can measure? Ours is a society that measures what we value, and values what we can measure. The impact of a college education might be measured in terms of graduation and employment rates, or perhaps some might consider earning power to be the critical dependent variable. As a teacher, however, I tend to think in terms of the intellectual and personal impact that college has on students. How can that be measured?

Instead of testing individuals to assess what they have learned in our classrooms and campuses, I would like to suggest that the first, most interesting step is to conduct genuine psychological research to find out in fact what we do in our classes has an effect on students after they leave college. That

is, I don't particularly care what my students can do during exam week, or in the month after graduation; rather, I care what they are doing one, two or five years after that.

Some of the dimensions I believe can and should be measured include (these dimensions could be measured across specific institutions as well):

- Do college graduates read more than others? What do they read?
- Do college graduates demonstrate more curiosity in their everyday lives than nongraduates?
- Do college graduates, or those who have taken certain courses, use more evidence in developing opinions and making decisions?
- Do college graduates, or those who have taken certain courses, more frequently change their mind in the face of new information?
- Do college graduates show a greater interest in or willingness to exchange ideas with others?

If college does in fact transform students in some profound intellectual and social ways, the source of that transformation is not totally clear. For instance, it may be that the real impact of college comes simply from having extended adolescence for several years. Or perhaps late adolescence is a critical period for the acquisition of mindfulness. Maybe the transformation stems from the specific timing of four additional years of emphasis on scholarship occurring, as it usually does, at the cusp of adulthood. Perhaps there is some alchemy caused by the



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intensive time college students spend with same-age peers, the focused attention they receive from non-parental adults, and the chance for extensive socialization. Those of us who actually give lectures and lead seminars, however, flatter ourselves that there is something unique and potent that happens in our classrooms. We hope that the courses we teach change students' minds, and their lives. The task we face now is to find out if we are right.

Conclusion

It is important to stress that the intellectual habits of mind I have described are not only for students who attend elite liberal arts institutions. Intellectual transformation is the right, and the obligation, of all students. A brief anecdote illustrates

this point: Lawrence Wright, author of *The Looming Tower: Al-Qaeda and the Road to 9/11*, described the story behind a growing split in the Arab world between two groups of radical Islamists. In the past four years, one group has undergone a profound shift and now rejects violent Jihad as a means to social change. In trying to explain how this dramatic shift occurred, one of the leaders of the group, Karam Zuhdy said, “We started growing older. We started examining the evidence. We began to read books and reconsider.” Reading books, examining evidence, reconsidering, and letting those thoughts change the way you live your life—that is what a college education is for, and it is for everyone. The less committed your students are to a life of the mind when they get to college, the more important it is that they experience that life while at college. An intellectually transformative college experience not only will enable students to land a white collar job

or reach a higher social class, but it can also serve as the very cornerstone of personal and communal well-being.



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