Thriving in Academe

Becoming a Master Teacher

Faculty must move beyond content and get to know their students.

BY SUSAN AMBROSE AND MICHAEL BRIDGES, CARNEGIE MELLON UNIVERSITY

Although many faculty have not been trained as teachers, we can all acquire new skills and improve as teachers.
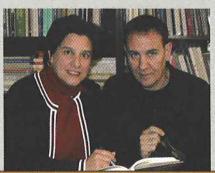
Research shows that the development of mastery or expertise in any domain takes at least 10 years. Experts possess a great deal of knowledge, have logged many hours of persistent practice in their field, and have received adequate guidance and feedback. Teaching is no different; it requires knowledge, sustained dedication, and support to move toward and realize expertise.

To become master teachers, faculty members need a knowledge base not only in their content area, but also in a variety of other areas. Here we focus on one aspect of that knowledge base—understanding students in multiple ways that represent the complex human beings they are. Drawing from research in cognitive science, social psychology, and education, we can learn more about how students develop intellectually, socially, and emotionally, as well as begin to understand our students through the lens of the culture and history in which they were raised.

Our focus, then, is on three areas that have not received as much attention with faculty as they deserve: the psychosocial development of students; the integration of cognitive theory into teaching practice; and the impact of the political, social, and economic status of the 1980s and 1990s on current college students (termed the Millennials). This knowledge can greatly impact the way we teach and design courses.

MEET THE AUTHORS

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Tales from Real Life

SEARCHING FOR ANSWERS

A few years ago, a number of faculty colleagues shared with us their concerns about their students' attitudes and behaviors. So we contacted all faculty to see if there was enough interest to warrant a series of meetings to explore these concerns. We received replies from 100 faculty members, all of them anxious to participate.

At the start of each meeting, we asked colleagues to identify troublesome behaviors, distinguishing issues that have been problematic yet consistent over the past one or two decades from issues that have arisen or seem more pronounced over the past four years. The response was a set of laments that resonated with everyone in the room: students today possess weaker vocabulary and math skills; have inadequate research skills; are more demanding and yet take less responsibility; don't take notes in class; skip homework assignments; come to class late or leave early; and are less interested in exploration and more interested in "just wanting the answer."

As the groups reflected on the commonalities across disciplines and student rank (i.e., freshman through senior), colleagues noted that today's students do seem different from past generations in many ways, yet there are some fundamental problematic issues that remain constant. "Help us understand and deal with both sets of issues," our colleagues pleaded.

Our answer? Get to know your students—not just their classroom behavior, but their motivations, interests, and cultural backgrounds.

—Susan Ambrose and Michael Bridges, Carnegie Mellon University

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The Necessity of Really Knowing Your Audience

A little knowledge can go a long way toward becoming a better educator.

One of the ways we can become master teachers is to cultivate a strong interest in and understanding of some of the developmental issues faced by our students. Three of the most important developmental issues are psychosocial, cognitive, and cultural. These areas play a key role in our students' intellectual growth, their competency in the classroom, their sense of identity, and how they relate to the rest of the world.

Psychosocial functioning

Over the course of four years, college students invest substantial energy in issues concerning their vocational, religious, and sexual identities. In addition, their academic and social self-concepts undergo considerable challenge and adjustment. The transition to college also brings a new set of academic peers to whom they compare themselves. This new comparison base may threaten a student's sense of intellectual and academic competency. Similarly, the distance (physical or emotional) that college often imposes on relationships with family and high school friends may force a loss of social identity and alter how students see themselves. In the midst of all the uncertainty brought about by coming to college, students are faced with the task of developing a sense of self-worth, self-competency, self-satisfaction, and self-confidence. All these struggles can impact academic performance.

In addition to changes that occur in the context of how students see themselves, important changes also occur in how students interact with the outside world. Students are developing a greater sense of autonomy—freedom from the external influence imposed by other individuals and institutions. They are testing previously held beliefs, values, and relationships in a shift toward a greater sense of control over important domains of their lives, and exerting more independence from family. This shift toward greater autonomy is accompanied by movement toward a less rigid orientation to the world: College students are becoming less authoritarian, dogmatic, and ethnocentric, less guided by strict rule-based behavior and stereotypic views of others, and more open to the perspectives and views of others. This growth also affects their learning, and expert teachers

design learning experiences with this in mind. For example, faculty can structure courses that allow students to individually identify the relative weighting applied to various components of the course—quizzes, homework, exams, etc. This affords students a greater sense of control, autonomy, and engagement.

Integrating cognitive theory into teaching practice

Expert teaching also requires an understanding and integration of cognitive theory into teaching practice. While this has occurred in K–12 classrooms, it has not occurred as much at the university level. Following are four key cognitive issues that expert teachers understand.

First, prior knowledge is the basis for building new knowledge because existing knowledge can facilitate, interfere with, or distort the integration of incoming information. It is important for instructors to understand the misconceptions students have, so they can dispel them up front; otherwise, these misconceptions make learning more difficult. On the other end of the spectrum, if instructors know what students know, they can build on that prior knowledge to strengthen their reception of new information.

This brings us to our second point: How prior knowledge is organized determines its access and use because organization can facilitate or interfere with retrieval, use, and further learning. If students have not organized prior information effectively, there is a good chance that they won't be able to access it easily, if at all. Organization is a sophisticated cognitive task, so instructors need to model effective organization and provide practice for students to help them hone this skill.

In order for information to become knowledge that a learner can access and use in multiple contexts, students must process that information deeply; this is our third point. Research indicates that active engagement promotes deeper learning because it creates stronger representations, facilitates storage in long-term memory, and creates multiple avenues for retrieval. Active engagement with material helps learners expand and elaborate on the course content, making it more meaningful or relevant to them while enhancing understanding and retention.

> [*Active engagement creates stronger representations, facilitates storage in long-term memory, and creates multiple avenues for retrieval.*]

Finally, if students are to develop proficiency as learners, they must acquire the skills of selecting, monitoring, evaluating, and adjusting their learning strategies—what some cognitive psychologists refer to as metacognition. In essence, students need to understand the role of prior knowledge, organization, and active engagement, among other things, in the learning process. One way to accomplish this is to explicitly focus on process, not just outcome, and ask students to reflect on how they solve problems or construct arguments. For example, a colleague of ours routinely assigns students two less homework problems and, instead, asks them to chose two of the assigned problems and document why and how they did what they did to solve the problems.

> **These students grew up reviewing flash cards, while eating a snack in the back of a minivan, listening to music on the way to soccer practice.**

Cultural development

This academic year represents the first time that "traditional" undergraduate classes are fully populated with members of the most recent cultural cohort—the Millennials. This group brings a host of shared experiences, attitudes, and values that are distinctly different from those of the previous generation. In particular, three features help us understand the culture from which our current students come.

This generation of students grew up in a time of unprecedented economic prosperity. As young children and teens, they have been courted by corporate America more than any previous generation. In addition, child protection policies, governmental regulations, and consumer standards have helped make this the most protected generation in history. Shifts in child-rearing practices have resulted in a cohort of students who are used to being indulged, consulted, and included in decisions that involve them or their families. The collective consequence of this pattern of attention has resulted in particularly strong bonds between today's students and their parents. This bond often manifests itself in ways that are counter to developing autonomy and independence.

Economic prosperity coupled with fewer children per family has meant more attention and resources for the academic, athletic, and artistic success of this generation. These students are expected to excel, so parents respond to the first hint of suboptimal performance with tutors, coaches, and special supplemental instruction. As a result, these students expect individual attention, extra help, and institutional resources to support any difficulties they might encounter.

This generation has also lived task-oriented lives. They grew up reviewing flash cards, while eating a snack in the back of a minivan, listening to music on the way to soccer practice. Multi-tasking is a way of life. As a result, they erroneously believe that they can assimilate, and understand complex information while simultaneously listening to music, tracking their favorite cable television program, and carrying on Instant Messenger conversations.

This overview, of course, only deals with one segment of a diverse national student body. Today's college students are complex beings. Understanding them along many dimensions moves us, as faculty, toward becoming more effective and more expert teachers.

BEST PRACTICES

To Build Expertise

You Are What You Read
Steven Samples, the former president of USC, argues in his book *The Contrarian's Guide to Leadership* that reading outside your disciplinary area can feed your creativity and innovation, providing new and inspiring perspectives which can inform your teaching. We suggest reading about students' psychosocial and cognitive development, and about the way they perceive the world based on the culture in which they were raised. We've included a bibliography of our favorites! (See page 8.)

Learn from Other Disciplines
A few years ago, we encouraged a group of engineering faculty to sit in on a few public critiques in the School of Architecture. Our engineering colleagues had been lamenting students' egocentrism and the fact that often they don't learn from each other, as well as students' inability to provide constructive feedback when they did look at others' work. We also suggested that the public nature of critiques in Architecture would provide an opportunity for their students to see the modeling of constructive feedback by faculty. What departments on your campus could you visit?

Nurture the Educator in You
For many of us, professional conferences provide a way to stay current in our fields, share our work, and connect with colleagues. Try attending a conference on teaching and learning. You'd be surprised at the shared concerns, new friendships, and useful advice you'll find there.

References & Resources

Anderson, J.R. 1990. *Cognitive Psychology and Its Implications*, 3rd Edition. New York: W.H. Freeman and Company.

Belenky, M.F., B.M. Clinchy, N.R. Goldberger, and J.M. Tarule. 1986. *Women's Ways of Knowing: The Development of Self, Voice, and Mind*. New York: BasicBooks.

Brophy, J. 2004. *Motivating Students to Learn*. Mahwah, NJ; Lawrence Erlbaum.

Evans, N.J., D.S. Forney, and F. Guido-DiBrito. 1998. *Student Development in College: Theory, Research, and Practice*. San Francisco: Jossey-Bass.

Howe, N. and W. Strauss. 2000. *Millennials Rising: The Next Great Generation*, New York: Vintage Books.

National Research Council. 2000. *How People Learn: Brain, Mind, Experience, and School*. Washington, DC: National Academy Press.

National Research Council. 2001. *Knowing What Students Know: The Science and Design of Educational Assessment*. Washington, DC: National Academy Press.

Pascarella, E.T. and P.T. Terenzini. 1991. *How College Affects Students*, San Francisco: Jossey-Bass.

Perry, W.G., Jr. 1999. *Forms of Intellectual and Ethical Development in the College Years: A Scheme*. San Francisco: Jossey-Bass.

Schor, J.B. 2004. *Born to Buy: The Commercialized Child and the New Consumer Culture*. New York: Scribner.
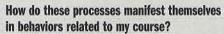
ISSUES TO CONSIDER

Where They're Coming From

Understanding students helps improve teaching.

Why do students experience such important social, emotional, cognitive, and intellectual developmental processes in college?

Demographic data indicate that most high schools in the United States serve students from relatively homogeneous racial, socioeconomic, and cultural backgrounds. For many students, college represents the first exposure to people, ideas, attitudes, value systems, and experiences that differ significantly from their own. This exposure can challenge a student's sense of personal identity and also act as a catalyst for growth and maturity.

How do these processes manifest themselves in behaviors related to my course?

There are limitless ways in which these processes influence students' behaviors. Here are just a few.

Students tend to see the world in a predominantly dualistic manner. They frequently fail to recognize pluralistic viewpoints or contextualized perspectives. As such, many of our students demonstrate substantial discomfort with the ambiguity that is inherent in complex domains. They show a great deal of frustration with answers to their questions that are qualified by context. Put differently, they want an answer, a single answer, and an answer that applies in all contexts.

Students often focus on product rather than process. This may manifest itself as an obsession with grades and a failure to reflect on learning or the important processes through which learning takes place. Recently, in a course that requires participation in class discussion, a student who rarely offered comments dropped the course because he was earning a B rather than an A. He seemed unable to recognize the growth in his learning or the value of the class discussions in which he was required to take part. Rather, he focused on the fact he wasn't getting an A.

As we've pointed out, students are engaged in a host of important social, emotional, intellectual, and cognitive developmental processes. Consequently, they are faced with multiple demands, not only on their time, but also on their attention, effort, and energy. As a result, they sometimes appear unfocused and distracted. They miss deadlines. They fail to turn in work. This does not necessarily mean students lack motivation; it may simply be that they are overwhelmed by the demands of growing up.

What can I do to respond to these processes?

We must educate ourselves about the complex aspects of development our students face. This will allow us to see beneath the surface of individual behavior and identify markers of important development. With this knowledge, we can then talk with our students, in an informed way, about their lives and learn how certain issues may aid or interfere with valuable learning. We will be better equipped to improve our teaching styles and be able to respond, change, and adapt as our students continue to evolve.

THRIVING IN ACADEME

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