In their new book, *Ideas that Work in College Teaching*, fifteen instructors from what they affectionately refer to as SUNY Potsdam (State University of New York at Potsdam) attempt to reveal the secrets of teaching success across thirteen academic disciplines—math, computer science, geology, modern languages, political science, philosophy, history, biology, psychology, sociology, physics, and art. While the specific teaching disciplines varied considerably in the content that was both studied and presented, I found that the principles of effective teaching were quite similar across each of these disciplines. I would like to share this brief review with you to reinforce that there really are many common *keys to success* in teaching, regardless of the specific teaching discipline.

Whether you primarily work with university, high school, middle school, or elementary students, the insights shared by these fifteen accomplished instructors provide some excellent wisdom that all teachers can learn from regardless of context and developmental age and stage of student capability and competence. Common goals and principles associated with effective teaching are highlighted below using specific examples from individual authors where appropriate.

**Goals of Teaching**

The goals and principles of effective teaching outlined below purposefully include many of the original words of the instructors to provide both insight and depth into the common threads that are interwoven throughout various academic disciplines. For example, William E. Herman, instructor of psychology, reminds us that most of us “... joined the academic ranks in order to maintain the momentum of intellectual stimulation nurtured in graduate school and to make a positive difference in the lives of students and society.” He then states that the goals of teaching, as he perceives them, are to “... focus on the exploration, creation, advancement, maintenance, critical assessment, and reality testing of knowledge.”

This was reiterated by Joel Foisy, instructor of mathematics, who believes the overall goal of teaching is to help students “think for themselves” regardless of the academic subject. History instructor Ronald Woodbury shares this belief because “history is interpretation of the meaning and significance of the past, not the past itself...” and is “... best understood through an interactive process of testing and refining ideas.”

This is supported by Sergei Abramovich, instructor of mathematics education, whose goal for mathematics education is to use technology, such as computers, to encourage interactive (i.e., “dialogic”) communication between both student and subject.

The goal of “testing and refining ideas” is also shared by David Curry, instructor of philosophy, although the means he employs to help students reach this end is not commonly shared by all instructors. His goal is to “create, disseminate, share, and foment confusion” among his students so they are forced to rethink and even unlearn old patterns of thinking. Then
he, as the instructor, models ways of “negotiating that confusion” by teaching his students what he calls “critical thinking in action” through the “give-and-take of reason and argument.”

It was Socrates’ goal, Curry claims, to encourage the moral improvement of both himself and others, for, as Socrates stated in the Apology, “the unexamined life is not worth living.” Thus, Curry’s overriding teaching goal is to help his students to see “… that a worthwhile life requires that one be constantly checking up on one’s beliefs, particularly one’s moral beliefs, subjecting them to a kind of eternal recurrence of cross-examination.”

Oscar Sarmiento, instructor of modern languages, echoes Curry’s sentiments with a similar goal for student learning outcomes, “… when students learn something valuable, something that is truly relevant, it radically affects their perceptions and values.” When this occurs, instructor of sociology Heather Sullivan-Catlin believes that the sense of hopelessness that many students feel about their powerlessness to effect change in the world is replaced by a sense of efficacy and a belief that they can enact real change that really matters.

**Principles of Effective Teaching**

For Sullivan-Catlin, the teaching goal of replacing hopelessness with efficacy can best be reached by engaging her students in community work through service learning and a principle she calls “resocialization” (i.e., “the process of socializing people into new cultures and environments, like a new job”). She believes that it is the teacher’s responsibility to help students make the connection between what she calls the “theoretical” and the “experiential.” When students are actively engaged in solving real-world problems, they begin to believe that they can make a difference. Examples of community service assignments she uses to engage students include tutoring, conducting needs assessments, public awareness through the creation of media and marketing materials, and presenting diversity workshops.

Joel Foisy, instructor of mathematics, also believes student engagement is the key to effective teaching. He focuses on specific practices in the classroom that foster participation, such as using a variety of methods, keeping teaching standards high but not so high that students “panic” or “feel demeaned,” and balancing lecture with projects and activities that will allow the students to work together and gain real-world experience. He stresses the importance of what he calls “quick activities,” such as using jokes and other kinesthetic activities (e.g., having the students stand and create angles with their arms) to catch the students’ attention and keep them engaged in the learning process. He is also a proponent of reflective questioning in which he will reflect student questions directed to him back to the class in order to generate increased discussion.

Peter Brouwer, instructor of computer science, uses projects, such as designing multiprogramming operating systems, to help students learn real-world skills, such as problem solving, teamwork, interpersonal skills, creativity, and project management. Project grades are given to the entire group, although the use of peer evaluations allows for the grade to be adjusted up or down based upon individual contributions to the project.

Caroline Downing, instructor of art, uses a balance of lecture about art history, studio art assignments, and “field trip Friday’s” to engage her students in the principles of perspective, balance, and color harmony. She states, “Many [of her students] are surprised to learn that perspective, for example, is not a universal scientific ‘given,’ but a cultural creation. . . .”

Robert Badger, instructor of geology, believes he can help his students teach an “old rock new tricks” by having them engage in third person writing about the events of their class geological field trips to someone who is not knowledgeable about the subject. Such a process, Badger
articulates, increases student descriptive writing skills and solidifies their understanding of what they have both seen and learned.

Lawrence Brehm, instructor of physics, emphasizes that the instructor has little control over the “state of mind” the student enters the classroom with but that it is his desire, as an instructor, to help his students become curious about how things work and why. He admits that one of the biggest challenges of teaching is that students have to “unlearn” so much of what they previously thought was correct so they can “learn” about how things actually work. He has moved away from much of the traditional lecture to inquiry- and discovery-based learning. He concedes that much of this type of learning takes place in a laboratory setting where students can “grapple” with certain tasks. This setting also allows him to consult with his students individually based upon their specific needs and questions. He also offers office visit coupons to his students that can only be redeemed within a certain number of days so he can meet with them individually about the homework questions they have. He believes that the successful navigation of the homework problems is critical to student learning and success.

Ronald Woodbury, instructor of history, has also replaced much of the lecture focus in his classes with debates, films, oral presentations, and small group discussions. For him, writing is a primary component of critical thinking, and he is careful to structure his writing assignments to help his students learn about what good writing is and how it can be achieved.

Peg Wesselink, instructor of politics, uses poster cards to help students identify important women and timelines in political thought while Walter Conley, instructor of biology, uses activities such as plays to teach the process of photosynthesis. Students dress up and play the parts of water, sunlight, carbon, and the electron transport chain in order to better understand this life-giving process.

Synthesis and Insights

A synthesis of the goals and principles of effective teaching shared by the instructors at SUNY Potsdam suggests that assessing who our students are and what they really need while trying to balance these needs with instructor needs and curriculum demands creates a unique context for establishing “points of engagement” between student, instructor, and subject. The primary rationale articulated by these instructors appears to be that shared by Walter Conley, instructor of biology, who has found that interest in a topic creates motivation to learn and that it is a teacher’s responsibility to use whatever creative teaching methodologies are available to spark that interest and create ever increasing points of engagement between the student, instructor, and the subject.

Oscar Sarmiento, instructor of modern languages, emphasizes how “precious” these points of engagement are for creating effective learning outcomes. “I surely wish,” he said, “we could find a magical formula to keep a class session from losing its precious intensity and edge.” This “intensity” and “edge” is created or lost due to how well the instructor facilitates these connections. It appears, then, that successful and effective teaching can be evaluated by both the quality and the quantity of the points of engagement the instructor is able to facilitate and by how well these engagement points are able to be maintained throughout a classroom experience.

Several points of engagement these instructors have in common include the desire to help their students think differently, to view topics from different vantage points, and thereby to increase awareness and ability to think critically. In other words, as Joel Foisy highlights, they want their students to learn to “think for themselves.”
Bloom’s taxonomy exposes the problem associated with so much of ineffective teaching, which is that many instructors “teach facts to the test” and focus primarily on “remember” and “understand” as the two major mental processes of learning. When students are only required to remember facts and understand concepts without application to their own experience, few points of engagement are created. When student interest is sparked and they are challenged and motivated to use not only the mental processes of remember and understand, but to analyze, solve, and create while making application to their own real-world experiences, it opens up a “thousand points of light.” It is in this light that the teaching experience becomes magical. On the other hand, when we do things that cause students to disengage, to feel bored, to panic, to feel lost, or to feel demeaned in any way, we can engender, as Lawrence Brehm, instructor of physics, insightfully shares, “a truly robust hatred” for the subject.

Who Are Our Students Really?

David Curry, instructor of philosophy, shares a personal assessment of the typical student who enters our classroom that is both insightful and entertaining:

Consider our students: They are, in short, a mass of latent contradiction and tensions: a fertile field of potential confusion ready for the harvest. They have absorbed the ubiquitous moral Puritanism of our society along with the equally ubiquitous commercialization of sex and violence. They live in the most widely touted democracy in the world, in which oligarchs and corporations compete for leadership and set the social and political agenda. They live in the largest secular and multicultural society in the world, yet retain a puritanical provincialism and a naive spiritualism. They are raised in a world made by science, yet place their hopes in psychic hotlines and the power of crystals to heal. They are individualists who just happen to all wear the same brand of jeans. They are moral relativists who are proud to proclaim their allegiance to the universal moral truth du jour. They are already a bundle of confusions and contradictions, though they are also, amazingly, completely unaware of the fact. They take it for granted that they are savvy, skeptical, clever, and informed when their entire educational history up to the day they enter our classrooms has almost certainly been little more than teaching facts to the tests, and has certainly not required subtlety of thought, has discouraged any sort of mitigated skepticism, has impeded cleverness, and has, at best, kept them minimally informed by convincing them to take mainstream commercial media as their sole source of information. Equally amazing is the fact that some of them have actually survived this process, or at least are salvageable.

Carol Downing, instructor of art, identifies two primary challenges to teacher effectiveness with their students: 1) students’ “short attention spans;” 2) students’ “profoundly visual orientation to learning.” She states,

Most of today’s students have, after all, spent many more hours watching television, playing video games, or surfing the net than they have reading books. They have developed as part of a visual culture unimaginined when many of their professors went to school. That visual culture contributes to the formation of limited attention spans because its manifestations (think of MTV), feature fast-moving, brightly colored, and rapidly changing segments. The typical college lecture course, in comparison, cannot help but seem bland, colorless, and dull. (p.51)
What Do Our Students Really Need?

A synthesis of information provided by the SUNY Potsdam instructors suggests that what they think their students really need is to learn to think, to question, to reason, to evaluate, to solve, to create, and to apply the topic being studied to their own real-world experiences. In sum, it is change that all of the instructors are seeking – change that informs, motivates, and inspires students to get involved and make a difference in their world; change that promotes self-efficacy and not helplessness; change that translates from cognition to real-world behavior.

Active Learning

The principle of active learning is the teaching thread that weaves all of these instructors’ teaching approaches together, regardless of topic or academic discipline. For example, Peter Brouwer, instructor of computer science, states simply that students must “do to learn.” Caroline Downing, instructor of art studio and history, adds that students must be actively involved in the creation process. “Moving from passive listening to active practice,” she articulates, “helps alleviate the problem of the short attention span.” Similarly, Lawrence Brehm, instructor of physics, states that it is the teacher’s role to create situations “to get the student to grapple with the topic, rather than listen to the teacher talk about it.”

To this end, Peg Wesselink, instructor of politics, argues “that varying information delivery and experiential learning, if done well motivates students to do the reading (and writing). . . .” that are critical to success and that “finding activities that stimulate thinking about readings is a challenge” because “the activity needs to be creative enough to be playful, but not so creative that it is superficial.”

Conclusion

Teaching effectively is an art form. It is a dramatic production complete with actors, scripts, antagonists, protagonists, major dramatic questions, and the climax that resolves and answers all of these questions. It requires real intelligence – social, emotional, physical, intellectual, and, sometimes, even spiritual – to succeed. And it doesn’t happen automatically, although I am convinced that almost anyone can learn to become a good teacher if they are willing to pay and enjoy the price to rise above the mediocrity that so often exists in the teaching world.

We know from both research and observation that effective teachers, as evidenced by the instructors at SUNY Potsdam, are all as different in their personality types and teaching styles as the snowflakes that fall from the sky, but we have also learned that good teachers share some common skills and some common teaching paradigms. Good teachers care about their students; they are aware of their students’ lives outside of the classroom; they are very socially, emotionally, and intellectually skilled; they listen; they discuss; they validate; they promote interaction; they ask good questions; they apply what they are teaching to their students’ lives; they teach with clarity; they are knowledgeable and skilled at preparation and delivery of their discipline-specific teaching content; they provide a secure environment that invites their students to reflect, think for themselves, change, and gain new skills within the context of active learning.

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Notes


10 Ibid., p. 52.
