



‘Warming’ the Climate for Learning

By Sandra Allen, Columbia College Chicago – sallen@colum.edu

When educators talk about climate, they don’t mean global warming. In academic circles, climate refers to the atmosphere of warmth existing between the teacher and the students. Much research suggests that few other factors produce a more lasting impact on learning than the professor’s approval or disapproval of the student’s work, and their in-class interactions.

So, how to go about climate change? With trial and error, and a dollop of research, I’ve identified three aspects that seem key to creating a “warm” climate for learning: (1) the teacher’s praise or approval; (2) enthusiasm for and use of students’ own ideas; and (3) teacher-student interaction. To be effective in facilitating student learning, I recommend that we use all three. In fact, praise alone does not definitively correlate with improved student learning.

Praise

Offering praise and approval doesn’t mean avoiding messages that let students know when their work doesn’t meet acceptable standards. In fact, recent studies show that students want specifics about their performance—not bland, ambiguous feedback, which can actually disrupt student learning. One survey of 100 students found that 70 percent saw their professors as the best source of written or face-to-face feedback on relevant tasks and assignments.

Enthusiasm

In my classroom, I’ve found that enthusiasm for and use of students’ own ideas is contagious. When the teacher gives concrete evidence of valuing a student’s diverse approaches—to say, problem solving—that

creates an energy that makes all students more attentive and cooperative. Here are four techniques I use to generate enthusiasm for student ideas. First, acknowledge what students contribute to the discussion. When appropriate, I point out that their solution to a problem, or insight into an issue represents a new twist, maybe even one I have not thought of previously. Second, I modify or rephrase the ideas into concepts that serve as springboards to new material. Next, I compare student ideas by connecting the dots between their thoughts. And finally, I summarize what was said by an individual or group of students, stating how it applies to the course content.

Another way to more proactively use students’ ideas is to solicit their opinions on course content and teaching style. Rare is the student who hesitates to give his opinion anonymously as those end-of-course comments on rating forms clearly indicate. However, those assessments come after the fact, and don’t necessarily help the teacher change if the approach in the current course is off. Among the many ways to gather student feedback, the one I prefer is simple, cheap, and easy. I distribute a three-by-five-inch index card to each student in class a few weeks before midterm. I ask them to write two or three things they have learned so far on one side of the card and to indicate what gets in their way of learning on the other side. After collecting and reviewing this anonymous feedback, I tell students “what I learned” and “what I’m doing (or will do) about it.” My response to their feedback lets them know that I value their opinions. I recommend repeating the process again three or so weeks before the final. It’s always an enlightening experience to compare the two sets of student responses.

Interaction

Characteristics of successful student-teacher interactions include both verbal techniques that hold student interest and the teacher’s physical gestures or movement in the classroom. Being savvy about what’s going on verbally and nonverbally with students goes beyond positively responding to student ideas. It gives the teacher the ability to interpret and respond to the classroom dynamic in real time. Long story short: get out from behind that desk, and move around the room as you talk. Remember: body language is part of a professor’s message. Moving among students has the added benefit of identifying those who are busy text messaging and/or using their laptop to refine their lists of friends on My Space.

It’s not a stretch to conclude that a vibrant classroom climate is important to enhancing student attitudes toward the teacher, and by extension, to acquiring the skills and knowledge of the course. Praise by itself might be counterproductive, but it becomes a potent motivational force in the classroom when combined with enthusiasm for and interaction with the students. Those three together improve teaching and enhance learning outcomes. ♥

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Can Training Make You a Better Teacher?

Countless workshops, seminars, retreats, and other training opportunities are offered under the assumption that they can positively affect how faculty teach, which in turn will help students learn more. It seems pretty obvious, but solid empirical evidence supporting these positive benefits is not widespread. In fact, there's more evidence that short-term interventions, such as an afternoon workshop, don't have much of an effect when it comes to sustained behavior change.

With the growing number of new faculty has come a rise in the amount and extensiveness of training for first-time college teachers. According to authors of the article referenced below, in some countries this more comprehensive training is now required by the institution. But here again, we have little in the way of evidence to support the assumption that these programs positively impact either teaching or learning. That is why the study being highlighted here is so important.

It looked at the effects of training programs at 20 universities in eight countries. Each training program involved at least 60 hours (300 for the longest) and spread those activities across four to 18 months. Three different surveys were used: two administered to students and one to the faculty participant in the training program. Students completed a widely used instructional rating instrument (Marsh's SEEQ) and the Module Experience Questionnaire, which solicits data as to whether students are using deep or surface approaches to learning. Faculty filled out the Approaches to Teaching Inventory, which measures the extent to which faculty are teacher-centered or learner-centered. Data were collected at the beginning of the training and approximately one year later. Results on all three of these instruments were compared with data collected from a control group. Faculty in the control group did not receive any training.

Results provide confirmation that this kind of training does make a significant and lasting impact on teaching. According to the student rating data, "the training

group's scores improved significantly on all five scales. In contrast, the control group's scores did not change significantly except for the scores for 'group interaction,' which worsened significantly." (p. 95) The extent to which students used surface approaches to learning also decreased after their teachers had been trained. The amount of this decrease was not statistically significant.

Faculty who participated in the training programs did become more student- and learning-focused, and that change was statistically significant. Teachers in the control group actually became more teacher-centered than when they started. However, the sample size of the control group was too small to attribute a lot of significance to this change.

Part of what adds power to these findings is that the instruments used in the research all have been tied to important learning gains. For example, if teachers are more learner-centered, their students are more likely to take deep approaches to learning—those associated with students understanding, retaining, and being able to apply what they have learned. And higher scores on reliable and valid rating instruments correlate with higher scores on exams.

So the training for new faculty received in these programs did make a difference. That doesn't establish that all training programs have that effect, and it leaves untested the difference training might make for faculty with experience or faculty with serious teaching deficiencies, but this research takes an important first step. These data verify that well-designed, substantive training programs for new faculty are worth the time and effort.

Reference: Gibbs, G., and Coffey, M. (2004). The impact of training of university teachers on their teaching skills, their approach to teaching and the approach to learning of their students. *Active Learning in Higher Education*, 5 (1), 87-100. 🍏

Police Officer or Professor?

By Peter J. Kakela, Michigan State University - kakela@msu.edu

I'm not sure how to say this without appearing either arrogant or ignorant, but I have discovered that there is a difference between being a police officer and being a professor. I have recognized the difference for some time now, but it has taken me the better part of my 40 years as a college professor to feel fairly comfortable in my new skin.

For many years, I taught more like a police officer than a professor. I didn't want anyone in my classes to get higher grades than they deserved. I was a vigilant protector of academic integrity. I looked for students who did not come to class or who might be breaking the rules. I set traps with quizzes and tricky test questions. Many of the multiple-choice questions I wrote focused on detailed, technical knowledge of facts. I paid little attention to the relevance of those facts. To pass these tests students needed to know exact terminology and specific definitions.

For example, when I taught introduction to physical geography, I held students accountable for the facts despite all the wonderful material on weather and natural disasters; on plate tectonics and earth pro-

cesses; on greenhouse gasses, environmental pollution, and global warming. Encouraged by senior faculty, I wrote exam questions that tested students' ability to distinguish longitude from latitude, find locations, and deal with time zones.

Furthermore, I focused on the problem students—trying to catch the ones who were not learning or those who looked as though they might sneak through. Nobody was going to steal a grade in my courses. I was the police officer, and I made my students the criminals. Taking this approach to education did not make me unique. A couple of years ago I was talking with a new faculty member in our department. Almost immediately she announced disdainfully, "I understand you can't get undergrads to read here." She was accusing students she had not even met of being slackers. At a luncheon ceremony a year ago, a group of my colleagues started talking about teaching. One youngish faculty member began complaining that half his students didn't come to class. So he started putting his lecture notes online. However, he didn't put all the material online so that on his tests he could catch the ones who were only reading the Internet notes.

I could continue this list of examples, but at this point in my career I find them

frustrating. I have stopped being so concerned with the problem students and now focus on the majority who are working hard and want to learn. Why should I devote most of my time and much of my energy to the few students who don't want to learn? Keeping my attention focused on the slackers made me more tense and angry about my teaching. I was often discouraged, and my classrooms were not friendly places. Being a police officer did not make me happy.

Now I walk into class as a professor. I believe that the students in my class are there to learn. They want to know more about life and the world around them, about the environment, jobs, and careers they can enjoy for years to come. And I believe if we make learning fun, it brings out their creativity. A relaxed mind can think better. Seeing their creativity inspires me—it makes me a better professor. Now I devote my energy to the students who are getting it, those who are bright, cheerful, relaxed, and interested in learning more. The shift has made teaching so much more enjoyable. And I'm convinced that more learning goes on in classrooms taught by professors, not police officers. 🍏

What Do Students Think about Active Learning?

Do students understand why faculty members work so hard to get them engaged with course material? Is it clear to students that involvement and learning (deep, lasting learning, that is) go hand in hand?

One good place to look for answers to these questions might be a required, general education course. And that is precisely the venue Patricia Machemer and Pat Crawford chose in order to study student perceptions of active learning. They replicated their study four times in classes that ranged in size from 125 to 180. Eight different activities were used in this integrated studies course in social and behavioral

sciences; five cooperative learning activities (involving group work), two independent active learning activities (students used a Web-based program to prepare for exams, for example) and the traditional lecture (the usual 50 minutes, delivered from behind a podium, enhanced with PowerPoint slides). Students rated these various activities on a five-point scale.

Overall, across the four different classes from which data were collected, students rated traditional lectures significantly higher than cooperative learning activities, and they rated the active learning activities higher than the cooperative learning work. Researchers were surprised by these results.

They explain how the course objectives and format were ideally suited for the use of cooperative and active-learning approaches. Despite that, students valued the traditional lectures and active learning activities virtually equally and did not value the cooperative learning activities as highly. When students had to work with others, that diminished the value of the activity in their eyes.

Machemer and Crawford attribute these results to the anonymity that is characteristic of large courses. "Asking students in a large class to learn collaboratively

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Student Engagement: Trade-offs and Payoffs

By E. Shelley Reid, George Mason University, VA – ereid1@gmu.edu

I dread the moments when I look out into a classroom and see a collection of blank stares or thumbs clicking on tiny keypads: a pool of disengaged students, despite what I thought was a student-centered activity. Recently, I have been considering how teachers (me specifically) undermine our own efforts to engage students. We do that by putting certain educational goals above getting and keeping students involved. If I sense a lack of energy and involvement on the part of students, right then, I may need to adjust my teaching methods, even if that means sacrificing some other laudable goals. Here are some examples that illustrate what I mean.

Engagement vs. correctness

True enough, students need to be able to produce correct answers. They should know Thomas Jefferson's beliefs about representational government or how to set up a chemical equation. And asking questions is a great way to engage students, particularly the one who's answering the question. But some students may be too shy, unprepared, or indifferent to engage with a fact-based question. Plus, once it's answered, no more students need to engage.

We can, however, consciously craft engagement-focused questions rather than knowledge questions. These are *true questions* to which we don't know the answer, they have multiple "right" answers, and they relate to students' experiences. They may also reveal comprehension or invite critical thinking: *What do you think is important for a democracy to survive? Which variable did you consider first in setting up this equation?* If necessary, I can give students 30 seconds to jot down an answer or share with a peer before I solicit responses.

Even when I accept all initial answers unreservedly—if I have designed the question well, the answers are all "right" for the students who gave them—I need not abandon correctness. I can then move us into critiquing the field, winnowing toward a "better" answer or a more "academic"

response. This process is exactly what I am trying to teach students to do: not to take my word for it but to draw from their own experiences and reason toward a best answer.

Engagement vs. coverage

The need for coverage presents another challenge: we have one class period to cover the Korean War or advanced research strategies, and we don't want to spend the whole period lecturing. Instead, I sometimes find myself pelting wary students with "Socratic" questions. In these situations, it may be both faster and more effective to do a shorter, noninteractive lecture and set aside five minutes for a related activity.

And when I engage students *before* I present information, I don't lose much speed. I start by asking student groups to pool what they already know about a problem: *List three tips for locating scholarly sources.* Waiting for students to generate material takes time; I also worry about "the blind leading the blind." Yet students' collective knowledge can be surprisingly extensive. After hearing from students, I know better what I don't need to "cover" and can focus more efficiently on their questions or confusions.

Engagement vs. consistency

We often ask student groups to report to the class, in part to ensure consistency in the learning experience. Wrong answers can be publicly set aside and core concepts reinforced. Yet sometimes, those group reports act on engaged students like ice water on a newly lit fire. Likewise, our task lists for collaborative groups ensure consistent coverage, but speedy groups may still skimp on engagement so that they can sit back and engage with something other than content.

I can set aside consistency in favor of engagement: if my goal is that all students will engage in *something* for 10 minutes, then I may not need reports. Similarly, I may be able to provide students with more tasks or a larger problem than they can

address in the allotted time, and not worry about who has completed what steps. When we move on, I can review questions or collect responses, but I don't need to: I've met my goal of engaging students in the material and can carry that momentum into the next segment of the class.

Engagement vs. control

Making engagement the top priority means ceding some control over students' learning. Despite our ample qualifications to direct the learning endeavor, we also know that during the moments when we are most engaged in learning, we are often least engaged with our formal teachers or with anyone else's plans.

True free writes ("write about anything"), group work with loose guidelines ("talk about what surprised you in last night's reading"), and somewhat random engagement questions ("if you were going to paint a portrait, who would you paint?") may not push students to use concrete language, wrestle with critical concepts, or understand 18th-century European artwork. That makes this the hardest trade for me to make. I need to remind myself that undirected engagement can be highly productive for learners. If I want my students to surprise me and to enjoy making unexpected discoveries—the hallmarks of engaged, lifelong learning—I need to take these chances and trust that the payoffs will be worth the risks.

Getting engaged

When the blahs strike, I try to look for a way to completely—albeit temporarily—abandon correctness, coverage, consistency, or control in favor of getting students engaged. Besides all the good learning that results, I feel a pedagogical rush when my students turn on their brains and produce new knowledge. We all get engaged, and we all move a bit closer to learning "happily ever after." 🍀

Letting Students Set the Rules

If the idea of students setting the rules for classroom behavior makes you shudder, you just might be interested in what happened when Professor Jeannie DiClementi tried this approach in an introductory psychology course and then compared results with a class where students thought she had set the rules.

She divided the class into groups of five and assigned each group a rule category. Their task was to develop a rule for that category. Categories included, among others, eating in class, sleeping in class, coming to class late, and use of cell phones and pagers. The whole class voted on each proposed rule and then agreed how they would self-manage any violations that occurred. Students then wrote these rules in the space provided for them in the copy of the syllabus that had already been distributed and discussed.

This experimental class was compared with a control intro psych course that met

during the class period following the first. In the control class, Professor DiClementi presented the rules generated by the previous class. She told this class that in order to facilitate recall, each student should write the rules in his or her copy of the syllabus. She did not tell students in the second class that these rules were student generated. Each class followed exactly the same rules, but in the second class students assumed the rules came from the instructor.

Both at midcourse and at the end of the course, students provided feedback on the rules. They rated their importance, their fairness, and what (if any) role they played in students' efforts to learn. They also provided feedback on several classroom behaviors related to the rules. Finally, they rated their perceptions of the instructor.

"According to the perceptions of students, fewer violations of the rules occurred when students had the opportunity to develop their rules." (p. 20) They also rated

the instructor more favorably. "They rated the instructor as more courteous, more willing to answer questions and to hear different points of view, and more encouraging of classroom discussion." (pp. 20-1)

Despite these positive effects, the two classes did not differ in the importance they placed on the behavioral rules or their perception of the fairness of the rules. Furthermore, the approach did not influence students' grades.

The procedure did "no harm and may be useful. At the very least, discussion of classroom rules may serve to open communication between instructor and students." (p. 21)

Reference: DiClementi, J. D., and Handelsman, M. M. (2005). Empowering students: Class-generated course rules. *Teaching of Psychology*, 32 (1), 18-21. ♥

Writing (Even a Little Bit) Facilitates Learning

The message of the Writing Across the Curriculum movement seems to have gotten through. Developing student writing skills is a responsibility we all share. We cannot expect our colleagues in English to do it alone. What is less well known is that the power of writing to positively impact learning outcomes has been proved. And the very best news of all is that the kind of writing linked to more and better learning is not just the formal paper with numerous instructor comments and/or rewrite options.

Here's the case in point, and it is a compelling one: 978 undergraduates in 32 sections of an introductory psychology course attended two lectures and one TA-led recitation per week. In the 16 experimental sections, students wrote on a topic for five minutes and then discussed it in class for 10 additional minutes. "Writing topics centered on expressing opinions about current controversies in the field,

applying course content to everyday experiences, and choosing and supporting a position after presentation of competing viewpoints." (p. 173) Students completed nine of these writing assignments, for one point each. The writing was not graded.

In the 16 control sections, students were presented the same topics in their recitation sections. Only in this case, students were told to think about the topic for five minutes, and that period was then followed with same 10-minute discussion.

All students took three multiple-choice exams that included six target questions, two for each topic students had written/thought about. Researchers used a variety of statistical methods to demonstrate that students in the experimental and control groups were not different.

The students who wrote and discussed did better on both factual and conceptual multiple-choice questions. Researchers do caution that effect sizes for group differ-

ences were small, but those could not be explained by any other factors.

"Just 5 minutes of writing on a topic per week (45 minutes per semester) produced significantly higher scores on test items than did the same amount of time spent thinking." (p. 174) The approach they used could be implemented in classes of almost any size. For the instructor, this is not a labor-intensive approach to implementing a writing exercise; and for the students, here's an easy, in-class exercise that translates into improved understanding of course content.

Reference: Drabick, D. A. G., Weisberg, R., Paul, L., and Bubier, J. L. (2007). Keeping it short and sweet: Brief, ungraded writing assignments facilitate learning. *Teaching of Psychology*, 34 (3), 172-176. ♥

Freaks and Brainiacs

In an essay that covers a range of pedagogical issues, Dale M. Bauer describes the following classroom incident. It's the end of the semester and Professor Bauer is conducting a review discussion. "I end the semester by asking detailed questions about the concepts that inform and unite the books we have read; because I don't give a final exam, this review gives me a chance to bring the nine novels we have read into some kind of dialogue with each other." (p. 159) One particular student is doing an especially able job both in anticipating the questions and then offering good answers. Her best friend in the class good-naturedly calls her a "freak."

For Bauer it was a moment of insight. "Marking oneself by knowing the answer made one contemptible, conspicuous, strange—in short, a freak." (p. 159) How different from the days when most professors were in school. Bauer explains, "What used to shame me in school—failing, not knowing the answer—is for more and more students the source of comfort and security, of fitting in." (p. 159)

Bauer explains the current student response this way. Bright, curious, intellectually interested students come to be identified with the professor—that strange person who, in this case, cares intensely about

literature, reading, and college. Students need grades, and that makes them reluctant to publicly shame the professor; so they direct their feelings of discomfort against fellow students—those who know the answers and are willing to say them. If students answer articulately too often, they are labeled "brainiacs, the freaks who project how our students see us and from whom they turn away in sometimes mock, sometimes real, horror." (p. 160)

Faculty make themselves vulnerable in the classroom when they show students how much they care about the content and intellectual engagement. They aspire to create classrooms where students will care about academic endeavors as much as they do, but Bauer doesn't think students come to class any longer wanting to be part of this kind of intellectual community. "I see my students walk around campus, wired to their iPods or cell phones, and I am amused, sometimes saddened, by how quaint the outdated community we offer in the classroom must seem. They are connected to their friends, maybe even their family, and we are asking students to leave one community—if only temporarily—and become part of a riskier one based on intellectual commitment and engagement." (pp. 160-1)

Later in the essay, Bauer writes about those students who come to understand, who begin to put things together and consequently reach new levels of understanding. These insights happen to individuals, generally one at a time. "The trick is to turn these individual epiphanies into a collective community." (p. 163) In other words, how does a teacher get that one student to infect others with his or her understanding? This is especially challenging given the anti-intellectualism that may exist among students.

Throughout the essay Bauer explores various notions of failure in the classroom—this isn't the most optimistic piece you'll ever read—and uses experiences and insights to shed light on much of what makes teaching so difficult and draining. "This kind of teaching—playing at failure and challenging students—takes a particular force of pedagogical will. As my anecdote about the student called out for being a freak demonstrates, students now need our will to overcome prescribed passivity and the implicit codes of silence." (p. 168)

Reference: Bauer, D. M. (2007). Another F word: Failure in the classroom. *Pedagogy*, 7 (2), 157-170. 🍀

ACTIVE LEARNING

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forces them to lose their anonymity. Students may select a large class because they seek a teacher-centered environment, where they can be passive observers and preserve their anonymity." (p. 24) Moreover, students are reluctant to share responsibility for learning with a group. Researchers wonder if the desire not to be involved with others is part of the general perception that general education courses are something students have to get out of the way, that they are a "diversion from their actual plan of study." (p. 27) They are not the courses students take most seriously, not the ones in which they want to

expend extra effort.

Supporting these suppositions about attitudes toward general education courses was the finding that students valued any activity (active, cooperative, or traditional) that improved their exam performance. The most highly valued activity of the eight was the exam preparation program, followed by a cooperative learning exam review session.

Do these findings mean that teachers should abandon the use of group work? The researchers point out that this study measured students' *perceptions* of the value of the activities. That may be quite different from the actual value of the activity as it relates learning outcomes. Students may not always want what is best for their

learning. As has been pointed out many times in this publication, sometimes students resist various forms of active learning because they require students to work harder. We think that is the very reason faculty ought to be using them.

Reference: Machemer, P. L., and Crawford, P. (2007). Student perceptions of active learning in a large cross-disciplinary classroom. *Active Learning in Higher Education*, 8 (1), 9-30. 🍀

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