Teaching Wisdom from Central Station Café

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Bob “PB” Nowack came to Clemson University shortly after serving in World War II and recently retired after teaching engineering here for 62 years. PB shares bits of his teaching wisdom with me between joking with the wait staff and eating multiple desserts at Central Station Café’s ample lunch buffet. Every 10th meal at this café is free, and PB treats enough students to this lunch that he probably earns at least one free meal each month.

I’d like to share some of PB’s accumulated teaching wisdom. It isn’t wisdom based on empirical analyses and it probably doesn’t apply to every teacher, but it has worked exceptionally well for PB. Even in his last year of teaching, PB found his office constantly crowded with current and past students (sometimes three generations from one family). If there’s a better metric for successful teaching, I’m not sure what it is.

PB’s wisdom ranges from the general, “Be firm at the start of a new course and ease up if needed: you can’t go the other way,” to the specific, “Don’t allow chewing tobacco in class,” which probably applies at land-grant universities like Clemson. PB uses acronyms to emphasize key points. They include words he doesn’t say in class, but they make his points memorably. For example, RTDP is short for “read the damn problem.” Once students figure out what RTDP means, they never forget it, and that’s the point. For difficult topics to teach and learn, PB urges persistence and trying different approaches. At least, that’s what I hope he meant when he told me: “Push, push, push. It’s like stuffing a turkey. If one end doesn’t work, try the other.”

PB’s students work to avoid invitations to his legendary “prayer sessions,” which are the opposite of getting invited to Central Station Café, although many students experience both. It doesn’t matter whether you are an A or D student, if you are achieving below your potential, that’s a surefire way to experience one of those prayer sessions. PB reminds underachieving students that they have ability and therefore responsibility. It’s an approach that encourages them to work harder. It’s also a backhanded compliment that builds students’ confidence, which PB feels is generally lacking. PB rarely gives personal advice in prayer sessions, recognizing that “even when students seem to be spilling their guts out, you are only really getting 10 percent of the big picture.” Prayer sessions often end with PB’s good-natured admonition “Get your baby ass in gear.” And if students require an example of hard work, they need look no further than PB. Even in his seventh decade of teaching, he still graded every homework problem and revised test questions to make sure they were fair.

Beyond the hard work and memorable sayings, I think the essence of PB’s teaching success is how accessible he makes himself to students. He explains that faculty members can choose to filter their true personality from their interactions with students or they can be themselves and, therefore, be more vulnerable. Of course, some students may take advantage of the latter approach, but PB finds this a small price to pay. When he’s true to himself, he gives students an authentic learning experience. Even though PB makes himself accessible to students, he’s no pushover. In prayer sessions, he tells students that he can “like the hell out of you with my friend hat on, but I’m also wearing my professor hat.” Students clearly appreciate this straightforward approach.

It is common for students who have failed PB’s class to come by his office the next semester to proudly update him on their second attempt at the course with a different instructor. In his typically eloquent and memorable way, PB points out that his accessibility is “the difference between teaching and professing.”

Even after retiring, PB is still accessible to students. He evaluates how much things cost in terms of equivalent trips with a student to Central Station Café. Recently, he said to me, “They want $75 to attend that awards dinner? I could make five trips to Central Station for that price.” He has a point. Like his students, I have learned much from PB. In his wisdom there are some profound lessons.
Reasons Why Students Do or Don’t Participate

Here’s something many scholars no longer even attempt: a multidisciplinary review of the literature, in this case on in-class participation. Author Kelly A. Rocca looked at articles on the topic published in academic journals between 1958 and 2009. The seven-page bibliography at the end of the review contains references that include empirical studies, reports by instructors of their experiences using a particular kind of participation policy (some with data, some without), advice-giving articles, other literature reviews, and miscellaneous reports. It’s an impressive collection, which is a credit to the author and attests to the amount of work done on this instructional practice.

Based on this literature review, Rocca identifies five factors that influence whether or not a student decides to participate in class. What follows here is an abbreviated discussion of each.

**Confidence and classroom apprehension**—Some students do not participate because they feel intimidated by their fellow classmates and by the instructor. This is particularly a problem in classrooms where a small percentage of the students are doing most of the participation. Unfortunately, that describes participation in many classrooms, according to a number of different studies. Sometimes students begin to participate once they feel comfortable with their classmates. Participation is also more likely when students are prepared, which can be encouraged by having them bring written answers to class or by talking about possible answers with a classmate before offering an answer to the whole class.

**Personality traits**—There is some evidence that traits like low self-esteem and a lack of assertiveness negatively influence the willingness to participate.

**Instructor and classroom climate**—Not surprising, instructors play an important role in participation decisions. The instructor behaviors that discourage participation include: not paying attention to students, making fun of them or putting them down, being overly critical, using lots of sarcasm, being overly opinionated, and being moody and unfriendly. Instructors also play an important role in creation of the overall climate that exists within the classroom. If it is a climate where students and the teacher respect each other and where teachers communicate care and concern for students, that positively impacts how comfortable students feel, which adds to their confidence and increases participation. There’s lots of advice in the literature on creating these kinds of classroom climates, such as knowing students’ names, providing verbal and nonverbal feedback, and being a good listener. Even something as simple as making sure there is sufficient “wait time” after asking a question can build a climate that encourages participation.

**Sex differences**—In the early ’80s there was some evidence that women
“Creating a climate that maximizes student accomplishment in any discipline focuses on student learning instead of assigning grades. This requires students to be involved as partners in the assessment of learning and to use assessment results to change their own learning tactics.” (p. 136) The authors of this comment continue by pointing out that this assessment involves the use of formative feedback and that feedback has the greatest benefit when it addresses multiple aspects of learning. This kind of assessment should contain feedback on the product (the completed task) and feedback on progress (the extent to which the student is improving over time). The article then describes a number of formative feedback activities that illustrate how students can be involved as partners in the assessment process. Their involvement means that formative feedback can be given more frequently.

Three-color group quiz—Students prepare for a quiz on a specified topic. Groups of four or five students assemble in class and first take the short-answer quiz individually. They write their answers in black with their books closed. Then the group collaborates by discussing questions they haven’t answered or answers about which they have doubts or need more details. After that discussion they may revise what they have written, only that information is written in green ink. Finally, the group is allowed to access textbooks, notes taken in class, and other resources. That material is added to their responses in blue ink. This approach allows students to gauge the level of their knowledge against the knowledge of others in their group and the content contained in course materials. The teacher can comment on these proportions when providing feedback on the quiz. Students reported an overwhelming preference for this approach over the traditional quiz. Most noted that they never looked up material they did not know after taking a traditional quiz. This strategy is designed so that they must.

Midterm student conferencing—The goal of these conferences is to connect with individual students, provide descriptive feedback, and review student performance so far in the course. The unique characteristic of these conferences is that students lead the conference, as in students are doing most of the talking. Several weeks before the conference, the teacher gives students the conference format and criteria. This allows them time to collect materials, reflect on their class performance, and think about what they will say. The teacher takes notes, answers questions, offers suggestions, and gives his/her perspective on the student’s performance. These midterm conferences mean that there is time for students to make changes. They also develop rapport between the teacher and students, making it more likely that students will approach the teacher with questions and concerns.

Assignment blogs—Designed to encourage communication, collaboration, and dissemination of feedback, assignment blogs can be used to “receive questions and provide feedback about certain aspects of an assignment.” (p. 140) Because they are open-access, if a student asks a good question, all students can benefit from reading the teacher’s response, and if many students have the same question, rather than repeating the answer, the teacher can give it once. Teachers can also use the assignment blogs to identify general areas of concern based on previous student work or to offer feedback to the class as a whole, thereby allowing students the chance to self-assess.

One of the authors notes that activities like these improve students’ critical-thinking skills. She writes, “You can’t just say, ‘Think critically’ and expect students to understand how to do it. The word critically often creates a negative perception of what critical thinking is all about. Instead, by thoughtfully trying to improve each other’s products, students naturally engage in the analytic and generative processes we call critical thinking. As a result, not only are student products better, but students improve in thinking and communication skills as well.” (p. 139)

A Google Jockey

And what in the world might a Google jockey be? In a first-year seminar on environmental sustainability, the Google jockey was a student who surfed the Web for material related to the discussion topic or lecture and then displayed that material in real time to the rest of the class. In this case, the student was a senior biochemistry major described in the article as “bright” and “engaged.” But don’t rule out this interesting strategy if you don’t have this kind of student preceptor at your disposal.

The authors of the article referenced below arrived at this strategy when they realized that students lacked “a rich set of mental images” related to the topic being discussed. (p. 254) They thought that adding images (including cartoons) might more effectively engage students and provide a visual context for the course material. And the strategy was even more successful than they anticipated. Keys to its success were a high-speed Internet connection and a fast computer. The student mastered the technique very quickly—in part, the authors think, because she was bright, but more because students have high technical literacy. The student did not have any special computer expertise or training before the strategy was launched.

Also contributing to the success of the strategy was the willingness of the instructor (one of the authors) to give some control of the discussion to the Google jockey. This lesson was learned the hard way. When the instructor asked the student preceptor to locate a particular kind of image, that made it difficult for the student. Now there was a “right” answer. It worked better when the Google jockey selected the images on her own, probably because students are more likely to pick images meaningful to fellow students.

A number of students in the class indicated they would like to try being the Google jockey, and toward the end of the semester the instructor experimented with letting other students play the role. Those students found it was not as easy as it looked. Having a student familiar with the content and having one who had worked previously with the professor did add to the success of the strategy.

With all the recent research on how students don’t multitask nearly as well as they think they do, perhaps a strategy like this is distracting. If students are looking at the images, then maybe they aren’t listening to the professor. After four class sessions with the preceptor acting as Google jockey, 92 percent of the students reported that the images contributed to the discussion. Forty-two percent said they could be distracting. By the end of the semester, 90 percent of the students agreed they could better cope with the images. At that point none of them said they were distracting.

The authors do acknowledge that a strategy like this depends on course content. They don’t see it working well in a highly structured, content-heavy course. But for a seminar, maybe in courses for nonmajors, it’s an interesting option that proved very successful in this course.


Attendance Policies: Research Update

Most college teachers don’t need research results to confirm that class attendance is a problem for many students. Some skip occasionally, others regularly; and some we see for the first time on exam days. Most faculty believe that students learn the material much better when they regularly attend class, and hence policies that require attendance are now the norm in many (could we say most?) classrooms.

Jonathan Golding conducted research on the effectiveness of attendance policies at getting students to come to class, their impact on course evaluations, and, most important, their effect on learning, as measured by course grades. A review of the literature allowed him to integrate his findings with those of others and offer some overall assessments and conclusions that serve to update our understanding of this widely used instructional policy.

Golding’s study included data from 5,150 students across an 11-year period. All these students were enrolled in a large psychology course taught by Golding. Each year, students in this course took four 50-question multiple-choice exams. In 2002 Golding introduced an attendance policy administered via “in-class assignments” that could be completed only by students in class. If students did not complete 80 percent of these assignments, they failed the course (between 2002 and 2005) or had their course grade dropped two letter grades (between 2006 and 2008).

This policy effectively increased class attendance. Research across the board confirms that attendance policies, administered in a variety of different ways, do get students coming to class. In Golding’s case, the implementation of this policy did not affect his course evaluations. And a strong correlation existed between attendance and performance on the exams. The more students came to class, the better they performed on the exams.

But there was one finding that most faculty would consider surprising. In
Caring for Students: How Important Is It?

Most teachers know that caring for students is important, but do they realize just how important? A recent article by Steven A. Meyers offers a succinct, well-referenced, and persuasive review of research that addresses the topic. It begins with what most teachers already know: Caring is regularly identified as one of the ingredients or components of effective instruction. What many teachers do not know is that students value the dimensions of caring more highly than teachers do. Teachers tend to focus on the instructional aspects of their role—they want their courses to have standards, to be well organized; they want their instruction to be clear and effective at stimulating student interest. Students agree that these aspects of instruction are important, but they consider the personal aspects of teaching just as important. They want teachers who welcome their questions, who acknowledge their input, and who are available—in short, teachers who establish rapport with individual students and the class as a whole. Said succinctly, caring is more important to students than it is to professors, according to a variety of research findings reviewed in this article.

But should faculty be concerned about what students consider important? Research findings say yes. One study cited reported that when instructor-student rapport increases, those increases are associated with greater student enjoyment of the class, improved attendance and attention, more study time devoted to the class, and more courses taken in that discipline. Another study documented that a professor’s positive attitude toward students accounted for 58 percent of the variability in the students' motivation, 42 percent of the variability in course appreciation, and 60 percent of students' attitude about the instructor. (p. 206)

Meyers addresses three faculty criticisms and cautions about caring, starting with “My students don't appreciate how much I care.” The problem here, according to Meyers, is that faculty don’t always express their care in ways that students understand. Faculty express caring through their devotion to the instructional aspects of their role. They always come to class prepared. They devote time and energy to keeping current in their field. They spend countless hours reading and reviewing potential texts. Those commitments bespeak their care, but according to the research, those are not the behaviors students associate with caring. Research on something called “verbal immediacy” has identified a number of behaviors that do convey caring to students—things like using personal examples, asking questions and encouraging students to talk, using humor in class, addressing students by name, and many others listed on a table in the article—and Meyers recommends that faculty consider using more of these behaviors.

Some faculty are reluctant to express care for students because they don't want to get too close to students. And Meyers agrees: “Faculty must maintain an awareness of interpersonal boundaries when creating supportive relationships with students.” (p. 207) It’s a question of finding an appropriate balance between caring for students and maintaining professional boundaries. Meyers offers this advice: “Effective, caring faculty members balance their connection with students by setting limits as needed, by enforcing classroom policies in consistent and equitable ways, and by maintaining democratic and respectful authority in the college classroom.” (p. 207)

And finally, there are faculty who believe “My job is to teach, not to care.”

ATTENDANCE POLICIES
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those years when there was no attendance policy, the average exam score was higher than in the years there was an attendance policy. Golding notes that those results should be interpreted cautiously, given the large N and relatively small effect size.

Based on his findings and those of others, Golding writes, “Taking into consideration both prior research and the archival data presented in this article, findings on the association between attendance and class performance are equivocal.” (p. 41) He points out one of the problems with this kind of correlational analysis. “These findings highlight the potential pitfalls of trying to implement interventions on the basis of correlational data: Simply because students who get better grades are also more likely to be students who come to class does not mean that making students come to class will result in better grades for them (i.e., correlation does not translate into causality).” (p. 42) Said a bit more bluntly, attendance policies may be effective at getting students into the classroom. They may be much less effective at engaging minds and learning.

As this article makes clear, there is no research mandate for attendance policies, which means that individual faculty should be assessing the impacts of their policies on classroom climate and learning outcomes. The ideal, of course, is classrooms with students present not because some policy requires them to be there, but because they understand that what happens in class is essential to their endeavors to learn course material. The design of classroom experiences that expedite that insight is a challenging task but the outcomes may be better than what attendance policies can achieve.

Lessons from Room 10

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Room 10 was often an uncomfortable place. I dreaded having to walk in there. Room 10 felt a bit like “Hell’s Classroom,” where we could take discussed it, but I think we were drawn to the tough? Yes, she was mean and AP chemistry was one difficult course. Mrs. H’s handw riting was atrocious, and by today’s standards, she didn’t create a supportive learning environment. Despite all this, I noticed that the best students at my school signed up for AP chemistry with Mrs. H. I hesitated before signing up for the course, but something drew me to the experience.

After some reflection, I believe I know why students at my high school entered Room 10 and why I am writing about this some 25 years later. Mrs. H gave her students an academic punch in the arm and it hurt. Some students could not take the punch and went down for the count (transferred to another course). Those of us who survived learned how to navigate a tough course with a demanding teacher who had only our best interests at heart. My classmates and I never discussed it, but I think we were drawn to the course because we knew if we could survive “Hell’s Classroom,” we could take anything thrown at us in college.

I can honestly say that walking into Room 10 was one of the best decisions of my life. It amazes me that after all these years, and knowing now that my AP course was poorly designed and executed, I had an extraordinarily valuable experience in that class. I want students to value the courses I teach, and in my classroom I cultivate very different student-teacher interactions. However, my commitment to academic rigor and high expectations for students has been influenced by Mrs. H and Room 10. Most faculty aspire to high standards for their students, but I do not read much about rigor in the educational literature these days. It may be that many faculty think rigor is an implied part of the collegiate experience. However, documentaries such as Declining by Degrees and the recent book Academically Adrift: Limited Learning on College Campuses tell a different story. It almost seems that any mention of rigor or challenge has become “educationally incorrect” in the literature of scholars who promote the reform of higher education and place an emphasis on learning over teaching. Moving away from the traditional lecture format does not require one to abandon rigor or high expectations, although this is rarely addressed in reform-minded manuscripts.

My experiences in Room 10 have convinced me that my job is to provide what has been termed productive discomfort (Mrs. H’s academic punch in the arm). I want my students to wrestle with ideas that at times disorient them and other times make them want to know more about the world of chemistry. I strongly believe there is a need to push students to maximize their potential and learning capacities.

My commitment and approach are complicated by the number of students who are poorly prepared to perform at high levels or lack the study and learning skills needed to be successful. Hardly a day goes by without a student asking how to do better in one of my courses. A similar question to Mrs. H would have been answered with the admonition to do more of the problems at the backs of the chapters. That used to be my standard line, but I have realized that students truly struggling with the material often need a new way of approaching problem solving and concept mastery. One successful approach has been to encourage students to draw diagrams and sketches (external representations) to help organize information and ideas. This allows them to apply their creativity and right-brained skills to tackle more analytical tasks.

The most rewarding and meaningful experiences of my teaching career have been the success of students who once struggled but ultimately overcame their difficulties. In my mind, a student’s journey from failure to mastery (or struggle to success) is what higher education is all about, and the only way we can make this work is by setting the academic bar high, but not beyond reach, and then providing the necessary support and motivation. If I had to establish a marketing campaign around this idea, it would sound like the Home Depot slogan: You can do it (succeed in a demanding course) and we can help (by providing a supportive and instructionally diverse environment).

Caring for Students

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These faculty worry that caring compromises academic rigor and lowers standards. They think that caring means always being nice, never pushing students, and always avoiding criticism. But it’s not a case of either-or—caring or doing those things associated with the instructional role. Teachers should do both because students benefit enormously when they do. And caring benefits teachers as well. Research has documented that when faculty don’t care or fail to communicate their concern for students, students respond in kind. When students don’t care about the teacher, they are much more willing to disrupt the class and make learning more difficult for everyone.

This is a first-rate article that convincingly establishes the importance of caring in the college classroom. It ends with an interesting set of questions on the topic that would make for excellent discussion with colleagues.