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The Seasons of a Class

To every thing there is a season, and a time to every purpose under the heaven.
—Ecclesiastes 3:1

Every class has a rhythm and a flow. Fall semester courses are different than spring ones. Students' enthusiasms rise and fall as they transition from scared newbies on the first day of class to sadder-but-wiser veterans by the end of the semester. By recognizing that some things just won't work in a large class until new students have a few weeks under their belts, you can save yourself and them a lot of frustration and wasted time.

Some instructors, aware of all the "content" they must cover during the term, like to get right to it and immediately start on the meat of the course in the first lecture of the semester. They are then surprised when it appears from the results of the first examination that virtually no students went to class that first day. In fall semester freshman courses, students are so occupied with appearing cool, while actually feeling intimidated, that they have the attention span of a Siamese cat (actually, because I own a couple of Siamese cats, I know that statement is insulting to Siamese). On the first day of a large, sophomore-level course, there will be a sufficient undercurrent of jabber as friends discuss what went on over the break or summer that the instructor's voice will need an extra 10 decibels out of the loudspeakers. So the first day is pretty much of a washout for content. However, as described in Chapter 2, it is marvelous for setting the tone, mood, and flavor of the course.

As the semester wears on for first-year students, they gain proficiency in study skills and learn that college really is different from high school. The middle third of the course is probably the most productive for both them and you. They have pretty much adapted to college life and are optimistic about the future. This means you can pick up the pace and go into more detail and complexity than you could at the beginning of the semester.

Source: Heppner, Frank. Teaching the Large College Class: A Guidebook for Instructors with Multitudes. San Francisco, CA: Jossey-Bass, 2007.

However, in the final third of the course several factors dictate that you slow down a bit. For some students, fear returns as they realize that it is going to be difficult to impossible to catch up. A semester of late-night partying and/or studying begins to catch up to them, and simple fatigue enters the picture. For many of them, end-of-semester projects come due in other courses and routine reading and studying have to take a backseat. For this reason, I usually distribute my reading assignments unevenly during the semester. After the first week or two of the semester, when they have had a chance to settle in, I hit them hard with readings to capitalize on early-semester energy, especially in fall courses. The reading load tapers off during the semester, and in the final two or three weeks their weekly reading assignment is half what it was at the beginning of the semester. This reading reduction has the added advantage of allowing those students who want to begin an end-of-semester review sufficient time to do it.

When I teach the same first-year course in both fall and spring, I notice some differences. In the spring you have a noticeably more mature group of students who have gotten over the first-semester trauma. Unfortunately, if you teach a major's course, you will also have a fairly substantial chunk of the students who failed the course in first semester. These students tend to be less than enthusiastic (for obvious reasons) about the course, but I try to say a few words to them collectively during the first lecture. They have an admittedly tough row to hoe because they've heard all your jokes, the book isn't going to be any more interesting the second time around, and the stakes are likely to be higher—they may be on academic probation. I tell them that hard as it will be to do, they have to pretend that they've never taken the course before. Their temptation will be to neither attend lectures nor read the chapters. After all, they supposedly had *already* read the chapters. I point out to them that although they may have *read* the chapters, if they had *understood* the chapters, they wouldn't be sitting where they are today. About a third of my "alumni" fail the class the second time also.

Student Evaluations of Teaching

Student evaluations of teaching, although they first started in the 1920s, really began to proliferate in the 1960s and are now widespread on college campuses. In the 1960s, they were a spinoff of the student movement and were intended as a guide to help students avoid dreadful instructors. The information was collected informally by students and distributed usually as a supplement to the student newspaper. An instructor who was in disfavor with the editors might find himself looking at something like these gems I recall from my Berkeley undergraduate days. "Professor Gold's monotone could be used by the Bureau of Standards. It has been reported that Professor Green is actually dead. This cannot be confirmed because no one can tell the difference between the lectures Professor Green gives now versus those he might give if he were dead."

College administrations and instructors soon co-opted these evaluations and began using them for different purposes—assisting administrators in promotion and tenure decisions, and only secondarily using the information gathered to help instructors improve their teaching. In the former case, suddenly, what had been merely a potentially embarrassing annoyance now became a career-influencing event.

There have been more than 2,000 published papers on the reliability and validity of student evaluations of teaching. The results of these studies are both equivocal and controversial. However, for your purposes, if promotion, tenure, or retention hinge on student evaluations at your institution, *it doesn't matter whether they are reliable or valid,* as long as the person or body deciding your fate believes they are.

Asking questions of students about your teaching can indeed be a valuable resource to help you improve your teaching. However, the questions an administrator might use on a student evaluation of teaching (SET) form to help rank your performance against a colleague or a standard often have little utility in helping you refine your teaching. For example, one of the agree-disagree statements used on the administrative SET form on my campus is, "Has an effective style of presentation." Suppose your students give you a very bad rating on this question. That tells your dean that your style of presentation is less effective than

Professor X's, but it doesn't give you a clue about *why* your style is ineffective. Do you have a world-class collection of annoying gestures and speech mannerisms? Do you never use words of less than eight syllables? Another statement is, "Treats students as mature individuals." What is the correct interpretation of a negative response to this question if you have a lot of students who are 17 and spectacularly immature? Is treating immature students as mature adults a good thing or a bad thing?

This conundrum may produce a problem for you. At most colleges that use an SET, it is mandated by the administration (or in some cases, by a body like a faculty senate). So you don't really have a choice about whether to give the administration's SET. The results may be of negligible value to you if you want to improve your teaching, although they may help you to keep your job.

The only real solution is to give the students *another* SET, one custom tailored to your course, whose purpose is not really evaluation but generation of information. You want to word the questions in such a way that an interpretation of the answer is clear and specific to your course. For example, "How many help sessions did you go to this semester? 0–1__; 2–3__; 4 or more___" is unambiguous. If your campus has an instructional or faculty development program, the folks there can be very helpful in designing a useful form. Unfortunately, your questionnaire is *in addition* to the college's, and I have found that once past their first semester many students tend to be cynics about the impact their opinions on a college SET will have on changing teachers' behavior, and they tend to blow all SETs off. I therefore explain that *my* questionnaire will be read carefully and taken seriously. I also leave a lot of room for write-in opinions. Needless to say, some students who might not be doing too well in the course may regard this as a golden opportunity for payback, so some of the write-ins may well include some colorful language and imaginative suggestions about what you can do to yourself and your anatomy.

So, you will administer your own SET to give you concrete suggestions to improve your teaching, but in the interest of maximizing the probability that you will return for another semester of teaching, how do you maximize your ratings on the college's SET? The educational literature does not offer any clear suggestions—you can find well-done papers that both support and argue against the relationship between lenient grading and good SETs, for example. So, what I will pass on to you is strictly anecdotal—take it for what it's worth. I'll also add that these comments do not necessarily apply to small and/or upper division classes with more mature students.

In looking at my own, and colleague's SETs, there seems to be a fairly strong association between students' perceptions of the *personality* of the instructor and ratings. Friendly, easygoing, approachable, and reasonable seem to be the money qualities. In other words—"cool!" Demanding, strict, brilliant, and adhering to high standards do not seem to be generally attractive qualities to lower division students. The *perception* of grading policies appears to have more impact than actual policies. For this reason, in the window of time that you will have to administer your college SET, you might consider administering the SET halfway between the last exam and the next one, so grades will not be in the forefront of students' minds while they are assessing your teaching qualities. Students often have short memories. Suppose you *are* normally demanding, have high expectations, and offer challenging lectures that dictate strict attention. If you make the lecture immediately before you hand out the SET forms a bit more relaxed, and dare it be said, "fun," you might be pleasantly surprised by the outcome.

Classroom Research

You learned about assessment—activities designed to give you day-to-day information on how your class is doing—in Chapter 7. By expanding on these activities and formalizing them a bit you are now doing educational research and may get a bit of extra mileage out of your teaching: some publications.

There are several well-respected refereed journals that publish articles on educational research in undergraduate education, among them the *Journal on Excellence in College Teaching*, *New Directions for Higher Education*, *College Teaching*, and *Journal of Research in College Teaching*. There are also more specialized journals, such as *Teaching Sociology*, *Journal of College Science Teaching*, *Science Education*, and *American Biology Teacher*. A number of professional societies, for example the American Chemical

Society and American Physical Society, have publications that deal with college teaching, much of it in a large-class context.

These journals not only can be a source of valuable tips for you, but can also be a venue for publications that will pay you back a bit for the extra time you are taking away from your specialty research to improve your teaching. A publication counts for your curriculum vitae as long as it is refereed, and if you are going to be doing assessment activities anyway, just expand the activity a bit and now you have an extra publication. I won't kid you: In most institutions that have large classes, research in your specialty will always be important for promotion and tenure and you ignore it at your peril. However, research for a teaching journal provides a valuable service to the teaching community and can convert some of that time you're spending on good teaching into the coin of the realm in academia—publications.

Grants

Say the word *grant* and the first thing that comes into most academics' heads is "specialty research." However, times have changed and, in many fields, grants for the improvement of teaching are easier to get, and larger, than traditional research grants. In my research field, animal behavior, the typical acceptance rate for grant proposals at the National Science Foundation (NSF) is 8%–13%. On recent grant panels on which I have served at NSF in the Undergraduate Education directorate, acceptances have been running 30%–50%, although it is now somewhat lower. In my department in recent years, we have picked up hundreds of thousands of dollars to improve our large-class lecture halls and upgrade our laboratories through education grants.

By developing a bit of expertise in teaching, and doing some cross-disciplinary reading in education, you may well find that you can generate as much or more grant overhead through teaching-related activities as you can from discipline-related research. There are several large national foundations that sponsor higher education grants, in particular the Howard Hughes Medical Education Foundation and the Lilly Foundation. The federal Department of Education and the NSF are both sponsors of research in higher education.

Local foundations can often be tapped for grants to improve large-class teaching. One of the things such foundations look for is a body count: How many students will benefit if the grant is awarded? As a large-class teacher you have the numbers on your side.

The Last Lecture

When I was an undergraduate at Berkeley in the early 1960s there was a charming custom that the final lecture of the semester be something special. In fact, it was usually called "The Last Lecture." In this lecture the instructor would try to impart some wisdom to the class, in addition to the knowledge that had been dispensed during the semester. If the class wished to indicate their approval of the instructor's efforts during the past four months, they would reward him or her with a round of applause before they departed. As I recall, only a few classes were so bad that the class simply got up after The Last Lecture was over and left in silence. I cannot begin to imagine how devastating that must have felt.

In most classes The Last Lecture was about as memorable as the rest of the class had been—that is, not very. After a perfunctory but polite few claps of applause, the class and instructor would both go about their respective businesses. However, three of the teachers I had at Berkeley were so staggeringly good that they positively changed my life. I have spent the last 38 years as a college professor trying to figure out just what it was that made them so influential and whether I might be able to drink from the same bottle of magical elixir and have a similar effect on my classes.

Two of the three taught small classes and I think much of their magic depended on us being able to see them do, with staggering proficiency, the thing they taught about. The third, however, taught a huge class. I was one of more than 400 students in Richard Eakin's embryology course. It might be instructive to pass on to you what I think made him such a marvelous large-class instructor.

The lectures themselves were technically perfect. Start on time, finish on time, beginning-middle-end, balance between principles and examples—the very model of what a well-constructed lecture should be. His voice was beautifully modulated and reached to the back rows. (I later found out that he had been very active in drama as an undergraduate.)

However, perfect lectures alone do not a great lecturer make. Although he was an internationally known researcher who was one of the jewels in Berkeley's crown, he let us know that teaching was both his greatest joy and privilege. We believed him. This is in contrast to some of my Nobel Prize-winning lecturers who let us know in no uncertain terms that we were annoying cockroaches keeping them from their important work in the laboratory.

I believe it was his small gestures that caused students to admire him almost to the point of worship. I was the recipient of such a gesture and have never forgotten it. Eakin liked to visit his labs and chat with his students as they were working. I was slaving over a hot microscope one afternoon, trying to figure out a way to impress my lab partner, Sandy, who was a premed and much smarter than I was. We were talking animatedly about some fine point of the 48-hour chick embryo when I suddenly became aware of a presence behind me. Eakin was a big man with an academic slouch who loomed over you. I turned around, saw him, and immediately became flustered. My first thought was "I'm doomed! He's going to ask me something about when the mesoderm appears, I'll look like an idiot, and Sandy will *never* go out with me." Instead, he smiled, asked my name, then inquired, "What have you seen today that's beautiful?" I was thunderstruck. I had been aware that the things we were looking at had a wonderful, painterly quality, but I didn't know those were permissible thoughts—I thought our only job was to memorize vocabulary and state principles. Well, I was an amateur photographer, and his question opened the floodgates. I spouted about composition, and color, and how I would photograph these objects. I blathered on, and when I ran out of breath, Eakin thanked me and left the room. As he did, and Sandy looked at me with an interest I hadn't seen before, I had the unsettling feeling that I had just been visited by God, or at least, someone who was very much like Him.

Eakin's Last Lecture was legendary, and students who had taken his course in previous years would come back to hear it again and be inspired. The lecture was a reminiscence of a life in science and the joy and thrill of having the opportunity, as a young man, to work in laboratories where discoveries about the fundamental nature of life were being made. He made a point of the fact that he had not been some sort of geeky supergenius as a youngster, but had instead been blessed with a strong sense of curiosity. I can still recall being amazed by that—surely such a man must have been an exceptional student? Why, that might mean that *I* might do such things some day.

Eakin always began his lectures by acknowledging the class and saying "Good morning." This day, he did not. As he drew to the end of The Last Lecture, I remember almost being on fire. Not only did I want to do the things he did, I wanted to *be like him*—a scientist, but also a humane teacher.

For this lecture, the house lights were off, and the only illumination was provided by the lights onstage. He gave us what amounted to a benediction, a wish that we go out and build on what we had learned and have a kind of life that he had been privileged to have. Then he paused, looked out over the class with an expression of ineffable kindness, and said, "Good morning—and goodbye." The stage lights crashed off, and when the house lights came up, he was gone.

A tough act to follow.

When I started teaching large classes, I decided to do my own Last Lecture, even though it is not the custom at my college. I can heartily recommend the exercise to you, but I can't give you any suggestions for themes or subjects because, by its very nature, it is personal. I've tried various themes over the years, and I think the most successful one has been The Last Lecture for my major's course. At that point in the semester, just before finals, many of my students are running scared, they've met the first real academic challenge they've ever had, and they badly need a confidence builder. I have the "advantage" of having been a particularly rotten student as a college freshman, so I just tell them about my freshman year 40-plus years ago. I was scared just like they were, and it seemed that the harder I tried, the worse off I was. As I look out over the class, I can see the looks of recognition—and amazement. I finish off very simply: "If

a kid who had a 1.8 average at the end of his first semester could end up here, so can you. Good morning—and goodbye." Lights out, and I'm gone. I've had many students come to me afterward and say they would have dropped out of college but for that lecture, so it must strike a resonant chord with at least some of them.

So this has been my Last Lecture for you. Teaching large classes well is the most difficult and challenging task in academia and offers the fewest tangible rewards. Knowing, however, that you have a real, positive, and inspiring effect on hundreds or thousands of young people will more than compensate for the liabilities. Do it right, and you will have former students all over the world who will be grateful to you for the wisdom you gave them.