

THINKING AHEAD

If I always appear prepared, it is because before entering on an undertaking, I have meditated long and have foreseen what may occur. It is not genius which reveals to me suddenly and secretly what I should do in circumstances unexpected by others; it is thought and meditation.

—Napoleon I

Before launching forth, let me tell you the assumptions I'm going to make about you, the reader. First, I'm going to assume that you are new to teaching large classes, and possibly new to college teaching. There may be a few old futzers like me who will read this, sniff, and say, "Well, that's not how *I* do it!" but this is basically a beginner's guide. I hope that experienced teachers who browse here will recall that very little is inherently obvious the first time you do it. Second, I'm assuming that you want to do a good job and will be willing to spend some time and effort on experiments to fine-tune your course. Finally, I assume that you want to have a life outside the auditorium and will have a strong interest in tricks and techniques that result not only in a good product, but in time efficiency.

I'm also going to let you in on a little secret, one you must hide from your colleagues who do *not* teach large courses: Once the initial terror subsides, if you are a reasonably organized person, it may actually take you *less* time to teach your 400 students than it does to teach 20 in a senior-level course. It is not intuitively obvious that this is so, so when you are asked to serve on a particularly onerous committee, say Calendar and Petitions, you can roll your eyes back, shrug helplessly, and say, "I'd love to, really, but Psych 113—." This works more often than you might think, but don't try to pull it on an old hand at big classes.

There are some other advantages to teaching a megaclass. For starters, you're a celebrity. If you teach a really big course, you'll be known (for good or evil) all over the campus. At graduation time, when you are in the supermarket, young men or women, accompanied by who are obviously their parents, will discreetly point at you and whisper something to

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A Guidebook for Instructors with Multitudes. San Francisco, CA: Jossey-Bass, 2007.

the folks, undoubtedly worshipful praise. Unlike colleagues who teach puny classes, you have a shot at getting an ovation at the end of the semester, and as a confirmed ham, I can tell you that it is a wonderful sound. But perhaps the best advantage is that if you are both conscientious and good, you *know* that you're going to have a major, dramatic, and positive influence on hundreds, if not thousands, of people. You have a marvelous bully pulpit, and as many of your students are likely to be impressionable freshmen, you can have a powerful influence for good. But before you can have that influence, you have to know what to do with that mass of humanity expectantly waiting for you to speak your first words.

First, what exactly *is* a "large" class? *Large* is a relative term, of course, but for our purposes, a large course is taught in a lecture hall with fixed seats and has a number of students greater than the number whose names you can reasonably learn by semester's end. Class sizes fit neatly in categories. Ten to 15 students is the classic small class. Discussions are easy to set up, you'll know quite a bit about each of your students, and you can be very flexible in how you structure the class. Essay exams and term papers are the norm and not burdensome to correct. Fifteen to 40 students or so doesn't represent a qualitative difference in course structure, but things are just a bit harder for you. Thirty essay examinations take a lot longer to correct than 10, for example. For me, 40–100 students is the very worst class size. You can't really teach it like a small class, and you can't justify the investment in time required to use large-class techniques. You might still give essay examinations, but you don't have time to grade them as essays—you grade using a checklist of terms and ideas you want to see.

The dividing line between "large" class and everything else is probably about 100 students. People don't expect you to use small-class techniques, and students aren't affronted if you don't know their names. On the other hand, when bullying or begging your department chair for resources, you can point out that the per-student cost for whatever it is that you want is vanishingly small. Universities that have numerical systems for figuring out faculty teaching responsibilities typically will give extra credit for teaching classes larger than 100 students due to the presumed extra workload.

Why Your Class Could Belong to the Chamber of Commerce

When you teach a large class, you need a different set of attitudes than you do when teaching a small class. A large class is *fundamentally* different than a small class in the way it has to be set up and run, and your job description is different than a small-class teacher. You are a teacher, to be sure, but you are in charge of an enterprise that is not merely a class, but something far more complex.

Your Class Is a Small Business

As the teacher of a large class, you may have up to a thousand "customers." These customers have paid a rather large sum of money for the service you provide, and some of them probably won't like it. So you need a customer complaint procedure. If you teach a laboratory course, you will have a budget, which you must request and adhere to, with dire consequences if you do not. If you have readers, graders, or laboratory assistants, you are now in the personnel business. You have to select your people, train them, evaluate them, discipline them if necessary, monitor their performance, and be able to help new hires navigate the personnel department. You are also accountable if they screw up—captain of the ship and all that. Your students will scrutinize your grading records as closely as an IRS agent might look at your tax deductions, so your accounting system has to be both accurate and powerful. There are many reasons why your customers might sue you, so you have to be aware of the legalities of grading, letters of recommendation, sexual and employee harassment, and lab safety. Students will come into your office with intense and frightening personal problems because they are away from home for the first time, and you are the only adult figure they know on campus, so you have to know when to counsel and when to refer to a professional. There can be a 50-point IQ spread in your class, and students at both ends of the spectrum expect that you will be able to teach them, so you need to know something about educational psychology. You are dealing with large numbers of people, some of whom may have very good

reasons to dislike you intensely, so you need to be at least minimally aware of security. If you have a large number of teaching assistants and/or a large budget, you and your course will be of intense interest to local (campus) politicians and may either be helped or assaulted from a variety of quarters. You will be under a great deal of stress from many sources. The coach whose star forward is in your class is *exceedingly* interested in your grading policies. If students are driven away because you don't do a good job in your course, your university could lose hundreds of thousands of dollars a year. The handicapped and disabled students' office is also concerned with almost every one of your procedures, which you might at any time be asked to explain or defend. In short, you are not only a teacher, you are a *course manager*.

Once you start thinking of yourself as a course manager, not just a teacher, you can start thinking about ways to do a good job *and* save yourself some time. Some of the following phrases will help guide your thinking in this direction.

Sooner or later, everything that can happen, will happen, and you need to think about it and be ready for it.

The law of averages says that if you deal with large enough numbers, even the highly improbable will eventually occur. For example, only about .05% of the American public are the unfortunate paranoid schizophrenics. Of these, about 40% have the potential for violence. That's only .02% of the total population, a tiny number. But if you have 20,000 students in your career, significant numbers of whom you flunk, you're going to have around 4 students who are unstable and may react in a potentially dangerous way when you give them bad news. Do you know how you would handle such a student in your office, if he or she became unhinged while discussing grades?

I have had students experience grand mal epileptic seizures in lecture. A woman went into labor during a final examination. A student requested an extension on an assignment because his uncle and brother were just arraigned on first-degree murder charges in a mob-related slaying, and he had to run the families' legitimate florist business for a while until things calmed down (a quite reasonable request under the circumstances, which I readily granted). A student emailed me from the state penitentiary ask-

ing what he should do about his final because he was currently being held without bail. No death threats for me (so far), but a number of bodily injury and property damage threats.

Given that you will have so many students, Monday-morning quarterbacks will say, if something goes disastrously wrong, that you *should* have thought about this particular thing, and taken preventive measures, or had a procedure to handle it. And they would be right. Remember, you're a manager, and managers are expected to foresee reasonable contingencies and take appropriate preventive or ameliorative steps. The following are some things a reasonable course manager has to think about.

Large courses can't be ad-libbed.

In a small course, if a student asks a question about a course procedure, or how she should do an assignment, you can essentially "wing it," knowing that if what you say has to be revised, it's not a big deal. In a large course, however, the minute you open your mouth, hundreds of people are copying what you say down in their notes, and they *expect* what you have to say will be authoritative and final. It is very difficult and time consuming to alter things after you've said them in a large course. Think about giving an off-the-cuff answer to a question and then regrading 750 examinations when some kid successfully argues that what you said in lecture was different than what the text said (and you had long forgotten your lecture comment). Similarly, if you are delivering a more-or-less formal lecture, most people (other than Robin Williams) have difficulty improvising in front of a huge audience, and nothing is more dreadful than standing on that stage, all eyes upon you, *knowing* that you don't have the foggiest idea what you're going to say next. This means that your degree of preparation, both in your setting up of course procedures and your actual lecture presentations, must be greater than would be the case in a small course.

A bad policy is better than an inconsistent policy.

When you are starting your large-class career, naturally you will want to do a lot of experimenting—different lecture styles, different grading systems, and so forth. However, first-year students, who are notoriously nervous about change and ambiguity, are looking for consistency in their

dealings with you and your course. They have enough variables in their life without having to worry about a vacillating teacher. They know they're going to be evaluated, and they have the intuitive knowledge that if you know what's expected of you, you are more likely to meet that expectation. So they tend to react very negatively to any changes in procedure during the semester, especially procedures revolving around evaluation or assignments. Even when a change would appear to be for their benefit, say, a relaxing of the length requirement for a term paper, a lot of students will complain about it. For example, "Well, I already *wrote* ten pages, and now he only wants five. It's not fair."

Assuming you follow the suggestions in this book and think out all your procedures in advance, it is very unlikely that you will have a policy or standard so out of line that it requires a midcourse correction. If something does require some adjustment, you can usually accomplish the adjustment without publicly changing a policy. For example, let's say you're teaching a new class, and you don't really know the abilities of the students. If the first examination is a disaster and produces far fewer decent grades than you are comfortable with, you don't have to change your policy—just make the next examination easier.

The time to make changes in policy is between semesters. The only thing you will have to deal with then is the student grapevine. Large classes tend to generate stories, which develop into rumors, which in some cases become legends. Especially at a state university, there is almost always somebody whose older brother or sister took the course a couple of years back, and they will fill kid brother in on what students have to do to succeed in your course. Unfortunately, that was then, this is now, so if you do make a fairly major change in procedure between semesters, you do need to mention to students that things used to be done in a certain way but are different now. Stories on the student grapevine persist for four or five years, so you will have to repeat this warning for several semesters running. The grapevine sometimes embellishes or distorts facts. Thus, even though a story about your course might have originated years before you started teaching it, it is helpful to be aware of what's being circulated in the rumor mill so you can give students the straight story in a timely fashion.

Put it in writing.

Once you have formulated your course's procedures, assignments, and so on, commit everything to paper, and make sure your students have everything in writing. This accomplishes a number of things. First, it *forces* you to decide what your policies and procedures are going to be before the fact, rather than making such decisions on the fly. Second, it makes your life a lot easier because it takes a rich mine of excuses away from students:

I wasn't at lecture when you announced that.

I didn't know I was supposed to do that.

I heard that we only needed three references.

I thought you said Chapter 5 wasn't going to be on the examination.

My roommate said you didn't have to type your term paper.

I give my students an extensive course outline on the first day of class (see Appendix A), and the top sheet is an affidavit that says, essentially, "I have read and understood these course regulations, and agree to comply with them. I understand there will be loss of points on assignments if I fail to follow these procedures." They have to sign and date the affidavit, and turn it in to the teaching assistant at their first recitation section. Later on, when they say they didn't know they were supposed to turn in an outline before the main paper, I can pull out the affidavit and ask them why they signed it if they didn't understand the rules.

Taking potential excuses away from students is good for them and good for you. It's good for them because if they are fully and completely informed about what they are supposed to do, they will be more likely in fact to do the correct thing. It's good for you because you have to make fewer individual decisions—there are the rules in black and white, they apply to everybody in the class, and you're just enforcing the rules, not picking on the student.

Use a checklist.

I'm a pilot, and one of the first things they tell you in flight school is *always* to use a printed checklist at critical times of the flight. No matter how many thousands of landings you've made, or how many tens of thousands of hours of flight time you have—you *always* use the checklist. The reason is that at times of high stress, if you're doing a routine job, it is very easy to skip a step and not notice it, precisely because you've done it so many times. Similarly, for the novice pilot, distractions may cause you to neglect something rather important, such as lowering your landing gear.

The same is true for a large class. Especially on the first day of class, there is a lot to do—check rosters, make announcements, and so on. The stress level is likely to be high on those first few days of class, even for old-timers. Unless you want to look like a fumbling idiot in front of a thousand people, you want to *know* exactly what things you are going to do when you walk in that class, and in what sequence you are going to do them. Appendix B shows the checklist I use on the first day of class. Even after 50 semesters of teaching the same class, I still use the checklist for the first day.

You can't save them all.

Most good, conscientious, humane teachers would like to have a positive effect on *all* of their students. This feeling is especially strong at the beginning of the semester, before some of the students have revealed themselves to be indolent sloths, or slimy, cheating sleazeballs. Nevertheless, many idealistic new teachers would like to be able to do something for everyone, especially the earnest, struggling ones, and are crushed when at the end of the semester there are large numbers of bad performances despite the teacher's best efforts. "If only I had spent more time," these teachers say. "If only my explanations were clearer, these students would have passed."

In a large class, you have a very broad representation of the human condition. Your institution may call itself a "university," but that does not mean that everyone in your class has the intellectual capacity that we used to think was necessary for a "university" education. You will probably have some students in your class who don't have a prayer of passing, because they are there to satisfy an agenda—and it may infuriate you (as

it does me) when you are given students who are really nice kids but have been set up for failure by giving them "opportunities" that they have no means or readiness to exploit, at least while they're in your class.

You will also have some students who *want* to fail. Impossible, you say? Students are often strongly pushed by their parents into a particular "respectable" major. They might come from a strong, tight family, and they are not about to *defy* Mom and Dad. Not everybody who is a pharmacy major, for example, really wants to be a pharmacist.

I had a student as an advisee who had put off declaring a major, although her courses seemed to be pointing her toward pharmacy. She had been very regular in seeing me, and I had the gut impression that she was pretty smart, but you wouldn't know it from her grades. One day, when she dropped by my office, just to start the conversation going, I asked her, "So, what do you want to do when you *finish* URI?" Whoops! Wrong question. She burst into tears and wracking sobs. After she tapered off to sniffles, I asked her why the tears. Well, it seemed that what she wanted to do more than anything in the world was to be a farrier, but her dad, whom she loved beyond words, was a blue-collar guy who was determined that his daughter was going to rise above his humble status to have a profession. Pharmacy was just the ticket, and as long as he was paying tuition, that's what her major would be. A little distracted by the outburst, I thought she said that she wanted to be a *furrier*, which was really odd for a kid who had told me that she loved animals, but then it hit me that she was on the equestrian team, and she meant *farrier*—a professional horseshoer. She'd worked for one during the summer and absolutely fell in love with the job. The wheels started to turn, and I asked her if it would be okay with her dad if she became a veterinarian instead of a pharmacist. She said she supposed so, but she was pretty sure she didn't have the grades for vet school—and she was right. But I told her she could declare to be an animal science major, and she could even take courses on equine science, or whatever it is when you study horses. Her grades would almost surely pick up, and her dad would be so happy to see her in that cap and gown that he wouldn't mind when she didn't make it to vet school, and she could then take a farrier apprenticeship. Happy ending to this story—that's exactly the way it worked out, and if I owned a horse, which I don't, I would never have to pay to have it shod

as long as I lived in Rhode Island—Jennifer promised me a lifetime supply of horseshoeing.

In a large class, you don't often hear about these stories, but you can be sure that there are always at least a few students out there who are going to fail no matter *what* you do, and you should not try to measure your success as a teacher by being able to get all of them safely through your course.

Start like Attila the Hun, finish as Mr. Rogers.

Everyone has a personality. Some people are affable and informal. Others are distant and reserved. However, whatever one's core personality, most people have a range of personality expressions, depending on the time, place, circumstance, and surroundings. You aren't the same person to your spouse, your kids, your friends, and the IRS auditor. Whatever your teaching personality, it will be easiest for both you and your class if you start out the semester at the most formal extreme of your personality, and then if things seem to be working out okay, you can relax a little. If you start out as a tough guy, and find after a time that the class is doing well and working hard, if you ease up a bit, the class will breathe a sigh of relief that you are now showing some human qualities. On the other hand, if you start out cozy and friendly (Don't call me Professor Farnsworth, just call me Steve), and the class gets the idea that you aren't really *serious* about things like deadlines, if you get tough later on, they will feel like you have turned against them, and aren't really as nice as you seemed to be.

Your style of dress will give the class rich clues as to the kind of personality you want to project. I always start the semester with my best suit, a power tie, and the gold pocket watch my Dad gave me. Then, as the semester wears on, if things are going well, I shift to a sport jacket, eventually lose the tie, and may even wear a sport shirt. On the other hand, if I feel they've been lazy in preparing for an exam and need a bit of talking to about this problem, back comes the suit. If I feel that they're starting to become overwhelmed and need some reassurance, I shoo the moths off my comfortable ol' cardigan sweater and do everything except change into slippers at the beginning of lecture. However, the decline of professional dress standards (or elimination of archaic dress codes, depending on your point

of view) means that *formal* is now definitely a relative term. Formal in some quarters means you wear a shirt over your tee.

The personality you project will have a lot to do with the day-to-day behavior of your class. High school students are used to the idea of "testing" their teachers to find out what they can get away with in class, and then adjusting their behavior depending on the response. In recent years, they seem to be bringing that habit with them to college. Many of my colleagues are now complaining about a dramatic increase in rude behavior in freshman classes, and they are not quite sure what to do about it. I rarely seem to have this problem, and I think one of the reasons is the tone I establish on the first day of class. I try to suggest to them that they are in the intellectual equivalent of Marine recruit training, I am their drill instructor, and if they wish to find out if I really mean these things I am saying about the course, they are welcome to try me out. This approach is not for everyone, of course, but it works just fine for me. Later on in the semester, the drill instructor gets sent to the showers and is replaced by Mr. Wizard, Bill Nye the Science Guy, Beakman, or the appropriate, affable TV science teacher for your generation.

Every once in a while, however, the students get a hint that the drill instructor is waiting in the wings if they don't study, and they'd better not do anything to bring him back, because *he's out of control*. By the end of the semester, as they're getting ready for finals, I'm all tea and sympathy because the high school bravado has pretty much disappeared, and they really do need a lot of reassurance and confidence building. Going from tough to nice is appropriate given the changing needs of the students during the semester, but going the other way seems to produce student ill will at an awkward time—student evaluations of faculty.

Don't try to teach them as you would have liked to be taught when you were their age.

Many conscientious new teachers make this understandable mistake. As they think about what their personal teaching style will be, they look back at those professors who had the greatest impact on them when they were undergraduates themselves. "Gee, Professor Goldschnitt changed my life—how far wrong could I go if I taught like her?" Actually, quite wrong.

If you have made it through the educational system far enough to become a college teacher, almost by definition you enjoyed school and learning. You were good at reading and eventually developed some sort of passion about your field of interest. As you went through the system, your friends and acquaintances got smarter and smarter, as those who weren't academically inclined were filtered out. You were comfortable with the life of the mind and enjoyed the challenges of using your brain.

That description may not fit all of your first-year students. What might be a terribly appealing teaching approach to a committed student might well be a turnoff or even a threat to a student who views college not as a place to learn how to use your mind, but rather as the place where you earn your union card. Colleges have abetted this view by not discouraging the aphorism, "You've got to go to college to get a good job." Does this mean that students who are in your class for the "wrong" reasons should simply be allowed to die academically while you concentrate all of your efforts on those students who are able to profit immediately from the kind of teaching approach that was so successful with you when you were a student? No. It means, rather, that you are going to have to explore a variety of teaching approaches, some of which may not be comfortable or intuitive for you, to reach those students who *can* learn, and *need* to learn, but don't learn the way the academically gifted student learns.

This is one of the reasons why it is much easier to win teaching awards if you only teach small upper-division courses than if you teach a scholastically demanding large course. In the small, advanced course, the students will be very much like you are and will respond in a similar way to your enthusiasms. In the large course, you have to study your students, find out what makes *them* tick, what rings *their* bells. The jargon term used in the education community to describe the very different ways students go about learning things is *learning styles*, and when I went through our campus's Instructional Development Program workshops on principles of learning, learning styles was perhaps the most revealing section in terms of explaining otherwise mysterious behavior. For example, most scientists involved in national panels on improving undergraduate science education argue that the old cookbook science labs don't teach students anything except rote procedures, and are boring. They advocate instead "discovery," or "inquiry" labs, which are open-ended investigative

affairs that are very appealing to scientists. However, when you actually put one of these labs in place, large numbers of students stand around looking bewildered or bored, and often the most common question in the discovery lab is, "What are we supposed to do now?" Liking to perform experiments rather than replicate something that has been done before is a learning style, and designing a course around the learning style (yours) of only a few of your students invites discontent.

There are a variety of ways of categorizing learning styles, but most divide basic learning styles into contrasting pairs—for example, independent-dependent, observer-participant, and so on. It is important to note that there is not a one-to-one relationship between "intelligence" and learning style. Bright students do not all learn in the same way, and neither do average ones. In a practical sense, what this means is that in a large class, where you are likely to have *every* learning style represented, if you teach in a way that most appeals to you, you are very likely to turn off large numbers of your students.

A chemist colleague of mine had a dramatic demonstration of this when he was developing a computerized tutorial system for basic chemistry. The student would be presented with a question, and if he got it right, he would be given the next question of slightly greater difficulty. If he got it wrong, he would get the correct answer, an explanation of why his answer was wrong, and then a new question. During pilot testing, it was found that after the novelty wore off, significant numbers of students did not return for more tutoring sessions. Having a captive audience, Jim was able to ask the defectors why they weren't coming back. It turned out that many of them didn't like the *way* the tutorial worked. They didn't want the correct answer and a new question. Rather, they wanted a *hint*, then a second try. The program was revised to provide a quick diagnostic of learning style at the beginning of the tutorial session, then the presentation of the questions was appropriately modified. Participation greatly increased after the change.

What this means to you is that unless you want to appeal only to a relatively small number of students, you need to first find out something about their learning styles through questionnaires that you might obtain from your campus's faculty development office, and then mix and match both your assignments and teaching styles so that no matter what your

students' learning styles are, there will at least be some tasks and teaching approaches that will appeal to them. You can't please all the people all the time.

All right, enough of the preliminaries. Let's get ready for the first day of class.