

The
Effective Teaching Assistant



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Sponsored by the Office of Graduate Studies

The Effective Teaching Assistant at Drexel University

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Introduction

The Purpose of This Manual

Every college or university develops its own culture and learning environment. This manual has been prepared to give you a basic overview of important aspects of undergraduate teaching at Drexel.

As a Drexel teaching assistant, you will be expected to learn quickly, teach competently and mix easily with people from all over the world. You have already demonstrated that you are a good learner. You may never have had any instruction in the art of teaching. You may have expected your duties to consist simply of research and grading, but find yourself with sole responsibility for one or more classes. Your exposure to different nationalities and ways of being may not have prepared you for the kind of students you will face in the classroom. There may be very limited time, given your graduate studies and other responsibilities, to devote to learning to teach. Nevertheless, you represent Drexel University to your students and their families as much as a full professor with many years of experience. Thus, this manual was produced to assist you to assume that responsibility.

History of the Effective Teaching Assistant

This manual has had a long life. Its first edition was written by two Business professors, Chris Jelepis and William Stahlin in 1990. Chris and Bill had realized that teaching assistants were often assigned responsibilities for which they had received no training and both thought that a manual would be of great use to them. That year, the two of them distributed copies of the first edition of *The Effective Teaching Assistant* to colleges and departments. Subsequently, the Committee on Teaching Assistant Excellence, that had been formed, became aware of the handbook, and reprinted and distributed it to new teaching assistants through Fall 2000. In academic year 2000-01, the staff of the Faculty Development Center (including Rose Ketterer) undertook a major revision and expansion of the manual. Since then updating and changes to it have been the responsibility of the Graduate Studies Office which hosts the annual TA Orientation every September.

The Academic Structure of the University

Drexel University is an institution of higher learning that grants advanced (masters and doctoral) degrees as well as undergraduate degrees. Drexel currently includes ten colleges and three schools:

- The College of Arts and Sciences
- The LeBow College of Business
- The College of Engineering
- The College of Media Arts and Design
- The College of Information Science and Technology (the iSchool)
- The Richard C. Goodwin College of Professional Studies
- The College of Nursing and Health Professions
- The College of Medicine
- The College of Law
- The Pennoni Honors College
- The School of Biomedical Engineering, Science and Health Systems
- The School of Education

- The School of Public Health

Members of the teaching hierarchy belong to the following categories:

- Teaching assistants constitute the lowest rank and are usually graduate students seeking their PhD degrees.
- Part-time faculty members are called adjunct professors.
- Full-time “non-tenure track” faculty members are called auxiliary professors. Adjuncts and auxiliaries generally are appointed for one academic term or one academic year.
- Tenure consists of a permanent faculty appointment that can be terminated only if the discipline in which a person is tenured has been eliminated from the curriculum or if the faculty member has committed serious offenses of ethical standards or has been found guilty of criminal behavior. Tenure-track faculty members who are not yet tenured are generally lecturers, instructors or assistant professors. Tenured faculty members are usually either associate or full professors. Retired faculty may be awarded the honorary title of emeritus professor.

Faculty and teaching assistants belong to academic departments. Related departments make up a college. Department heads report to the Dean of their college. Academic deans report to the Provost, who is the chief academic officer of the university. The Provost reports to the President, who is chief executive officer of the university. The President reports to the Board of Trustees, a body of experts who deliberate on and approve or disapprove policies and financial decisions proposed by the President.

The Culture of Drexel University

The culture of Drexel University grows from its roots as a career-oriented, technological institution. Drexel students, on the whole, tend to be hardworking and focused on professional advancement. The combination of a strong undergraduate Co-op program and an academic calendar divided into four equal terms (Fall, Winter, Spring and Summer) makes everything at Drexel seem fast-paced and goal-driven. Co-op work cycles send undergraduate students to scattered locations for extended periods and make it challenging to establish lasting community on campus. There is less time for reflection, cultural pursuits and socializing than at semester-based or liberal arts institutions. Every teacher here has to be cognizant of that.

General Advice

New teaching assistants can be overwhelmed by their sudden change in status. Almost all academic departments provide substantial support for their teaching assistants; it is the unusual one that does not and even then, course directors to whom TAs are assigned are available to help. Those of you who discover that you need advice or support outside your departments can turn to several organizations on campus. The Graduate Studies Office is one place to start. Then for more specific concerns, consultants for the Office of Information Resources and Technology (IRT) will assist you with software or hardware problems and also schedule workshops on various aspects of technology use each term. Hagerty Library research librarians can be helpful with questions about how to locate resources to enrich your courses. International teaching assistants can contact campus offices for different kinds of support for specific concerns: The International Students and Scholars Services (ISSS) for information about visas and policies and regulations of the United States Department of State; The English Language Center (ELC) provides confidential, individual consultations on teaching as well as a support group for concerns related to the classroom.

Staff of the Center for Academic Excellence (CAE in the Korman Building) will direct you to a wealth of information that will enhance your teaching and TAs are welcome to participate in many of the CAE programs for faculty such as brown-bag sessions and special workshops. Contact information for these and other campus offices appears in Section III of this manual.

A Word to International Teaching Assistants

Many of the problems faced by international teaching assistants are the same as those faced by American teaching assistants. The International teaching assistant, however, is new not only to Drexel and to teaching, but also to this country. Two unique concerns affect you: language barriers and the different culture and behavior of American students.

The greatest concern of International teaching assistants is language. You fear that you won't be able to understand your students or that your students won't be able to understand you. As you gain more experience speaking English, your concerns will lessen.

Give your students a chance to get accustomed to your accented English. Students are exposed to many things that are novel to them, including different accents. There are New England and Southern accents among Americans. Begin slowly. Tell students what country you're from and why you're here at Drexel University. If students understand a little about your culture and background, they're more likely to give you a chance. They're also more likely to make the small effort necessary to understand an unfamiliar accent. Keep in mind that American students tend to be very forgiving and flexible.

One important way to gain acceptance by your students is to let them know that you care about them and their success in the course.

Make it clear to the class that they should let you know if they don't understand something you say. Be patient when this happens and don't be offended or defensive about these communication breakdowns. If you don't understand a student's question ask the student to rephrase it. This won't compromise your authority. However, pretending to understand when you don't will undermine your authority and lose the students' respect for you.

American students are different from the students in many other countries. Their dress and manner may be quite casual. Classroom behavior may be informal, with students sometimes questioning or disagreeing with the instructor. This is accepted behavior and should not be treated as a challenge to your authority. It isn't a sign of disrespect but rather a student's interest in dialogue. Also be careful not to be overly authoritarian -- it's resented by American students and will interfere with your effectiveness as a teacher.

Lastly keep in mind that you'll make some mistakes. Try to laugh at them and make them work to your benefit. Demonstrate that you care about your students and this country and you can minimize any problems you'll encounter with language and the American culture.

Section I: The Role of the Teaching Assistant

Teaching -- Showing the way; directing, guiding; imparting instruction or knowledge.

Assistant – One who is present to help; aiding, auxiliary. (Oxford English Dictionary)

Overview

As a teaching assistant, you play a vital role in providing effective classroom instruction at Drexel University. You will assist students and professors. You will direct some learning activities yourself and you will be providing support in others. Yet new teaching assistants often have little experience in teaching. This guide is designed to help you as you attempt to provide high quality instruction in the lecture hall, the classroom or the lab. Some people are more “natural” teachers than others, but, given solid information about the “best practices” in teaching and learning, everyone can improve their skills.

As you go about your duties note that you are not alone. A faculty mentor in your own department, usually the director of the course to which you are assigned, is the best aid to your professional development as a teacher. If such a mentor is not available to you then try to partner with a mentor outside your discipline. Many skilled and experienced Drexel professors are ready to help you as you learn how to teach. The CAE and its webpage can be important sources of support for you. Other Drexel offices (including the Graduate Studies Office through the Graduate Student Excellence Committee) are also ready to provide various forms of assistance. See the section on “Some Important Drexel Support Services” in this manual.

As a teaching assistant you have the opportunity to develop presentation skills as well as your powers of observation and feelings of empathy. The preparation that goes into teaching is taxing, but the rewards of teaching others and doing a good job are worth the time and effort.

This guide assumes that you have little if any formal training or experience as a teacher. It includes suggestions and advice for being successful in the classroom. Never forget that teaching effectively takes a great deal of time, effort, and dedication. In other words, be prepared for a demanding but gratifying task as you help students to progress and succeed.

Much of what you read here will come alive as you meet your students and have a few sessions with them. Read the guide through now and refer back to it from time to time as the term goes on. You’ll develop your own style and adopt suggestions in the guide to fit your own personality. Preparation and a positive attitude will help you do a good job. Remember to feel comfortable and relaxed about what you’re doing.

In “The Art of Teaching,” Gilbert Highet says:

Teaching isn’t confined to parents and professional teachers. In every business and industry, there are learners and teachers. Whenever there are beginners and experts, old and young, there is some kind of learning going on, and some sort of teaching. We are all pupils and we are all teachers.

Think of your own life as an individual. Much of it is routine. Some of it is amusement. The rest is made up of learning and of teaching: whether you’re a doctor enlarging your knowledge of certain types of illness or an author writing a book, or a political speaker influencing an audience you’re learning for yourself and teaching others.

Most people don't realize how much of their private life is taken up with amateurish teaching and haphazard learning; and not many understand that most of us, as public beings, either learn or teach incessantly.

You have people around you, fellow teaching assistants and faculty members who will share advice, experiences and materials with you when you need moral or professional support. Don't hesitate to seek this valuable aid

Identifying Roles

Arthur Chickering, in Education and Identity, says, "The function of college is transportation. It offers rapid transit from adolescence to adulthood, from dull or poorly paid jobs to more interesting or better paid ones, from slum to suburb, from lower to middle or upper class. Its function is to help the student get from where he is to where he wants to be."

We as teachers have an obligation to help the people we teach have the best ride possible in getting from one place to another.

As a teaching assistant, you will have many roles:

- *Educator* -- First and foremost you must educate your students by imparting knowledge and understanding.
- *Subject Matter Expert* -- You need to be knowledgeable in the area you're teaching. You don't need to be all knowing.
- *Communicator* -- It is essential that you convey concepts and facts clearly.
- *Motivator* -- By making material interesting and showing enthusiasm, you can encourage students to learn.
- *Evaluator* -- Providing feedback and assigning a grade are end products of the course. While grades may not be an important end product to the instructor, many students hold them to be of utmost importance.
- *Listener* -- You must hear what students are saying both verbally and non-verbally. For instance, the rustling of books and papers at the end of a class is the students' way of saying they've stopped paying attention.
- *Facilitator* -- Coordination of class interactions such as leading and controlling discussion are important to two-way communication.
- *Counselor* -- You'll provide guidance on how to be successful in the course as well as with future careers.
- *Role Model* -- Perhaps the thing you teach most profoundly is "what kind of person is interested in this subject?" Don't underestimate the impact you have on students. Because of your position, your behavior influences students. How you feel about lifelong learning, how you relate to other people, are all-important lessons your students, and the professor you are assisting, will learn.
- *University Representative* -- Every moment you teach, you represent Drexel and your department to the world. This is a heavy responsibility, but also an honor.

While the number of roles that you'll hold as a teaching assistant may seem overwhelming, remember that you can change pace often, and that expert help is available.

Professional Ethics

Teaching assistants are expected to maintain the same standards of professional ethics as any member of the Drexel University faculty. Always come to class on time and prepared to teach. When grading, teaching assistants should establish clear, firm, consistent, and objective standards, and assign grades based on those standards. When dealing with students, either in or outside the classroom, avoid any sexist, racist, religious, or ethnic jokes or remarks.

Teaching assistants should maintain their integrity by establishing a strictly professional relationship with students, both inside and outside of the class. You can be pleasant, but you are not a friend to your students. Romantic relationships between teaching assistants and their students are not ethically appropriate and may constitute sexual harassment, which is against the law.

Section II: Learning and Teaching

The Art and Science of Learning

Learning Principles

Learning principles are ideas about how the human mind works and about how information can best be presented to take advantage of people's natural ways of thinking. In order to teach effectively, it will help you to have some understanding of some generally accepted learning principles:

- All human beings can learn
- Individuals must be motivated to learn
- Learning is an active process
- Proper guidance can help promote learning
- Materials must be provided
- Learning requires time
- Learning styles vary so teaching methods should be varied
- Learning should provide satisfaction
- Reinforcement should follow correct behavior
- Standards of performance should be set for learners so they can measure progress

Learning Categories ¹

The system that follows, developed by Benjamin Bloom (and called Bloom's Taxonomy), is one of the most widely used and is based on the notion of hierarchy of thought processes. Each category requires more complex thinking than the one preceding it, and also builds on or incorporates the preceding types of thought. That is, one needs the capacity for "lower" levels of thought in order to proceed to the "higher" levels. This suggests a teaching strategy: In the early stages of a topic, there should be more emphasis on lower, more basic thinking processes; as this is mastered, students will be able to move up the hierarchy.

<i>Category</i>	<i>Sample Performance Statements</i>
Memorization is the remembering of previously learned material. This may involve the recall of a wide range of material, from specific facts to complete theories, but all that is required is the bringing to mind of the appropriate information. Memorization represents the lowest level of learning outcomes in the cognitive domain.	a) States names of four European rulers during World War I b) Describes how to titrate. c) Defines deviance.

¹ Handbook for Teaching Assistants: The TA at the University of Delaware, edited by Judy G. Bailey, fourth ed. (Wilmington: Center for Teaching Effectiveness, 1988) pp: 70-71. 3 Major Categories in the Cognitive Domain

<p>Comprehension is the ability to grasp the meaning of material. This may be translating material from one form to another (words to numbers), interpreting material (explaining or summarizing), and estimating future trends (predicting consequences or effects). These learning outcomes go one step beyond the simple remembering of material, and represent the lowest level of understanding.</p>	<ul style="list-style-type: none"> a) Summarizes Plato's views on good and evil. b) Describes the composition of the nucleus of an isotope from its position in the periodic table. c) Restates the concept of the superego in his or her own words.
<p>Application is the ability to use learned material in new and concrete situations. This may include the application of such things as rules, methods, concepts, principles, laws, and theories. Learning outcomes in this area require a higher level of understanding than simple comprehension.</p>	<ul style="list-style-type: none"> a) Calculates the volume of a sample of gas under any conditions. b) Writes a coherent paragraph, as given by the basic rules, to express his or her idea. c) On the basis of a description, classifies a society as embodying organic mechanical solidarity.
<p>Analysis is the ability to break down material into its component parts so that its organizational structure may be understood. This may include the identification of the parts, and recognition of the organizational principles involved. Learning outcomes here represent a higher intellectual level than comprehension and application because they require an understanding of both the content and the structural form of the material.</p>	<ul style="list-style-type: none"> a) Identifies the ions in an unknown using a chemical qualitative analysis scheme. b) Identifies the key themes in a short story, and shows how they are interrelated in producing the outcome. c) Identifies several central values in a non-Western cultural system, and shows how they are expressed in economic and religious activities.
<p>Synthesis is the ability to put parts together to form a new whole. This may involve the production of a unique communication (theme or speech), a plan of operations (research proposal), or a set of abstract relations (scheme for classifying information). Learning outcomes in this area stress creative behaviors, with major emphasis on the formulation of new patterns or structures.</p>	<ul style="list-style-type: none"> a) Devises a scheme for the synthesis of an organic compound from a given starting material. b) Working from original documents, constructs an account of how European intervention affected the Civil War. c) Designs an experiment for establishing in what ways how certain members of an ecological system are dependent on one another

<p>Critical Evaluation is concerned with the ability to judge the value of material (a statement, novel, poem, research report) for a given purpose. The judgments are to be based on definite criteria. These may be internal criteria (organization) or external criteria (relevance to the purpose) and the student may determine the criteria or be given them. Learning outcomes in this area are highest in the cognitive hierarchy because they contain elements of all the behavior other categories, plus conscious value judgments based on clearly defined criteria.</p>	<p>a) Chooses the most efficient scheme of synthesis for an organic compound from among several schemes.</p> <p>b) Evaluates the quality of several poems on the basis on internal structure and harmony of imagery.</p> <p>c) Compares the adequacy of three theories or personality in explaining a specified type of</p>
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Everyone learns a little differently. If you try to use the levels of Bloom's Taxonomy in planning your lessons you will be able to meet different students' needs and many levels of thinking in each individual.

Learning Styles

The term "learning styles" is used to refer to several ways in which people learn most easily. Most people who are involved with college level teaching are able to learn well by reading, listening to lectures and taking and reviewing notes on complicated subjects. It is easy for academics to suppose that everyone learns in the same way. However, some people learn best by hearing instruction; they are auditory learners who thrive on good lectures and discussions. Others learn best by seeing, whether text or images; they are visual learners who may work best on their own. Still others learn best by manipulating objects; they are kinesthetic learners who may excel in laboratory classes.

Some people are able to learn in any modality, even those that are less natural for them. Others suffer from learning disabilities or learning differences that limit their ability to focus and convey their learning.

Seven Principles for Good Practice in Undergraduate Education

In 1987, the Wingspread Journal published an article by Arthur W. Chickering and Zelda F. Gamson. The article reported a study supported by the American Association of Higher Education, the Education Commission of the States, and The Johnson Foundation. The principles, which "rest on 50 years of research on good teaching and learning in colleges and universities", were quickly adopted as standards of excellence by institutions and accrediting organizations throughout the United States. Three inventories were later developed to measure the presence of the seven principles in the work of individual faculty members, individual students and institutions. The seven principles state that good practice in undergraduate education:

- encourages contact between students and faculty
- develops reciprocity and cooperation among students
- encourages active learning
- gives prompt feedback
- emphasizes time on task
- communicates high expectations

- respects diverse talents and ways of learning

As you develop your own teaching style and mature in your knowledge of your discipline, remember to incorporate these powerful guidelines into your work.

Active Learning

As audience to a traditional lecture, students rely on the teacher to do all the work of preparing and investigating course material. Any learning they accomplish is passive. At most, they take notes or ask questions. In contrast, active learning involves students in problem solving, discussion, research, hypothesis generation and other activities designed to make them pursue learning. One of the pioneers of active learning and active training, Mel Silberman, writes, “When learning is active, the learner is seeking something in answer to a question, information to solve a problem, or a way to do a job. Learning can’t be swallowed whole. To retain what has been taught, students must chew on it.” Silberman’s book *Active Learning* provides many easy-to-use activities and is available in the CAE. His webpage, *Active Learning Online* can be accessed at www.acu.edu/cte/activelearning/whyuseal.htm

Collaborative or Cooperative Learning

Collaborative learning and cooperative learning are terms used interchangeably to refer to the practice of having small groups of students work together on a project. Generally, everyone in a group receives the same grade. Students are thus encouraged to divide the work equally and to co-teach each other. Two trends drive the adoption of collaborative learning at the college and university level: first, extensive reports on the effectiveness of small group learning in elementary schools and high schools; second, the need to prepare students to participate in teams in the workplace.

Groups of four to six students are formed, often by random assignment. The academic task and evaluation of the group’s work must be clearly specified. The group’s goals should be itemized into work that involves individual accountability. For example, one person may do the library research, another the web research, another the writing of results, and still another may deliver an oral report on the team’s findings to the class. It is helpful to give students a way to dismiss an unproductive or obstructive team member, who then must present an individual project of comparable difficulty. Collaborative learning fosters critical thinking, social skills and responsibility for one’s own and others’ learning.

The Learner Centered Approach to Teaching

For centuries, the central method of instruction in higher education has centered on the teacher. The measure of teaching excellence was the quality of the lecturer, sometimes referred to as “the sage on the stage”. The emphasis was on “inputs”, the material presented by the teacher. In recent years, the focus has shifted to the ability of the instructor to motivate students and design learning activities that facilitate learning. The emphasis now is on “outputs”, the competencies demonstrated by the students.

The new model of the teacher as a learning coach is called “the guide on the side”. The goal is no longer to pour knowledge into passive students, but to teach learners how to find the answers to important questions. The change in teaching style is not merely a fashionable trend, but is based on solid research that shows deep learning, understanding that lasts and is transferable to other subjects, results when students take responsibility for their own learning. The book *How People Learn* summarizes much of the recent educational research on the subject.

In the capacity of resource person, your task is to model good learning strategies, point out useful resources for the learner, devise interesting problems for learners and be available to answer questions.

Your responsibility is to set realistic teaching goals for yourself and reasonable learning objectives for the students, to present material in a useful manner, and to measure your effectiveness. Teaching generally is a cyclical process of planning, presenting, evaluating and planning again.

Some basic steps for learner centered teaching are the following:

1. Set realistic teaching goals for yourself. As you review the syllabus for your course and consider the amount of class time you will have for each topic, decide on the most important points to make and the supporting research to cite, as well as problems or activities that will help students to understand concepts or master skills.
2. Set reasonable learning objectives for the students. Everything you teach should be related to the “outcomes” of the course. Learner centered faculty often include in their syllabi a statement about learning outcomes, such as, “A student who successfully completes this course will be able to:” followed by a list of learning objectives. For example, the syllabus of a women’s studies course might state:
Learning Objectives. After successfully completing the course, a student should be able to: perceive gendered patterns of behavior and expectations in religious institutions, identify and describe common practices and beliefs of a variety of world religions, compare and contrast the spiritual experience of women and men in several historic periods, demonstrate understanding of the importance of religion and spirituality in the emotional and social lives of human beings, and know how to conduct research on religious and spiritual experience.
3. Present material in a useful manner. Speak clearly and in a tone loud enough to reach the student furthest from you. Choose a level of explanation that is neither too simple nor too advanced for the class. Because people have limited attention spans and different learning styles, plan for a change of pace at least every 20 minutes. For example, you may open a 50 minute class by lecturing for 20 minutes, then break the class into small groups to discuss a question or work on a problem for 10 minutes, then ask for reports from the small groups for 5 minutes and conclude with 15 minutes of discussing common mistakes made on a recent quiz or in homework.
4. Measure your effectiveness because “There is no teaching without learning.” Course evaluations at the end of a term do not help you to reach the class that is surveyed; their learning time with you is nearly over. Find simple ways to determine whether the class has understood you or assigned readings DURING AND AT THE END OF EACH CLASS. A professor who has won many awards for teaching commonly interrupts lectures to ask. “Who feels lost? Who doesn’t understand what I’ve been saying?” If no one raises a hand, the professor continues. “Who thinks someone else in the room might be lost?” One widely used method of assessment is to ask for a “minute paper” at the end of each class. Students take a minute or two to write the answer to a question such as, “What is the most important thing you learned during this class period?” or “What is the most confusing thing you have heard in this class period?” You should go over the minute papers carefully and open your next session by summarizing them and responding to them. You may need to repeat material that students did not understand, or reorganize your plans for the next class period. The minute paper and many other strategies for measuring your effectiveness can be found in the book Classroom Assessment Techniques, available in the CAE.
5. Start all over by planning for the next time you teach the material you have just covered. Leave notes for yourself in texts or your class notes or another place where you will find them easily.

Ways of Holding Class

When you plan for a class, balance the interaction of three components: the students, the teacher, and the material. You should seek to create harmony among these elements.

There are many different ways of engaging students in a classroom setting. Below are some of the main ones used in Drexel classes. You should experiment with a variety of them, so you can see what works best for you, what works best for your students, and what works best for the material.

The lecture. The teacher transmits information to students who remain passive. Maintaining student attention is essential. The lecture is useful in presenting a large amount of theoretical information quickly. It's economical because it utilizes one instructor, does not involve a lot of technology, and allows for much specific information to be transmitted in a short time.

On the other hand, this method may not stimulate the participation of the students, is not effective in changing attitudes, and does not address the differences in general knowledge of the students.

Discussion. A group of people meets to discuss a certain problem and to arrive at conclusions that will help solve it. The class discussion method requires the participation of people directly related with the problem. It allows them to share ideas, to learn from others, and sometimes to work in groups. The group usually produces solutions to practical problems.

The potential pitfall of this method is that one student may dominate the discussion over less assertive and introspective students. Also, if not coordinated properly, people may wander to items unrelated to the original discussion.

Case study. Students analyze a real or imaginary situation that is written as a history. They're responsible for investigating, alone or in groups, the theory behind the case. This method involves active participation of the students in learning, discussing sharing points of view, and working in groups, so learning retention is higher than for lecture or discussions methods.

The disadvantage of this method is that it requires considerable time to transmit little specific information and a great deal of research to select the cases. Also, it may be difficult to fully present more than one answer or solution to a case.

Role-playing. Role-play consists of a spontaneous dramatization of a real situation by two or more people. Students can gain insight into the personal and social values of their own behavior and attitudes. The acting is observed and critiqued by the class. This method provides the student an opportunity to analyze his or her behavior in selected situations and to change or modify attitudes.

The drawback to this method is that it requires a great deal of time to learn few things and, if not properly involved in the situation, the acting can deteriorate into silliness. The discussion leader must have good facilitation skills to develop key points made or not made during the role-play.

Project-or problem based learning: Students work on solving real problems in the field of study using real tools and methods. Lab classes are one instance of this method. As in a workplace, students can explore the excitement and disappointment of discovering something through their own initiative. This approach taps into the different abilities learners have: some may develop into natural project leaders, others may be skilled at graphically depicting data, and others may be especially acute at analyzing numerical data.

The drawback with this approach is that the students must buy into the project and really take charge of their own learning to a large extent. If they are not committed, it doesn't work well. And as with case studies and role-playing, it may take a great deal of time for students to discover what is intended.

The Art and Science of Teaching

The First Class

Preparing for the First Class

Even the most experienced presenters suffer a little stage fright before they stand in front of an audience. Stage fright is normal and healthy and can even prompt you to perform at higher levels. As you learn to accept and control your nervousness you'll be more comfortable. You can keep improving through self-evaluation. One key way to overcome stage fright is to be well prepared and organized.

Meeting a Class for the First Time

Preparation is of crucial importance. Prepare your lesson plan well before your first meeting with the class and study it carefully. You'll get started correctly if you know exactly what you're going to cover in the first class, and if you're organized, and have practiced or rehearsed what you want to say.

Review the syllabus and/or course outline with the students, being certain to cover the requirements and assignments of the course. Take nothing for granted and don't assume that students already know basic information. For example, tell them when the class meets, your policies on attendance and tardiness and how you enforce them.

Have on hand the materials to be distributed at the first meeting. Having everything you will need in advance can alleviate some nervousness and will make a favorable impression on the students. No matter what the course, students appreciate an instructor who's well organized, assertive, and decisive about the course.

Arrive early. Check to make sure any technology you need (computers, projectors, etc) are working and you will have the ability to do what you need.

Put the agenda for the day on the board so students know what to expect from the moment they come in. Stick to this agenda.

Greet the students when they arrive. Talk about their expectations of the class, campus, or current events. Do this after class as well. You'll be less removed or aloof from them. Students who choose seats up front are especially receptive to small talk with the instructor.

The First Few Minutes

The first few minutes of the first class meeting are special. There's a certain excitement and anxiety on both sides of the room. This is the first meeting of a group that will be with you for the next ten weeks. This meeting is the most difficult to plan because enrollments aren't yet firmly established, and names and faces are unfamiliar to you. The students may be late because they're wandering mentally as well as physically and because they're under even more stress than you are.

Be early. There's no need for you to make your grand entrance five minutes late. Get to class at least five minutes early: Direct and assist students, organize the items you wish to distribute and write on the board. When students realize that you arrive early, they'll see the importance of arriving on time.

Be friendly. It's just as easy to smile and look at students directly, as it is to take an attitude that they don't exist. Answer any questions that students ask but address questions of a general nature and importance to the whole class. To break the ice and help them feel more relaxed, you might welcome them as they enter and indicate the name of the course and that they should sit close to the center of the room. Remember that in these first few minutes you should show a sincere interest in students and offer any help you can.

Communicate effectively. You want the students to know who you are. So tell them your name, your graduate major, and a little personal history about yourself, e.g., where you went to undergraduate school, what activities if any you participated in, hobbies, and work experiences. Speak slowly and carefully. Remember students are making judgments immediately and your verbal communication style is important. Write your name, your office telephone number, your email address and your office hours on the chalkboard.

Call the roll. Ask for help in pronouncing names; students will appreciate your attention.

Explain the course. In the first five minutes of class, you're now ready to distribute the course outline and discuss the course. It's important that you sell the course and its topics. As you go over each topic and sub-topic week-by-week, stress the importance of each item, the activity planned, the assignment or reading necessary, and the requirements of the course including attendance and tardiness procedures. After you have reviewed the outline, discuss the lesson and/or assignment due at the next class session.

Be positive. Students must understand that you mean business, that you have rules and expectations. But after reviewing your expectations, discuss how the course will be valuable and beneficial to them.

It's important to establish rapport and build a supportive classroom environment during the first few class sessions. Not an easy task, but some suggestions follow.

Presenting a Lecture

Preparation for the Class

Effectiveness in the classroom depends on being prepared and well organized. There's nothing as bad as a teacher who's obviously not prepared and attempts to "wing it." Prepare a lesson plan for each lesson and be quite explicit about what is to be covered, including time estimates for each activity. The effective instructor reads the lesson plan well before the class and then plans what to do in light of personal experience and teaching style.

You'll probably begin your lesson with a lecture. There are three reasons why this method is appropriate at this stage of the course:

The students have not read any material nor do they have sufficient knowledge to have a meaningful discussion.

The students aren't yet comfortable in speaking in front of their peers or in answering questions.

The lecture method at this point will be easier for you. If prepared carefully, it will allow one-way information from you, putting you in control. It limits difficult questions until you get to know the students better.

The Presentation

Don't read verbatim from a prepared lecture. Nothing will cause students to lose interest more quickly than a presentation that is read word for word.

Move around the front of the room. Purposeful movement and gestures will keep students' attention better. Be spontaneous and enthusiastic. Make your points standing and moving about the room. Standing makes it easier to maintain eye contact and moving closer to the students maintains interest. It's not a good idea to sit down, but if you must, don't sit for the entire period.

Know your purpose and stick to it. Remember, education is like transportation. Keep moving ahead and don't get off the subject or allow yourself to be distracted. At the end of the lesson you should feel that you've covered everything that you wanted to, adequately and without rushing or stalling.

Lecturing Guidelines²

- Underestimate your powers of explanation and your students' powers of comprehension.
- Plan as if your students' attention span is 15 minutes for one item.
- Organize your lecture by identifying the main ideas and then building on them.
- Tell them what you're going to tell them, tell them, and then tell them what you told them.
- Talk slowly.
- Make eye contact with everyone.
- Talk with the students, not at them.
- If you can, don't lecture, per se, at all.
- Allow time to summarize key ideas and to conclude each lecture.
- Don't run over class time.
- Observe other teachers and analyze their effectiveness.
- Find out what students already know and what they want to know.
- Relate lecture themes to the course as a whole.
- Illustrate points frequently with anecdotes and analogies.
- Point out transitions between concepts.
- Regularly evaluate your effectiveness.
- Concentrate on enhancing one skill at a time.
- Study the performing arts.
- Plan an introduction to catch the listeners' attention.
- Tell students how you expect them to use the lecture material.
- Define or explain unfamiliar terminology.
- Check on student understanding throughout the lecture.
- Cue important ideas by varying speech rate, volume, and pitch.
- Avoid using distracting gestures.
- Display enthusiasm.

Building a Supportive Classroom Environment

The following suggestions are easy to use and require neither expense nor administrative decisions. They can be quickly implemented, often just on your own initiative or with the help of one or two others.

Devote the first week of classes to creating a positive learning environment. Students who feel comfortable in the classroom and who have some positive rapport with the teacher are much more likely to speed up learning processes as the term goes on. Students often surpass normal course expectations if they feel very positive about the learning climate.

² Joseph Janes, Joseph and Diane Hauer, *Now What? Readings on Surviving (and Even Enjoying) Your First Experience at College Teaching* (Littleton, MA: Copley Publishing Group, 1988) pp: 28-29.

Learn student names. We will mention learning names several times in this manual. Although it is such a simple suggestion, knowing your students has profound results. All of us respond to being approached individually and personally, and the logical way of beginning that process is calling us by our names. The immediate problem is how to learn the names of 100 or more students each term.

One way of approaching the problem is telling students on the first day of class that they may sit anywhere they choose but that you'd like them to sit in the same place for a week or two. Tell them that that way you can make a seating chart and learn their names more quickly. For a few days, initially, students can wear nametags, perhaps with just the first names lightly visible so that you can see the name and reinforce name and face associations. You can have students introduce themselves and focus on their names — how did they get their names, do they have nicknames, what do they prefer to be called, or why do or don't they like their names. Perhaps you can ask them to give a brief description of themselves in which they concentrate on their names.

Provide nonverbal encouragement. Provide a secure, reassuring, positive atmosphere. There are several ways of encouraging such an environment that don't involve the spoken word. Maintain eye contact. Move around. Be animated and expressive. Control nervous mannerisms. Fiddling with a tie or your hair indicates that you are not self-confident. This can be particularly unnerving to those students who react positively to teachers who seem to be firmly in control.

Avoid judging students. Without realizing it, teachers can exhibit judging behaviors that discourage students by making them feel inadequate. Avoid judging on appearance or dress. We must not allow ourselves to be turned off by a student who's unkempt or who's wearing non-traditional clothing. Avoid sexual stereotyping: we may unconsciously assume that females have a certain set of interests and males have another. Age stereotyping is another judgment trap. We may expect certain behaviors from people in certain age groups; for example, we may assume that older students are automatically more self-assured or serious about their work than are eighteen year olds.

As much as we may believe that we're not prejudiced, racial or ethnic considerations can cause us to react subconsciously. For example, do you expect different attendance patterns from certain groups of students? Do you find yourself avoiding certain subjects in the classroom because of the fear of offending somebody? Do you tend to target your examples towards certain groups in your class? Do you assume students have certain expertise based on racial or ethnic characteristics? Becoming aware of this type of judging behavior can help us avoid it.

Learn something personal about each student. This will require some effort and energy on your part. This strategy is an extension of the suggestion to learn your students' names; it's one step further toward personalizing relationships.

Getting to know a student, what his or her personal interests and hobbies are, or what kinds of books he or she likes to read can help you establish fairly quickly a positive relationship. Teachers of composition courses might have an advantage here because students often reveal personal areas of their lives in writing.

Whatever your discipline, you will benefit from finding ways of bringing out students' personal interests. Perhaps asking students for a brief self-assessment at the beginning of the term would be helpful. Ask simple questions such as "Where did you go to high school?" "What kinds of things do you like to do in your spare time?" to get them started.

Relate to students on a personal level. Just as you ask students to share their personal experiences, you must be willing to share parts of yourself and your personal life. Let them interview you, too. In classroom presentation you can speak occasionally from personal experience. If you ask students to

write a paragraph describing a personality of someone they're close to, you can write as an example a paragraph describing one of your children or your spouse or your parent.

There's a great deal to be said for sharing the immediacy of a personal experience, whether your car just broke down or you just had a hassle with the baby-sitter. You can express those feelings spontaneously in an informal way and find your students responding to you not only as an authority figure but also as a person.

Caution: Use this technique sparingly; no one wants to spend a term listening to an instructor who does almost nothing but tell personal stories.

Provide specific positive reinforcement. Taking the time to praise a student can have excellent results. The key here is specificity. A student will sense insincerity if you praise profusely and generally, but if you can select one particular element or aspect of work or attitude, your comment will have more meaning. A student who has written a paper that's not particularly effective, but who has used a striking metaphor, for example, can be complimented on that use. You may praise a student on the perceptiveness of her question; if you indicate that you remember her asking several other perceptive questions, your compliment will be more impressive.

Caution: Be alert and sensitive. Some students feel uncomfortable about being singled out by any praise at all. Such students will become more uncomfortable if they continue to receive compliments. An understanding of basic body language and facial expression is helpful in this instance.

Treat your students as adults. Sometimes teachers unwittingly treat their students as children, or exhibit impersonal kinds of behavior. One example is turning away from a student to address a colleague who's walking by. If you don't excuse yourself or introduce the student, you're treating him or her as less than a responsible adult. Perhaps the most effective approach is to introduce your student to the colleague and then ask the student if he or she minds if you talk with the colleague. In some instances, you may be able to include the student, at least for a short time.

Spend time with your students. Invite them to your office. Before and after class you can chat informally with groups. When you meet a student in the hall or on the campus, smile and give a personal greeting, using his or her name. When you discover something particularly important about a student, such as an award or elective office, you might mention it in or out of class. It's easy to point out accomplishments of students who are actively involved in sports or professional groups, who have received awards, or who have been given notice in the newspaper, but there are ways of giving credit to quieter students too. For example, when you're discussing an assignment that you've graded, you might point out that one student in the class had a thorough and effective answer and then read it aloud. If the student is shy, you may not want to call him or her by name; your sharing the answer with the class will show the student that you noticed something good.

Make yourself available. Any teacher who's responsible for teaching four sections of English Composition or for teaching three lab courses will recognize that this is often a difficult task. However, it's essential, particularly with students who are likely to drop out of school. You're serving as a role model, and keeping reliable office hours gives them a sense of your commitment. If you set office hours, keep them. Be on time. Spend as much time in the office as you've promised, if for any reason you won't be able to be in your office on a given day, give your students advance notice. In essence, you have made a contract with students and you should keep it.

Email is a valuable tool for communicating with students. Be clear about how much notice you need to respond to email, and how often you check your email. The same is true for voicemail left on an office telephone; let students know what to expect from you in terms of response time to messages.

Generally, quick response to this kind of contact establishes trust. Be diplomatic about whatever rules you set up

Never humiliate a student. Although you don't intend to humiliate students, you may inadvertently interact with a student in a way that embarrasses or calls attention to him or her. Such interactions can discourage a student and make it difficult for him or her to come back to your class. Avoid sarcasm as well as teasing. One rule that's easy to remember is never to exhibit a student's work without permission. Using a student's paper as an example of the wrong way to do something is humiliating, but even exhibiting good work will embarrass some students. Determining what might be uncomfortable for students requires a good bit of perception on the part of the teacher

Discover personal situations that could interfere with student learning. Whether this is a formal or informal process, it's important to discover problems that might disrupt the schedules of some students. Such things as irregular work schedules, child-care problems, and transportation problems can affect class attendance. It's to your advantage to learn about these problems ahead of time.

Be as positive as possible. This isn't easy when you're having a hard day, but are some ways to boost morale. Voice quality, for instance, is extremely important. Be energetic and bright in your inflection. A monotone or a deep, tired voice will give away your lack of interest. Be willing to laugh, and encourage your students to laugh. If at all possible, be available before class for small talk, chatting, greeting students. Sometimes this will be therapeutic for you; if your energy level is running low, a few exchanges with students will energize you.

Read inattentive behaviors. We all have observed inattentive behaviors: Shuffling in chairs, persistent coughing by one or more students, glances at other students or watches, stacking books with five minutes left in the class period. Also notice posture, attitude, and lack of eye contact.

When you notice such behaviors, your response should be immediate and decisive. Silence is often effective in regaining attention. Calling the student by name to engage him or her in conversation should dispel inattention. If a student senses your presence close by, he or she may become alert. Changing the pace of the class can be most effective. For example, switching from a lecture to a small-group activity can wake up the class. Breaking the rhythm of your usual behavior can break the monotony. Allow breaks, particularly in classes over an hour and fifteen minutes long.

Commit yourself to at least one individual conference with each student. These conferences don't have to be long when the students don't have significant problems. They may simply be friendly, personal conversations. Yet this kind of conference shows the student that you care about him or her.

For those students with significant problems, however, the conference is crucial, perhaps the only means of convincing them of your interest. Sometimes you yourself can solve some of the student's problems, or you can guide the student to someone who can help. A surprising number of students aren't familiar with the counseling services available at Drexel.

Teacher evaluations show that this individual conference is often the element that students appreciate most.

Email students when high-risk patterns develop. Examples of high-risk patterns are several missed assignments, chronic absences, and perpetual tardiness. Emailing students can be an effective way of reaching them; students are often impressed that an instructor would take the time to write something like: "We missed you in class today. I'd like to send the material you missed to you?"

Caution: Confidentiality is always important. Discuss a problem only with the student. Respect the student as an adult and keep information concerning his or her performance confidential.

Diversity

College students vary from one another in important ways. People generally recognize certain differences, especially gender, race, nationality and religion. We notice if someone speaks with an accent, uses a wheelchair or dresses according to ethnic fashions. Other differences are not so noticeable.

For example, social class and the degree of wealth or poverty associated with membership in a given class contribute heavily to the kind of education one receives in childhood, the cultural and recreational pursuits one enjoys, and one's basic use of language. A wealthy student (or teaching assistant) may object to the language and behavior of a poor student as vulgar or crude while the poorer student thinks the wealthier student is arrogant, spoiled and boastful. We can usually tell when students are blind, but not always notice if they are deaf. Learning disabilities are usually invisible -- at least until a bright student submits a paper with wildly erratic spelling or otherwise reveals a learning difference. Sexual preference is another important personal characteristic that is not always easy to detect; usually only the heterosexual majority feel free to flaunt their relationships in public, speaking about their dates or wearing engagement rings. Bisexual, gay and lesbian students (and teaching assistants) may feel much more vulnerable about discussing their private lives in the presence of strangers. These and many other differences may characterize the students in your classes.

Both Drexel University and the City of Philadelphia have taken strong stands affirming the civil rights of different groups of people. In a diverse, global culture like Drexel's, it is important to remember to treat everyone with respect. As the authority figure in charge of the class, you set the tone for everyone. If a student makes a bigoted remark or tells a joke that insults a group of people, it is your responsibility to state that prejudice is not appropriate in the classroom and that you expect all students to be tolerant and polite to one another. Of course, you yourself should never make bigoted statements or tell offensive jokes, even outside the classroom. If you are unable to restrain a student who makes offensive remarks, you should consult the professional staff in the Office of Student Life, some of whom are experts in diversity training.

Learning disabilities limit some students' ability to read, spell accurately or perform other necessary academic activities. A number of learning disabilities have been identified, including dyslexia (difficulties with reading and perceiving visual symbols), dysgraphia (difficulties with writing and fine motor skills), dyscalcula (difficulties with computation and numerical procedures), attention deficit disorder or A.D.D. (difficulty focusing and paying attention) and attention deficit hyperactivity disorder or A.D.H.D. (difficulty in keeping physically still).

As a teacher, you are obliged to provide reasonable accommodation to any student who presents documentation of a learning disability. Accommodation most often consists of untimed tests, a quiet environment during test taking, ability to use a computer with spellchecker for all assignments and, possibly, oral rather than written examinations. The Drexel Office of Disability Services, which reports to the Dean of Students, can provide more information to you on request. See Section IV for contact information.

Those with physical or psychological disabilities may also require reasonable accommodation upon request. Students who have documented disabilities are accustomed to providing documentation and requesting assistance. If a student or a representative of Disability Services requests your aid for accommodation, be sure to involve your supervising faculty member or department head in the process of accommodation. You cannot be expected to understand all the issues related to accommodation without expert guidance.

The Art of Asking Questions

If discussion is your objective don't ask questions that can be answered with a "yes" or "no" response. Example: "Did you have a good co-op experience at ABC Industries?" versus, "Tell us what you liked (disliked) about your co-op experience at ABC Industries." Ask questions that require more than simple one-word answers, which also reveal something about the person's feelings and thoughts on the subject.

- Give reticent students a chance to think about the question. Try to get more involvement from all the students.
- Ask the question, pause and then call on an individual. The entire class must consider their response rather than answer under pressure of being chosen or identified. If you say, "Sue, what do you think about. . .," then Sue is the only one in the class considering a response.
- When no one answers your question, pause for three to five seconds. Don't answer the question yourself! Rephrase it. If there's still no response, call on a particular student. Then build upon the response to illustrate your point.
- Try not to bombard students with too many questions or questions that come too fast. Be patient and allow time for them to reflect.
- Don't allow one student to dominate or bore the rest of the class with overly long answers or statements that get away from the subject.
- If you're asked a question you can't answer, admit you don't know, but tell the students that you'll find out. At the next class tell them what you found out. Students respect honesty, integrity and follow-up to their questions.
- Never laugh or make fun of a student's question. Students will quickly give up asking questions if they're greeted with sarcasm or contempt.
- Call on different people. If the same people consistently volunteer, tell the class you want someone who has not yet answered to respond.
- Be supportive of students with the wrong answer. Take a portion of what they've said and make a bridge to the correct answer.
- Ask "what if" questions to challenge students' understanding.
- When you don't get a response to a question, make eye contact with the class. Usually there are several people who seem to know the answer but don't want to raise their hands.
- There's no one right technique for asking questions, but if you make one student feel good about contributing, others too will find participating rewarding.
- Try "brainstorming" by inviting students to call out quick responses to a question. You or one or more students write the comments on the board or large newsprint pads, without evaluating them. Then rearrange the comments into similar groups, explaining how they relate to one another. This technique often reduces the fear of being judged, which may inhibit participation.

Hold review sessions to allow students who have fallen behind to present their questions without fear of being thought stupid.

Create a more democratic environment by showing students that you are not the only knowledgeable person present. To do this, ask the class to summarize the discussion, or elaborate on a student comment.

Welcome questions or comments that surprise you. Even when students misunderstand you, their thought processes can be interesting and can lead to new ways of exploring a subject.

Reward all efforts to participate. Students watch what happens to those who speak up.

*How to Ask Probing Questions*³

- Teacher: Would you say that nationalism in Africa is now greater or less than it was twenty years ago?
- Student: Greater.
- Teacher: Right. Why is that so?
- Student: Because there are more nations now.
- Teacher: That's right, but it's only part of it. Can anyone else give some more reasons?
- Class: (Silence)
- Teacher: Well, basically, it's because...

A teacher wants his or her class to discuss a topic. He or she asks a question and receives a cursory answer that adds next to nothing. The discussion drags and evolves into an unprepared lecture. In many cases, this is the teacher's fault. He or she may ask questions that are embarrassingly simple. However, it may be that the students are shy, afraid of answering incorrectly, or just naturally taciturn.

Effective teachers keep a discussion going by asking questions that require more than superficial answers. They do this in two ways. One is to forestall superficial answers by asking questions to which such answers can't be given. This is what higher order questions do. The other approach is based in techniques that may be used after a student has given a superficial response. By probing, the teacher requires the student to go beyond the first response. The teacher's cue is the student's response. Once it has occurred, the teacher, instead of advancing to another question, probes the student's response by means of one of the techniques outlined below.

More than any other skill in this cluster, probing will require you to give an unrehearsed response. Because the probe depends on the student's response, you'll rarely be able to prepare probing questions in advance. However, by practicing probing questions with a variety of responses, you can develop a repertoire of question formats.

The probing techniques outlined below can be used in any situation where student participation is necessary to realize the goals of the lesson. A given technique, of course, may be appropriate in one situation but not in another.

Seeking clarification. The teacher may ask the student for more information, or clarification, by saying:

- What exactly do you mean?
- Please rephrase that statement.
- Could you elaborate on that point?
- What do you mean by the term...

³ Joseph Janes and Diane Hauer, "Now What? Readings on Surviving (and Even Enjoying) Your First Experience at College Teaching," (Litdeton, MA: Copley Publishing Group, 1988) pp: 50-51.

Increasing the student's critical awareness. The teacher wants the student to justify his response. Examples of appropriate probing questions are:

- What are you assuming?
- What are your reasons for thinking that is so?
- Is that all there's to it?
- How many questions are we trying to answer here?
- How would an opponent of this point of view respond?

Refocusing the response. If a student has given a satisfactory response, it might seem unnecessary to probe it. However, the teacher could use this opportunity to refocus on a related issue. Examples of probing questions that might refocus the responses are:

- If this is true, what are the implications for...?
- How does John's answer relate to...?
- Can you relate this to ..
- Let's analyze that answer.

Prompting the student. The teacher gives the student hints to help him answer the question:

- Teacher: "John, what's the square root of 94?"
- John: "I don't know."
- Teacher: "Well, what's the square root of 100?"
- John: "Ten."
- Teacher: "And the square root of 81?"
- John: "Nine."
- Teacher: "Then what do we know about the square root of 94?"
- John: "It's between nine and ten."

Redirecting the question. This isn't a probing technique, per se, but it does help bring students into the discussion quickly, while still using probing techniques. The teacher changes the interaction from himself and one student to himself and another student:

- Teacher: "What is the theme of Hemingway's Old Man and the Sea?"
- Sam: "It's about an old man's courage in catching a fish."
- Teacher: "Mary, do you agree?" or, "Mary, do you think it's that simple?" or, "Mary, can you elaborate on Sam's answer?"

The teacher initiates these techniques immediately after the student has responded, and they require the student to think beyond an initial response.

Motivating Students

We should create an atmosphere in which motivation can occur. Teachers cannot force students to learn. They can create an atmosphere in which students are motivated to learn. Here are some ways you can do it:

- Create a supportive environment -- students should feel able to give wrong answers without being humiliated.
- Reward student contributions (see below).

- Use fear as a motivator judiciously. Inappropriate fear-engendering techniques cause resentment.
- Try the reward and punishment approach, the carrot and stick.
- Express interest in students by using their names.
- Integrate students' comments into your comments.
- Use nonverbal cues -- smiling, making eye contact, showing enthusiasm.
- Make your presentations organized and attention getting.

Rewarding Contributions and Providing Feedback⁴

- Learn to listen carefully and show it. Look attentive, and test your understanding when necessary by a follow-up question, by paraphrasing what the student has said, or checking on an implication of his or her meaning. Restate complex or inaudible contributions, or ask the student to restate them.
- Talk directly to the student and respond explicitly to him or her. Make eye contact and use his or her name if possible. Point out specifically what you thought was valuable in the contribution -- don't be content with a vague "good" or "OK" unless the point was very minor or obvious. Comment on the thinking process a student has used, as well as his or her conclusions.. By showing interest, you can reward participation while indicating that a particular contribution is incorrect.
- If you see potential in the comment, draw the student out by asking him or her to elaborate, apply or relate the point in new ways. Relate the student's point to material being discussed in class. -
- Build on or incorporate the student's point in a later point of yours, so that the intellectual work of the class becomes a mixture of many people's ideas. Invite other students to add their reactions or reflections to build further on the original point.
- If a student comment is unclear or confused, help the student find out and express what he or she really was trying to say. Show that you care about the original intent.
- Use non-verbal messages -- body posture, facial expressions -- to reward students for participating (regardless of what you've to say about the substance). Remember to make eye contact (which we often avoid due to discomfort just when it's needed most!).
- Be sensitive to students' pride and fears. In putting forward an idea, a student (and probably you, too) puts his or her self-esteem on the line as well. Be especially alert to avoid any tone of condescension or criticism; a student who is working on an idea, however elementary or naive, deserves respect. You'll find that this encourages others to take risks too.
- Recognize the reality of a high-pressure competitive campus; students have to worry about grades whether they want to or not. Medical school or graduate school admission can sometimes hang on a few GPA points. Keep this in mind when you've something negative to say.
- Leave your ego in your briefcase. Looking good at students' expense is the surest way to create a tense, anxious climate that inhibits participation. Admit it when you don't know something. Be a model for students by thinking out loud when you're puzzled
- Be clear, in your own mind, and in your statements, as to the difference between what is incorrect and what you as an individual disagree with. Never use the former to enforce the latter.

⁴ Handbook for Teaching Assistants: The TA at the University of Delaware, edited by Judy G. Bailey, fourth ed. (Wilmington: Center for Teaching Effectiveness, 1988) pp: 50-51. 24

- If you are not completely clear about what a student means, ask a question to clarify. The student may be making a different point than you thought, or be right for reasons you had not thought of. When you disagree with or correct a student, restate or paraphrase the point she or he made. This tests your understanding, and also conveys that you take the point seriously.

Guidelines for the Effective Teacher

Characteristics of Effective and Ineffective Instructors

Drexel University students are surveyed from time to time about their positive and negative classroom experiences. They usually describe their best teachers as follows.

Effective instructors:

- Care about the students
- Develop rapport
- Use excellent communications skills
- Listen to what students say
- Are fair and test on what students should know
- Are accessible to students
- Learn students' names
- Use anecdotes relating to the material
- Elicit class discussion
- Give constructive feedback
- Give the feeling that they enjoy teaching
- Are enthusiastic
- Let students do activities by themselves
- Present different formats, ways to look at things

Drexel students say their least effective instructors:

- Are not prepared
- Use poor communication skills; lack eye contact; speak in a monotone
- Are not organized
- Are condescending, hostile, sarcastic
- Fail to give guidance
- Give only negative feedback
- Become frustrated if students learn too slowly
- Give exams that are too difficult
- Are late in arriving to class, returning exams or assignments
- Treat students as if they were in grade school
- Discourage class participation overtly or covertly
- Add to students' apprehension
- Miss classes

The differences between effective and ineffective instructors are quite clear. Keep them in mind as you strive to be an effective instructor, but don't be discouraged if you aren't as successful as you'd like to

be at first. Teaching is composed of skills that can be mastered. If you plan carefully and review your performance, you will improve. The following suggestions will provide a framework for you to follow. Appendix E: 44 Things To Do in Class, contains additional helpful ideas.

Be prepared. Know what you're going to teach and be assertive and positive about the topic for the day. Organize the activities in a sequence, make notes for yourself, and rehearse. Also be certain that you've gathered all the materials you'll need for the lesson. This may include paper, pencils, handouts, and even chalk. Students appreciate a well- prepared instructor.

Be prompt. You can't expect your students to take your class seriously if you show up tardy and disorganized. Always be in the classroom a few minutes before class to answer any questions and prepare the blackboard or any materials needed. At the very first class establish your expectations, which include beginning the class promptly. Follow through on subsequent classes by beginning class promptly and don't tolerate students coming in late. Establish a grace period.

Be flexible. Be aware of weather conditions, time of the day, and even how this class fits in with the regular term, e.g., is it before mid-terms or final exams? Students are under tremendous pressure. You may not think something is very serious but to them it may be crucial, so learn to "read the students." flexibility, not in your standards, but in your relationship with the students, is important

Review prior lessons. Learning is always enhanced when instructors review topics covered in the previous class. A short review bridges the transition to the new lesson, and helps communicate how important you consider the topics.

Have a sense of humor. You'll learn very early not to take yourself too seriously in class. You'll make mistakes, and be challenged by students. It's best to admit an error and laugh at yourself or tell a story about yourself so that students understand that you too are human and not perfect. This self-disclosure can help develop stronger rapport with the class.

Keep learning. After a short time you'll gain confidence by noting the techniques that have been successful and those that fall flat or don't make the point. Don't settle into a routine that may lead to smugness or arrogance. As the famous cellist Gregor Piatagoirsky said when he was in his 70s, "I'll stop teaching when I quit learning."

Vary your teaching methodology. We have discussed different teaching techniques. You may have a preference for one particular style, but stay alert to the response and reaction of the students and vary your style in order to keep attention levels high. Plan to vary classroom activities so that students are constantly refreshed and challenged.

Evaluate and reevaluate. A good instructor constantly asks: Did I meet my objective for today's lesson? Have I accomplished what I set out to do this week or this term? What could I have done differently to make learning more effective and enjoyable for the students? Know what your objective is and move meaningfully to accomplish it. Without an objective, movement for the sake of movement is sheer nonsense. It's just like running around in circles and getting nowhere. Ask your students if you're getting the point across and let them tell you what you might do better. A good instructor isn't fearful of an anonymous evaluation of his or her teaching. Accept students' suggestions and use them to improve your performance.

Pay attention to administrative detail. Taking attendance, making announcements, recording grades, etc., are all part of the teaching process. Students respect instructors who efficiently take care of the administrative details.

Use visual aids and supplementary resources. No matter how good a lecturer or speaker you may be, your teaching can be enhanced by the use of charts and graphs, videotapes or guest speakers. Video or

graphic representations can stimulate interest and clarify important points and ideas, and can help provide a consistency from class to class and even from instructor to instructor.

Dress professionally. You leave your student role behind when you stand in front of a class. Students are more inclined to listen attentively and respect the instructor who looks the part. Observe what faculty in your department wear and select similar clothing. Of course, as a student, you are not expected to spend a great deal of money on your wardrobe. Choose outfits that are clean, comfortable, neat, and not extreme fashions. You want students to pay attention to what you say, not what you wear.

Strategies of Effective Teachers

How to Minimize the Possibility of Things Going Wrong

Avoid sarcasm. Sharply sneering or cutting remarks may not be intended to hurt someone, but they do. Sarcasm is the quickest way to lose your students forever and constrain them from asking questions or participating in discussion. Making fun of or belittling someone isn't acceptable if you're to be an effective teacher.

Don't get into a confrontation with a student in front of the rest of the class. If you can anticipate a problem, handle it privately before or after the class. If you can't, then have a plan on how you might handle the situation if it arises. For example, speak to the professor or other teaching assistants about what to do and what suggestions or procedures they prefer in situations that might arise.

Never use profanity or sexist comments. If you try it for effect it may backfire on you so avoid it altogether. Some students in virtually every class will be offended.

Speak slightly above your normal conversation level. Speak to the person farthest away from you. Always be alert to the size of your class and whether or not the entire class can hear the question or response of students participating in question and answer periods or discussions with you. If everyone can't hear a question raised by one student, repeat the question in a loud voice so everyone will know what has been asked.

Become a student of human behavior. Common sense goes a long way in being an effective teacher. Learn to observe the telltale signs of decreased attention, listening, and class and individual motivation. Some good questions to keep you alert to this aspect of instruction might be: Are the students doing other work while you're speaking? Is there eye contact with you and any other non-verbal cues such as nodding of the head as you make a point? Is there sullen and defiant posture? Does yawning or daydreaming prevail throughout the class as the period goes on? Have you been talking for most of the class and, if so, how could you ask a question or use the board to break the monotony? Observe carefully for verbal or non-verbal feedback that the students are attentive and absorbed.

Office Hours and Counseling Students⁵

The teaching assistant's office is one of the few places where the protective shield of impersonality at a university can be broken. Usually office hours are scheduled before the term begins and announced during the first week. One alternative is to check with the students about convenient times before scheduling your office hours.

Let students know frequently that they're welcome. Invite them individually. A comment on a paper (e.g., "Please see me about this.") brings about a 75 percent response. Stress the importance and value of office visits both to you and to them. Most teaching assistants deal with freshmen and sophomores

⁵ Handbook for Teaching Assistants: The TA at the University of Delaware. edited by Judy G. Bailey, fourth ed. (Wilmington: Center for Teaching Effectiveness, 1988) pp. 10-11.

who aren't used to such personal contact. If those first few who come in have positive experiences, the word will spread. Some teaching assistants find that posting answers to quiz or homework problems inside the door is an effective means of attracting students to office hours.

You may find that many students will come in, and for many different reasons. You may find yourself helping a student with the material for the course you're teaching, with the logistics of a course that contains unfamiliar material, or with a personal problem. To facilitate a helpful tutorial or counseling session:

Try to be as approachable as possible. The best thing to do when students come in to your office hours is to make them feel welcome. It's very easy to make students feel that they're intruding; it takes only a little bit of care to create a relaxed, pleasant atmosphere in which communication is natural and easy.

Rely on the student to tell you what he or she has come to see you about. You may suspect some hidden problem, but you should not press the student to disclose it. You can help the students if they actively request your help, but your responsibility need not extend further than responding to their requests.

Listen to your students when they come to your office hours. Give them your undivided attention. The best way to show that you're listening is to ask questions--it also shows students that you find their concerns important. Students often fear that they're wasting your time; by listening attentively and responding thoughtfully, you can help allay their anxiety.

Finally, realize that you won't always be able to provide the answers or information that is needed. If you're tutoring a student in the material for your own course, there's nothing wrong with saying, "I don't know, but I can find out for you."

If a student is asking for more personal counseling, remember that you're not always the best-qualified person for the student to be talking to. If you feel that the student needs more specific advice, you may be able to suggest someone who can provide it.

Time Management

As a teaching assistant, you live both as a teacher and as a student, so managing your time becomes essential, especially around midterms and finals. There will not be enough time to do all the things that need to be done unless you plan and use your time well. Consider this scenario.

Time: Late on Saturday evening near the end of the term.

Place: Your room.

Situation: You're sitting at your desk. In one corner of the desk sits a mountainous pile of ungraded students' papers; in the other corner, an equally towering pile of books for the final paper or exam in one of your graduate courses. In the center of the desk are the materials for the class you're to teach on Monday.

Question: Where do you begin?

The most natural reaction would be to begin the preparation for Monday's class; after all, that's the most immediate pressure. Failure here means immediate failure in front of a large group of people; success provides immediate gratification. This task, then, becomes the more seductive one, and the sense of concrete achievement it provides may allow you, at least temporarily, to forget the burden of papers and work. Very soon, however, the feeling of pressure will again begin to build up, intensified because deadlines have drawn even closer.

At the start of the term, organize your work and plan your time so that you don't end up in the situation described above. By the time you've reached that state, there's almost nothing you can do to alleviate the time crunch. Something will suffer, and usually it's both graduate work and teaching.

Draw up some rules for yourself at the beginning of the term. You may not always be able to keep them, but you should try to adopt them as general guides. The following tips can help you use time effectively and avoid feeling overwhelmed.

Set goals. Write specific, measurable outcomes you want to achieve in the next week, month, year, and five years. Consider your work, relationships, play, and well-being. Go from goals to plan to work.

Use a master "To Do" list. Categorize all of your "to do" items into highest, medium, and low priority. Work on high priority items first!

Get the big picture. Plan your priorities so you work foremost on whatever gives you the biggest payoff in potential.

Cluster common tasks. Do similar tasks in the same time block (e.g., a bunch of letters, then a bunch of errands).

Create systems. Keep tools, forms, checklists, and information handy and organized for repetitive tasks.

Establish place habits. Keep everything in its pre-determined place.

Delineate time blocks. Schedule blocks of time (2-4 hours) to work on projects requiring concentration.

Design your environment. Make your setting conducive to concentration (e.g., sit with your back to traffic passing your office, screen calls).

Reduce panic. Handle what worries you the most. Ask yourself, "Will this matter seem urgent 10 years from now?"

Take the one-minute test. Periodically take a minute to ask yourself, "Am I doing this in the best way to meet my goals, serve others, and take care of myself?"

Making It Through the Term – Performing Multiple Tasks at the Same Time

When establishing priorities remember your own graduate work. Thinking practically, you must realize that your assistantship is dependent upon successful completion of your own courses.

Don't let work pile up. When you receive a set of papers to be graded, don't toss them into a corner until you have time to do all of them. Large blocks of free time are extremely difficult to find once the term gets underway. Instead, calculate how many papers you'd have to read everyday in order to return the papers within a reasonable time, say one week, and then find that much time. If you have 30 students in a class, reading four or five papers each day would finish them up in a week.

Be ready to ask for help. If, as the term progresses, you find yourself consistently behind with both your graduate work and your teaching, it's time to reassess your methods. Speak to your faculty adviser about your problem.

Assessment

Testing and other Forms of Evaluation

You will evaluate your students' understanding of course concepts through the quality of their papers, projects, presentations, web sites, classroom interactions, discussions, quizzes, and tests. Years ago teachers might have offered only a midterm and a final examination as the sole evaluation procedures. As we've learned more about how people learn, we've discovered that frequent, well-designed evaluations not only tell the teacher what a student knows but can also be a useful part of the learning process for a student. Assessment and feedback from you help students know what they have learned and what they need to learn.

Assessment is intrinsic to the educational process. You need to assess students' knowledge at the beginning so you can be sure they have the prerequisites to understand your lessons. You need to carry out ongoing assessments each time you see your class (through classroom discussion, question-and-answer sessions, informal conversation, or quizzes) to make sure students are learning at an acceptable rate. And before you pass students out of your class you must be sure that they have mastered the material. In addition, you should always carry on an appraisal of the lessons you teach and your own teaching style, and you should receive an evaluation from your students.

Students learn best when they have many respectful, helpful evaluations from teachers and peers. Overt negative criticism is not so useful. We've also learned that people respond in different ways to different assessment procedures. Some may excel on writing papers but perform poorly when making a verbal presentation, or do well on a short-answer quiz but poorly in a discussion setting. Offering a wide variety of evaluations can help you enhance your students' depth of understanding.

As with many suggestions in this book, different methods of evaluation will be most appropriate for different kinds of classes. The evaluations themselves should cover what has gone on in class, both lectures and discussions. In creating assessments, review the types of knowledge and skills emphasized in the course. What levels of Bloom's Taxonomy (see pp. 6-8) were featured more in the class? Was comprehension of material or the synthesis of concepts more important? Assessments should reflect the experiences of the classes.

At the beginning of the term you should tell the students how much value you will be placing on each forms of evaluation throughout the term. For instance, you may have two papers each worth 10 percent of the grade, four quizzes each worth 5%, class participation worth 10%, a group project worth 30%, and a final examination worth 20%.

Whenever students are evaluated, you should discuss the evaluation with them. You may want to show students examples of assessments you have given previously. Copies of old exams or examples of well-written papers can be very useful.

Much research has shown that students learn best when they receive feedback on their work quickly. Papers, presentations, tests, and other assignments should be given back at the next class session, if possible, both for educational reasons and out of respect. You should return graded papers at the end of a class so students won't be engrossed by them while you try to cover something else.

Basics of Test Preparation and Administration

You may be required to give and grade tests that are created by your supervising professor or your department or you may need to create tests. If you have not taught the course before, review exams from previous terms to help you with your creation.

Give clear directions. Ask unambiguous questions. Before you give the test, explain its requirements. Ask for questions and clarify problems.

Be sure the test is legible. Leave enough room on the page for an appropriate length answer.

The value for each correct answer toward the overall mark should be clear. Tests should evaluate students' grasp of central course issues. They may be hard or easy but they should not be devious or frivolous. If it is a short answer or essay question you should decide how much credit you will give to less-than-complete answers.

Before giving the exam, write out an answer sheet yourself. You will probably be able to finish the exam in one-fourth the time it will take your students. This practice will enable you to determine whether your directions and test items are clear. Does your test reflect an attempt at offering questions on various levels of Bloom's Taxonomy (see section I): memorization, comprehension, analysis, synthesis, and critical evaluation? Minor alterations in how you ask questions, or what you ask, may provoke a deeper level of thinking and help expand understanding of the course objectives.

Develop the test format so that responses are related to exercises done during the term.

As far as possible, your test should be interesting and relevant. Have problems relate to a real-life situation, or have students synthesize more than one concept.

Avoid unnecessary or tedious calculations. Concentrate on thinking, not stamina.

Ask a colleague or your supervising professor to review your creation to improve the final product. From clarifying imprecision to correcting spelling and design, fresh eyes are very useful.

Save a copy of the test for your files. Note any problems, successes, or surprises.

Types of Tests

Short-answer tests are usually best at evaluating memorization and analysis skills.

Essay exams let students systematize information, consider that information, and then express their understanding at length. These tests may have the highest educational value, although they are quite difficult to grade. They can be genuine learning events, not exercises in memorization. They may be graded more subjectively than other kinds of tests, so be sure the students know clearly what information their answers should contain.

Multiple-choice tests can be very hard to create but can do a good job of evaluating memorization and application levels of thinking.

Numerical or logical tests reveal understanding of material and the ability to apply it.

Completion questions check for recognition of key terms and concepts. Be flexible in marking if answers are equivalent; student answers may surprise you!

Matching questions test recognition of the relationships between pairs of words or between words and definitions. Be sure to give enough choices so that students can't guess simply by the process of elimination.

Take-home essay exams let students work at their own pace in their own place but have some disadvantages. Students with less work outside of your class have a time advantage. "Information sharing" also may be problematic. A variation on the take-home exam which addresses these problems is to hand out the test in advance and permit discussion, but students actually write the answers in class without references.

Grading

Grading puzzles many beginning teachers. Some teachers are strict, believing that they will spur the best efforts from their students. Others feel that the responsibility of learners is to themselves and that good grades represent good teaching. Grading strategies are related to what you believe and think, as well as evaluating learning gains toward planned goals.

No matter how you feel about grades, you must realize their importance to the students. You must always be absolutely honest and consistent. You must be fair and reasonable and maintain grading principles you can defend if disputed.

Sometimes students focus more on grades and less on the whole experience of your class (“Is this going to be on the test?”), but it is up to you to use the grading system as a positive mechanism for giving honest and useful feedback on student performance.

Important Information about Evaluations

- **Plan.** Assessments should be built into the course from its inception. If you’re working with a professor, get her or his input on varieties of assessment. Then plan the percentage of the final grade each assignment or test is worth.
- **Explain.** In the first class tell students your scheme for grading and that you selected it to help them succeed in class. Tell them your rule for failed or missed midterms and late assignments. Tell them what you want the class to achieve and how you are going to assess progress. Be clear and let them know how they will ultimately be graded.
- **Record.** It is vital that you keep correct and current records of your grading of each student’s work throughout the term and for several years because students may come back later to ask about a grade, an incomplete, or a recommendation. Records let you justify or re-evaluate student work.

Grading Papers

It is not very useful to return an essay to a student with nothing but a grade. On-target comments and criticism delivered with compassion are not only appreciated but also valuable for directing students in making future choices. Think carefully about what you write, write thoughtfully and clearly.

In correcting students' papers, write in margins or on the backs of pages, or on sticky notes, so their writing is still visible.

Direct your comments not only toward what the student has submitted, but also try helping them do better on the next assignment

If you find yourself repeating comments or criticism, you’ve discovered a problem afflicting more than one student. You could prepare a lesson or worksheet to help address such issues.

“A paper should be judged on its content, organization and presentation. Often it’s useful to the student if you evaluate the paper in each of these areas and assign a mark on the basis of some combination of these factors. Also, some teachers have had good success with asking students to write papers twice. This first draft is submitted and subjected to constructive criticism on both content and style. The second draft is graded and usually shows the kind of improvement that is quite satisfying to student and teacher alike.” (*Teaching at Stanford: An Introductory Handbook*, revised and edited by M. Fisher (Palo Alto, CA: Board of Trustees of the Leland Stanford Junior University, 1983), p. 20.

Whenever you grade essays there is an element of your personal opinion that determines the grades. Studies show that you’re likely to grade the first several essays more harshly, and liable to be more careless about what you write to students when you’re weary. To stay away from these difficulties,

read several essays before you actually start grading to assess their general level. Take a break from grading when you become tired or bored.

Evaluation of Students' Oral Work

Oral Reports. Many courses require oral reports, either from individuals or groups. Evaluate oral reports much as you would written reports, for content, organization, and manner of presentation. See the Speaker Evaluation Form below for a typical checklist for individual oral presentations.

Give students the opportunity to practice, either by submitting an outline in advance for your comments or by discussing their presentations with you in private. It is very important to give helpful feedback. Avoid negative criticism at all times, especially in public, as in class.

Find something positive to say about the report. If it was unsatisfactory, frame your response carefully. Say "Did you think about adding another theoretical perspective to strengthen your report?" NOT "One theorist is not enough for this assignment!" Or remark, "You covered some of the same material as the Alpha group." NOT "Well, this was just a repeat of last Thursday's group report." Save any negative feedback for a private communication between you and the student or group.

Sometimes the entire class is asked to respond to an oral presentation, either by filling in a form or in spontaneous comments. If you choose to do this, give very clear guidelines about constructive criticism. If a student makes a disparaging remark, it is your job to intervene and restate the rules about positive feedback.

Oral Examinations.

An oral examination should compare in difficulty to a written examination on the same topic. Book reports or compare and contrast questions involving several readings may be appropriate choices for oral exams.

You may decide to give oral exams in response to requests from students with physical or learning disabilities or in order to save time reviewing and grading written reports. It's best to set firm time limits, both for the entire exam and for portions of it, because oral exams can be quite time consuming. You may want to give the student several questions, similar to those used for essay exams, and allow a set number of minutes for each answer. If you have assigned a larger topic like those used for research papers insist on advance preparation of an outline that you can respond to in time for the student to correct an inadequate approach to the material. You should also ask for a list of references consulted and perhaps for one or more visual aids to enhance the student's presentation.

The oral examination can be a sensitive tool for assessing the range of a student's knowledge. Have a checklist for yourself, with important items like thoroughness, accuracy, and focus. Note whether the student responded to the specific assignment. An oral exam situation gives you the opportunity to question a student who may not have fully articulated the work he or she has done or who may have misstated a point.

Your evaluation should be given promptly. In the case of an excellent presentation, you can simply tell the student he or she earned an "A". A dismal exam is also simple to evaluate, and you can decide whether to give a failing grade or allow the student to try again. It is often difficult to discriminate between a "B" and a "C" level oral exam, unless you have a very detailed checklist. For this reason, it may be simpler to give only pass-fail oral exams.

Grading Participation in Discussion

Discussion is a good technique for building community by encouraging equal exchange of ideas. Each class can become a learning community if everyone's contribution is needed and valued. If you are to lead successful discussions, you must be serious about preparation for class, attendance and participation.

Students are often reluctant to speak out in a large class. Small group discussions can be less threatening and serve to introduce students to one another. Discussion should be guided by questions you provide on the assigned readings or problems.

Ground rules are necessary for academic discussions. A primary rule is that the time should be open to all, rather than dominated by a few outspoken students. Dr. Peter Frederick, winner of the American Historical Association 2001 award for teaching excellence, uses the following handout in his classes.

Handout: Grading of Discussions

Peter Frederick, Wabash College

Your primary responsibility is to do the reading carefully and with some depth, taking notes, marking passages and thinking of questions and connections with other readings, cultures and your own life. Then, come to class prepared (ready and willing!) to discuss. Toward that end, see and read carefully, more than once, “On Reading Well To Discuss Well” and “On Discussion and Participation Grades.”

6

Criteria for Your Discussion Grades

(Adapted from similar statements by Bill Placher and Stephen Morillo)

- *You get an F for discussion if you miss lots of classes, rarely speak when you are there, and show no evidence of having done the reading.*
- *You get a D for discussion if you come irregularly and rarely show signs of having done or thought much about the readings.*
- *You get a C for discussion if you come to class regularly but rarely speak, or if you are active in discussion in a way that shows little evidence of having done or thought much about the readings.*
- *You get a B for discussion if you are always in class and take a thoughtful part in our discussions, participate actively and well, engaging texts, themes of the course, and others with some depth; and occasionally take leadership for the direction of the discussion.*
- *You get an A for discussion if you are always in class, show evidence of having read and thought about the reading with some depth, listen well to other students, help focus our discussions with thoughtful comments and questions about the broader implications and comparative possibilities of the readings, and generally offer creative, imaginative ways of engaging the texts, the themes of the course, and other students.*

Academic Integrity and Academic Dishonesty

Academic integrity is one of the shared values of the Drexel University community. Simply put, academic integrity means intellectual honesty. Students are expected to be honest and forthright. That is, an individual's work and ideas are ones own, and any assistance in one's work and thought should be clearly acknowledged and properly referenced.

⁶ These readings appear in Appendix B

Academic integrity must be both encouraged and insisted upon by those who value quality in teaching and learning. Academic dishonesty corrupts the process by which knowledge is advanced. The credibility of academic work is seriously jeopardized when there's a lack of academic integrity. Dishonesty is patently unfair to those who are honest. The university policy regarding academic honesty, as stated in the Student Handbook, Section 10, appears as Appendix D.

Teaching assistants must convey the message that there are good reasons for students to behave honorably. Drexel University is an institution based upon the free exchange of knowledge. To plagiarize another's work knowingly, falsify data, or give or receive assistance on exams or other work is to violate the basic principles upon which Drexel is structured. Students must understand that plagiarism means not merely copying another's words without proper credit given, but also copying their ideas.

Several types of cheating are common. Plagiarism consists of using the work of others as if it were one's own. Copying from another student can be done with or without the assistance of the person whose work is copied. A group may not only study for but complete together assignments that are meant to show individual work.

Behavior that seems to be cheating is sometimes attributable to cultural differences or miscommunication. Cooperative learning is the norm in many parts of the world, as is providing assistance to family members or countrymen in difficulty. Elders may have specifically instructed students to look after cousins or siblings who are far from home. Especially in courses where small group work or collaborative learning is practiced, students may believe it is permissible to work on exams together. Similar answers to essay questions or identical work on take-home problems may be the result of students helping one another and sharing work without understanding when such cooperation is not allowed. Inexperienced students who do not understand how to reference, quote and paraphrase the work of others too may do plagiarizing innocently

Always assume that students are honest. You may never encounter cheating, especially if you set clear ground rules for all assignments and tests. For more information on types of academic dishonesty, and what to do if you discover someone cheating, see Appendix C.

Technology In the Classroom

Appropriate use of technology can help students learn more information in less time than ever before. It can help improve student understanding of concepts. It can provide valuable support to students with different learning styles, different levels of physical and social skills, and different ways of expressing themselves. It can help you communicate with students and your supervisor in novel ways, and keep track of student progress.

There are many technologies used in today's classroom. From the humble chalkboard through computer projection, from tape recorders through slides and transparencies, from videotape through teleconferencing, Drexel has a wealth of technology to use to help you help your students.

But technology needs to be integrated into your course like any other resource, where it is suitable to the subject matter and the students.

At a minimum, every teaching assistant should be able to:

- Use a board and/or presentation software to communicate ideas and concepts
- Use email
- Use software particular to your discipline
- Use Banner to help generate class lists, contact students, and enter grades

Many classrooms on the Drexel campus come equipped to use some technology. Some have chalkboards; others have white boards, overhead projectors, slide or videotape projectors, large computer displays, etc. If your classroom doesn't have what you need, contact Drexel's Instructional Media Services (IMS). See Section IV for contact information. IMS maintains a wide array of equipment, including video cameras and tape recorders. The staff members are willing and able to help you improve your use of media.

Computers, Software, and Networks

Every student at Drexel has an email account, space on a server for storing and displaying web pages, and access to university-distributed software. Use of these technologies can be, and in some cases should be, part of the course you are teaching. Writing papers using a word-processor (such as Microsoft Word), analyzing data using a statistics package (such as SPSS), presenting lab results using a presentation package (such as Microsoft PowerPoint), or programming in C++ are some of the ways computers may be incorporated into your course.

This guide will give you a brief description of some of the ways computers are used in education on Drexel's campus. You can get extensive support for uses of instructional technology by contacting Information Resources and Technology (IRT). See Section IV for contact information. A copy of IRT's [Guide to Instructional Technology Support](#), available in the Korman Center, will help familiarize you with the ways computers are integrated into a Drexel education.

Here are some of the many ways you may be involved with various aspects of Drexel technology as instructional and research aids that can help you teach and manage your class:

- Presentation, implementing visual and audio aids for in-class lessons
- Web-based instruction, either to supplement classroom instruction or teach a whole course remotely
- Personal web pages

- iDrive, an off-campus, online storage service
- Video conferencing
- Webcasting
- Class lists, complete with pictures and even seating charts, although it may be necessary to ask your supervising professor to access this service for you
- Class list servers to create mailing lists for your class, to send messages and/or to create an electronic discussion group where students can participate
- Exam grading using “bubble” forms for some tests
- Computer classrooms where you can teach classes
- Managing resource funds
- Library databases

The latest edition of the [Guide to Instructional Technology Support](#) lists the current group of Drexel site-licensed software. Some of this software is available to every student, other software is only available to students of particular classes, and some instructors may require students to purchase software (usually available at the bookstore)

Presentations: Chalkboard, Whiteboard, and Software

Auditory and visual (AV) aids enhance any lecture. By appealing to two senses, hearing and sight, visual aids increase learning retention significantly.

AV aids can help you communicate effectively. For example: The teacher mentions a term that has a familiar and well-defined meaning to him. The student, however, has a different reaction. When the teacher supplements the discussion of the term with an illustration, the meaning of the term is unmistakable.

To be effective, visual aids must be prepared properly. Too often boards, transparencies, or software presentations are crowded with so much information they’re not readable. Overcrowded visual information also distracts students from listening to you. Blackboards containing disorganized and unlabeled calculations hinder rather than aid learning because students can’t follow the flow of information. Students must be able to read what you write.

Make your presentation thorough and attractive because at any moment some students aren’t listening carefully, and some students are just taking notes without understanding. Your presentation should tell what went on well enough so that the daydreamers won’t be lost when they tune in again, and so the baffled can use their notes to figure things out later (maybe with their roommate’s help).

Chalkboards, whiteboards, and overhead transparencies (viewgraphs) can help you organize your presentation as well as add visual reinforcement. Transparencies allow you to face the class while using them; they can be prepared in advance, saving valuable class time. A University of Pennsylvania study showed that presenters who used transparencies were perceived as better prepared, more professional, more persuasive, more creditable and more interesting than presenters who did not. They work especially well for large classes.

Videotapes and films are effective for a generation of students who have grown up watching television. In the physical sciences, practical demonstration can illustrate a point more effectively and dramatically than a mere verbal description.

Presentation software (such as PowerPoint) can help integrate the advantages of these visual and audio aids in one multimedia package. The CAE may be able to help you get started with presentation software.

Tips on Getting the Most from Visual Aids

- Visit the room where you will be working before class starts to see whether it has what you need, from chalk to dry-erase markers to an overhead projector to a computer (with the right software) to speakers. **This is essential!**
- Visual aids depend on combining compelling content, appropriate design including color and shape of graphic and textual elements, and movement.
- Pull the shades if there's sunlight or glare on the board or screen -- even your best students would rather squint than tell you they can't see.
- Maintain eye contact with students when talking and using the visual aid. This is the most often violated rule in the college classroom. Talk to the class, not the visual aid.
- When writing on the blackboard, write, stop, turn, and then talk. It's difficult to hear when one talks and faces away from the audience.
- Check the AV equipment before use in class. Know how to turn it on and focus it. Check to make sure it's visible in the farthest corners of the classroom.
- Don't block the view of the visual aid.
- If you see your students' heads waving back and forth, it means they can't see what's projected or written on the bottom third of the board. Don't use this part. Compensate by writing the top line higher up: stand on tiptoe if necessary. Also, remember that students can't see through you -- don't "cover the material" by standing in front of it.
- Turn the projector off when done. This signals students to focus on **you**, not the visual aid.
- Start class with a clean blackboard. Ask students if they have had sufficient time to take notes before erasing it.
- On transparencies, don't use more than eight (8) lines of copy. Just put key words or phrases on the viewgraph. You wouldn't ask the class to read the text in class so don't give them text-like viewgraphs.
- Vary the kinds of visual aids you use. It lends variety and is refreshing. The extra effort means a lot to your students.
- Be sure your graphics are neat, clear, and spelled correctly. If you aren't a good speller, be sure to check any doubtful words. Students respect someone who has gone to the trouble of spelling correctly.
- Be prepared for the possibility that the equipment may not function properly. Know how to switch to the spare projector bulb (if the machine has one) or how to insert a spare bulb.

The Instructional Media Center on the fourth floor of McAlister Hall can assist you in preparing visual aids. Be sure to give them sufficient notice (usually three to five working days).

Seeing is Understanding: Using the Chalkboard⁷

Science and engineering teachers almost always have to write things down -- the diagrams, the formulas, the derivations. Yet their blackboard often seems to be more a record of their stream of consciousness than anything else.

Neatness Counts

The basic rule is: Don't skip around the board, tucking in formulas wherever there's a little space; use the board sections in an orderly way. One good method is to start at the extreme left panel, go down, continue with the next panel to its right, and start over at the left again when the entire board is full. The writing itself should be clear, the right size (easily read but not wasting a lot of space), and written level. Check these things occasionally after class by looking at the board from the rear of the classroom.

“My chemistry T. A. draws all the structural formulas in the air with his fingers. He must think chalk is one of the rare earths.”

Write It and Leave It

Write down enough (including the statement of the problem for the sake of those who didn't bring their books or notes to class) so things can be figured out later. Standard abbreviations will help to save space. Don't erase until all the boards are filled, and don't simplify expressions by using the eraser, as this frustrates note-takers. Put important things in boxes to emphasize them visually, or use colored chalk.

A Few More Chalkboard Tips

- Practice drawing pictures or diagrams ahead of time, if you've trouble with them.
- Your chalk squeaks? Watch out for this since it's something that usually annoys the class much more than the teacher. Just break the chalk in half, and hold it at a 45-degree angle to the board.
- Try to stay inside the squares; that is, don't write across the vertical cracks of the blackboard if you can help it. It can be rather confusing visually.

Projecting a Computer Monitor

Sometimes the most effective presentation will be to magnify your computer screen. The class can then view information normally seen on an individual's computer screen. You can do this in several ways:

- Use software to create a presentation, print overhead transparencies or slides and use the overhead or slide projector to show each screen. This type of presentation lacks multimedia.
- Project your software by using a computer directly connected to an LCD panel or a large screen monitor with programs such as Word, Excel, MathLab, simulation or modeling software, World Wide Web pages, graphics programs, or C++. Many Drexel classrooms are equipped for any of the common programs, or software can be added from your disk.
- If your presentation involves audio, you must make sure that working speakers are available and that the computer has a sound card. By and large, this will work with almost any software. If you plan to use software which may have different, video or audio requirements (such as 3D animation or quadrasonic sound) find a way to test the setup beforehand to make sure it works.

⁷ H. Heine, P. Richardson, A. Mattuck, E. Taylor, S. Brown, A. Olsen and C. Russell. *The Torch or the Firehose? A Guide to Section Teaching* (Cambridge, MA: Massachusetts Institute of Technology, 1986) pp: 23-24.

- Never use a font size smaller than 18 points.
- Prepare a presentation using Microsoft PowerPoint or another software presentation package and project your results on a large-screen monitor or on a web site.

Using Presentation Software⁸

Presentation software allows you to combine many of the best features of transparencies, slides, and chalkboards. You must prepare your presentation beforehand, which means you will have time to carefully plan it out and match your presentation to the material. You can easily add high quality graphics, charts linked to spreadsheets, even animations or live-action video to your presentation. You can “write” interactively on a projected image, either by projecting onto a surface where you can also write, or by actually using a mouse with the image on the computer screen. You can pre-set the presentation to show at a specified speed, or control the speed through which students go. You can specify transitions from screen to screen. You can put your entire presentation on the Web so students can access it from home to help refresh their memories, or you can print it out to let them take it home.

Presentation Basics: Purpose, Color, Movement

When creating a presentation, it is important first to gather materials and information you think you will need. Then you should begin to plan your presentation.

What is your purpose? Do you want to introduce, persuade, explain, entertain, excite, interview, or inform listeners? Is the presentation going to help structure the entire class period or is it just to make specific points? Many presentation packages have wizards or agents to help you built into the program.

⁸ Drexel University currently provides a presentation package as part of the Microsoft Office Suite, Microsoft PowerPoint, to all students, staff, and faculty. Examples and terminology used in this chapter are taken from this program. Other programs that help prepare presentations may be preferable.

Section III : Resources and Strategies

Important Drexel Support Services

Information Resources and Technology provides assistance for faculty, staff, and students who need help with software or hardware. General consult (phone) 215-895-2698, (web) www.drexel.edu/irt

Disability Services: The mission of the Office of Disability Services is to provide all Drexel University students, faculty, and staff with disabilities with an equal opportunity for access to University employment, courses, programs, facilities, services, and activities by providing training, advising and consultation to the University community regarding our commitments under the Americans with Disability Act and Section 504 of the Rehabilitation Act. (phone) 215-895-2506, (web) <http://www.drexel.edu/studentlife/docs/disability/>

W. W. Hagerty Library of Drexel University houses nearly half a million books, periodicals, microforms, and non-print materials. Its strengths include technology, pure science, business, design, nutrition, and information science. The social sciences, architecture, fine arts, and general literature are also represented in the collection. The Library's web-based information system is your access point for our materials, in addition to online databases, electronic journals, and information resources worldwide. Hagerty Library continues to be a leader in offering Internet accessible databases. (phone) 215-895-1500, (web) <http://www.library.drexel.edu/>

The **International Students and Scholars Services (ISSS)** offers a wide array of programs and services to more than 1,500 international students, scholars and faculty from more than 100 countries. It also works to promote meaningful interaction between Americans and the nationals of other countries as well as organizes cultural enrichment opportunities for all members of Drexel University and the community at large. (phone) 215-895-2502, (web) <http://www.drexel.edu/international/isso/index.html>

Instructional Media Services is the Audio/Visual and Graphics service department for Drexel University. IMS lends audio/visual equipment to instructors and students, schedules media classrooms, trains faculty to use specially-equipped lecture halls, and creates instructional materials. If you need audio/visual equipment or service, call the IMS Main Office at 215-895-2925. If you need Graphics service, call the IMS Graphics lab at 215-895-2926 (web) <http://www.drexel.edu/ims/>

Counseling Support Services

Counseling Center, Creese Student Center, Room 210, (215) 895-1415, <http://www.drexel.edu/studentlife/docs/counseling/>:

- offers free, confidential counseling services provided by mental health professionals to currently enrolled undergraduate or graduate students. Call ahead to make an appointment.

Learning Support Services

- Drexel Center for Learning and Instruction, Main 229, (215) 895-2568, dcli@drexel.edu
- Drexel ELC, the English language Center, 229 North 33rd. Street, (215) 895-2022, <http://www.coas.drexel.edu/elc/>

The Writing Center

MacAlister 032 , University Writing Program, (215) 895-6633,
<http://www.drexel.edu/provost/writing/writingcenter/writingcenter.html>

The writing center offers a variety of services for students and faculty members. All Drexel students are encouraged to make use of its services. Students are offered help with their course writing assignments through on-site and email tutorials and small group workshops. Faculty may be able to obtain help with designing and assessing writing assignments and also through workshops and colloquia. Creative writers are offered the opportunity to share their work and ideas through public readings of their work. Administrators and support personnel can request help with writing reports, memos, letters, and other forms of written interaction.

Professional Resources

Professional Publications and Organizations.

Many organizations have been formed to foster excellence in teaching and learning. Membership fees may be beyond your means, but these organizations offer a wealth of information about teaching, learning, position openings and collegial discussion about educational topics. If your department is a member of a discipline-specific organization such as the Institute of Electrical and Electronics Engineers (IEEE), you may have access to publications and professional meetings such as the annual IEEE conference on Frontiers in Education. The Chronicle of Higher Education, a weekly newspaper, is a valuable source of information on educational matters. Some departments and individual faculty subscribe to the Chronicle and may be willing to share them with you. Otherwise drop by the CAE or the Graduate Studies Office. The Hagerty Library may already subscribe to publications of interest to you, or the research staff may be able to assist you in electronic access to publications.

Strategies for Professional Success

Building Your Teaching Portfolio

A teaching portfolio is a collection of material that provides evidence of the scope and quality of your teaching. It is in your professional self interest to begin collecting positive documents and other materials. You can include any of your own work, such as tests or syllabi you constructed, especially good student papers and your evaluations of them, letters and emails of appreciation from students, positive evaluations from your supervising faculty member or department chair, or any other relevant material. You can draw from these materials when preparing a curriculum vita, which is a detailed report of your work. An excellent book on building a teaching portfolio, Peter Seldin's [The Teaching Portfolio](#), appears as one of the references at the end of this section.

It can also be helpful to keep (separately from the materials you want to share) negative feedback on your teaching, such as poor evaluations or critical letters of emails from students. Although it is painful to be criticized, you can use negative feedback to improve your future performance. Be careful NOT to share negative feedback with someone who can harm you by using the information against you. Your goal is to improve your teaching, not to punish yourself.

Mentoring

A mentor is an experienced, skilled person who nurtures the professional development of a less experienced person. Mentoring is usually an extended commitment to be available to advise and guide the novice. A mentoring relationship may develop spontaneously and remain informal, may be a structured assignment within a department or field of study. A senior person may offer mentoring service to a junior, or a junior person may seek or request mentoring. A good mentor facilitates the professional growth of the less experienced person by pointed out resources, serving as a role model and supporting efforts to advance in knowledge, skill and insight. If your department does not provide you with a mentor or offer a mentoring group, you may decide to ask a faculty member whom you respect to mentor you. Many senior faculty members are generous in sharing their time and expertise. A faculty member who does not have the time to devote to nurturing your professional development may be willing to refer you to someone else who can help you. Lacking a senior mentor, a peer support group of other teaching assistants can fulfill some mentoring functions.

Training Program for International Teaching Assistants

Because of the special problems faced by international teaching assistants in the United States, Drexel University has established a training program designed particularly to smooth your adjustment to the American classroom. This program includes a summer, four or five-week intensive course together with follow-up classroom observations. It focuses on both English language and teaching skills, and provides as well, cultural information about the American university system. All new international teaching assistants are urged to attend the program.

Appendices

Appendix A: Working With a Professor

The role of a TA can vary enormously. Sometimes you will function almost independently, with nearly complete responsibility for planning, running and grading a course. More often, particularly as a new TA, you'll be asked to work with an experienced professor and perform a variety of tasks to assist him or her in the conduct of a course. In this section we'll consider some of the most common tasks and recommend how to perform them and how to get help if you are uncertain.

The Professor's Wish List of Attributes of a TA

If you were able to ask many professors what they value in a TA, the following attributes are likely to emerge. You would do well to keep them in mind as you plan your term.

Reliability

Professors value a TA (any anyone else) who performs as promised. Since the professor will be judged in part by the work of those assisting him or her, most value reliability extremely highly.

If for some reason you must delay completing something you've promised, show courtesy by informing the professor as soon as you know you'll be delayed. Then tell the professor when it will be completed.

Promptness

A specific aspect of reliability is being prompt. Because students learn more from prompt feedback, planning your schedule so you are prompt with your work (particularly grading) is extremely valuable.

Thoroughness

Take your work assignments seriously and hold yourself to as a high standard as you would for your own course work.

Interest in the Work

More professors are teaching a particular course because they care about the subject. By showing that you, too, are interested you're likely to win the appreciation of your professor. Ask questions and make appropriate suggestions.

Respect

Few TAs would be disrespectful to a professor. It's nearly as important to be respectful (which does not mean subservient) to students. Remember that students, like you, have complex, busy lives and are

facing this material for the first time. What seems simple to you may be very confusing or even threatening to them. Listen to them and respect them.

Interacting effectively with students is a complex subject. Not all are properly respectful to TAs or professors. If you are in a situation in which this appears to be the case, seek advice from your professor about how to handle it.

If you are not sure – Ask Her/Him!

If you are lucky you'll have a professor who is extremely clear about your duties and will be available to assist you when you have questions. Not infrequently; the professor's own responsibilities and experience will lead him or her to assume you know what you're expected to do, perhaps after a very brief outline. Professors have been teaching for long enough that they forget this is your first time or second time and that you need guidance.

The most important advice is to ask the professor what you are expected to do. Almost every professor will be pleased that you care enough to think carefully about your work and want to determine what is necessary and how it should be performed. It is entirely reasonable to ask the following kinds of questions – presented here only as examples, not as an exhaustive list.

- What are the specific tasks you wish me to undertake?
- How often will we meet to discuss the course?
- Do you want me to attend the lectures in the course (a very good idea even if it's not required)?
- Will I be grading student work?
 - If so, can you give me a schedule of when the assignments are due so that I may plan for them?
 - Do you have explicit guidelines for what is required to achieve a specific grade on each assignment/test?
 - Are there solutions for the problems (or specific issues to look for in grading papers) or will I be expected to generate them myself?
 - How soon must grading be finished after the assignment is turned in? (This is critical because prompt feedback is one of the things students most value.)
- Is there a schedule for the course that I should be aware of?
 - Which specific dates on that schedule affect me and how much time should I plan in order to perform my duties?
- Are there specific goals I should strive for in my interactions with students?

Grading

As implied by the questions above, grading is one of the most frequent tasks that TAs are asked to perform. Ideally, the professor will establish clear guidelines for each grading assignment, addressing each of the important issues. In that case, your job is to carry out the grading in a prompt and fair manner.

If the grading guidelines are not made clear you're advised to ask for clarification before grading. One useful method to seek clarification is to prepare your own guidelines and ask the professor to review them so that you may receive their corrections and approval.

The following general advice may also be helpful:

- Be prompt. Plan ahead for the assignment and return it quickly. A worthwhile goal is to return anything within one week of its submission – more quickly if possible.
- Consistency is crucial. Students will compare what you return to them. If you are consistent you'll reduce or eliminate any possibility of being accused of discrimination.
- Review several student works before starting to grade. It's a natural tendency to be extra harsh on the first piece you grade and then to fall off as you read more. Reading several before you start grading will help you establish reasonable expectations.
- Keep careful records. Students are likely to come back and ask you throughout the entire course and afterwards about your grading.
- It's extremely helpful to students to make comments indicating how they could improve, not just where they have failed to meet the assignment requirements. This is particularly true for written pieces, but is also true for more mathematical work.
- Encouragement for particularly well-done is very well received.

Generating Exam Questions

Some professors will ask you to generate examination questions, perhaps even an entire exam. The temptation for many new TAs (and faculty) is to demonstrate how much you know by writing a very "clever" exam. Too often that "cleverness" produces questions that are far too difficult for the exam's allotted time. Your goal is to produce "fair" questions that truly cover the material students are expected to know/use in an examination setting. Some specific guidelines are:

- Solve the problem or answer the question yourself before submitting it. Yes, people including this author, have been embarrassed by submitting questions they couldn't answer in the time available.
- Assume that students will take about three times as long as you do to answer a technical question in subjects such as math and engineering. The multiplier may be less in the humanities, but students still need more time.
- Strive for clarity in the question. Have a friend read it. You want to be sure that the wording is unambiguous and all the necessary information is provided.
- It may help to categorize questions by their difficulty and the general topic they are supposed to address.

Laboratory Sections

TAs in the sciences and engineering are often asked to be laboratory instructors. In that role they are responsible for the conduct and often the grading of the laboratory. You may have considerable freedom and lack of direct supervision in this role – a situation that can be both rewarding and frightening. It is especially important to seek the professor's guidance for what he or she wishes to

accomplish with the lab and how it is to be run. While each lab has many specific requirements the following suggestions apply to many different labs:

- Think safety! Many labs use potentially hazardous equipment or supplies. Safety must come first. Students are likely to play and do reckless things It's your job to anticipate this and prevent injuries.
- Perform the lab yourself before the students do. You'll save yourself great embarrassment by finding equipment or methodological difficulties beforehand rather than in front of a group of impatient students.
- Check that all the necessary equipment and supplies are available before the actual lab session.
- Remember to break down the equipment afterward, if necessary. You can often get student help with this if you plan ahead.
- Check with the professor for items required in a good lab report.

Recitation Sections

Like a laboratory section, a recitation section often is run reasonably independently. For the same reasons, it is important to understand the professor's goals for the recitation section. Ask what these goals are.

Most recitation sections fall into one of three groups. Think through which group yours is (sometimes combinations occur) and consider the issues suggested below.

Consideration of Lecture Material

This type of recitation section gives students an opportunity to consider in greater depth the material covered in lectures – usually with an opportunity to ask questions that couldn't be asked during lecture. Many techniques can be used to run a session, but they should all be focused on helping students master the main points of the lecture. To accomplish this goal, a TA would be wise to:

- Attend the lecture yourself.
- Summarize for yourself the main points, particularly those likely to be on the exam. Decide on their relative importance.
- Consider the interaction of those points with material covered in prior weeks
- Plan how you will conduct the class so that each of the points is addressed and students are given time to get answers about issues that are unclear.

Problem Solving

The problem-solving recitation is a special case of the consideration of lecture material recitation. These recitations are most common in the sciences and engineering. In these sessions, your goal is to review what was covered in that lecture, but specifically help students make the material their own by applying it to solving homework problems. Usually students are asked to have completed homework assignments before arriving in class. In addition to the general consideration of lecture material a wise TA will:

- Solve the relevant problems themselves beforehand to avoid embarrassment and catch errors (errors in homework happen all the time).
- Think of ways to ensure that students have completed the necessary homework before arriving in class. Quick quizzes or homework collection can be very helpful with this. There are many other techniques as well.
- Consider how to find which problems need discussion and which need little attention because everyone solved them.
- For each problem, decide the key point being addressed, not just how would solve it.
- Help students understand how to see the problem and how to choose the appropriate method to solve it.

Extension of Lecture Material

In some classes the recitation section is used to provide basic course material, not just as a review. In this case same kind of planning as before applies, but you also need to address:

- What new issues are to be addressed in class?
- How important and complex is each new issue and how much time does it deserve?
- What relationships to prior material are important to address?

Office Hours

Many TAs are asked to keep office hours, an announced time that you will be available to help students. These hours can be enormously helpful to students although many will never take advantage of them. To do a good job of holding office hours you should:

- Actually be there!
- Tell students explicitly and repeatedly (many will forget) when your office hours are.
- Tell students where your office is and how to get there.
- Explain what you need to help them – many TAs ask students to bring what they’ve already tried, as well as to define a specific question.
-

Appendix B: A Tribute to some previous TAs

Teaching Assistants: Our Unsung Heroes

By Alexis Gerard Finger, Chair of the TA Excellence Committee

When I heard Pat Croce say on television, “You make a living by what you get, but you make a life by what you give,” I thought of many of our teaching assistants at Drexel University who were nominated throughout the year by students for the priceless things they gave them, including knowledge, skills, self-confidence,

guidance, inspiration, support, and hope. From August 2003 to May 2004, over 102 TAs were nominated for a TA Excellence Award, mostly by students whose lives were positively affected by their TAs. At the 14th annual TA Awards Ceremony and Reception on Monday, May 17, 2004, 26 teaching assistants from five different colleges received awards and applause from undergraduates, faculty, staff, parents and friends.

Too often the only public voice we hear when the topic of teaching assistants comes up on any university campus is a negative one. Complaints about TAs from students who are not doing well in a course are not uncommon, whether they are totally justified or not. I hear them, too. When I do, I'm concerned. I try to determine the cause and address the problem, particularly in the summer International Teaching Assistant program and the September TA workshops that Drexel University offers its new teaching assistants. After all, nothing is more important at a school, regardless of the age and level of the student body, than the quality of education it provides its students. For this reason, I'm delighted when the email nominations for TA Excellence Awards start coming in. The picture they paint is a very positive one of TAs making extraordinary contributions toward the learning of their students and their ultimate success in their classes. The following nomination is a perfect example of how a TA has helped a student deal with a challenging subject.

“My TA is great! I HATE, HATE, HATE science, physics especially, but mostly because I have such a hard time understanding the concepts.

From the first recitation class, my TA told the class he was available at any time for any reason, and he actually came through on that promise, as he has met me numerous times outside his office hours. He is excited about the subject and gives an honest effort into helping you understand it. He always tries to give me real world examples and doesn't get frustrated or impatient when I don't understand the homework. Also, he has offered review sessions for our exams outside of the department, meaning that he is not required to give up his time to help us. I appreciate Drexel recruiting people like him. It makes our money seem worth it. Please use this as my sincere vote and nomination, or at least just as a way for someone to take notice of his efforts.”

Considering the TAs notoriously “meager” salaries and back-breaking schedules, one can't help but notice and be inspired by the personal sacrifices they make to fulfill their teaching commitments and their positive attitude. It might interest you to know how teaching assistants feel about their role and experiences.

For example, Sushmita Srikant, a 2003 TA Excellence Award winner for her physics classes, told me that her day usually ends at 5 in the morning with all the homework and quizzes to study for everyday of the week. But, she said that the thought of making a difference or helping to improve the scores of even one student in her 10:00 class gives her the energy to put on her best smile and head to class.”

Another TA award winner Ashwin Menon, who teaches electrical engineering, told me that because he realizes the TA can help students build that special bond with the subject, he provides extra tutoring for students who need it and extra study sessions during midterms and finals for everybody.” But, he also admitted that “sometimes the pressure is enormous, especially when you are a TA for a freshman course, and on a Monday morning (for Physics), Wednesday Morning (For Math) you have 100 papers that have to be graded by that day.”

Two-time TA award winner for chemistry, Natalie Carroll, who has often spoken to new TAs in our orientation workshops, sees herself as an “ambassador of her field.” She said, “When a teacher has respect for her craft, her field, and her students, students see this and invariably trust her and understand that their success is important to her. And, the formation of this mutual respect is what leads to an equal involvement of student and teacher in the learning process.”

Most TAs I spoke to seem to agree that what makes this relationship between TA and students so meaningful are the shared rewards that can result from the shared effort. Often TAs who have “satisfied” students, enjoy and personally benefit from teaching them. Tony Abi Salloum, a 2004 TA Award winner for physics (and now a faculty member at Widener University), said to a new group of TAs, “My experiences have shown me how teaching is a unique and exciting mission. We interact with all different ages and cultures. We give from our heart, and that makes learning easy and fun. Being a teaching assistant is one of the most beautiful experiences I’ve ever had in my career life. It has made me feel what it means to be a professional.”

It’s a privilege to know such dedicated young professionals and participate in the process that rewards their efforts and helps “sing their song.” They certainly aren’t working hard for some kind of tribute, but it has great value. As Jing Zhang, Materials Science & Engineering TA award winner said to me, “When

students show their appreciation by saying, ‘Thank you,’ it is the best award not only for me but to all TAs.’

If for some reason this coming term, you aren’t doing well in a class and you aren’t happy with your TA. Speak to your TA about the problem after class or during an office hour. Though you only heard from a few teaching assistants in this article, TAs are genuinely concerned about the learning and academic success of their students. They really want to do a good job but they need your input. So, the chances are that if you speak to your TA about the problem, s/he will make an effort to solve it.

The winners for 2004 -2005 are up to you! I hope you will take time to acknowledge a TA who goes “the extra mile” for you and your classmates and brings “order out of chaos” or inspires you and points you in a new direction, perhaps even a new profession. For any TA who gives new meaning to the cliché, “made a difference in your life,” fill out the TA Excellence nomination form and tell us why your TA deserves the award. Is there a better way to say “Thank you”

Appendix C: On Discussions...

On Discussions and Participation Grades

Peter Frederick, Wabash College

Although the primary responsibility for initiating the tone and style of the discussions is mine, I value most those discussions in which you are doing most of the talking, interacting with each other and with the reading more than with me. Rather than arguing and debating one another, it is more important, I believe, to discuss cooperatively, building on one another’s ideas and helping each other with incomplete thoughts. There will be times for vigorous disagreement to be sure, but I would prefer that you acknowledge the person who just spoke before going on to make your point. We all know how good it feels to be understood, or acknowledged, and to have our ideas respected.

A quality discussion is best achieved when three conditions are met: first, that we know each other, refer to one another by name and with respect, and feel comfortable together; second, that the amount of talking I do is somewhat limited; and third, and most important, that the reading for the day has been carefully read and thought about ahead of class. It is a good idea to formulate your own questions about a reading, to write them down, to consider points of connection with other readings and with experience, and to note those passages which spoke to course themes and/or had a strong impact on you, emotionally as well as intellectually. I cannot overstate the importance of this last point.

Which brings me to the issue of determining the participation portion of your grade, a highly subjective but not necessarily unfair process. It is crucial, of course, to attend class regularly and to participate openly and thoughtfully. For me, “participation” means speaking not just when you are certain of an idea but also when you need to think out loud in order to figure what you think about an issue. Quality participation also means active listening to others, echoing what you hear them say and building on or disagreeing with (thereby affirming the value of) the ideas of others.

I am aware of the difficulties of participating in groups; some people are shyer than others. Nevertheless, I encourage you to take risks and to speak out, for we need everyone’s ideas and perspectives to fully understand these texts and issues. This class is an opportunity to work on your group discussion skills. Toward that end, we will sometimes break into smaller groups as well as staying all together.

Whether in large or small groups, please do not let grading get in the way of enjoying and getting involved in our discussions. It helps most to participate as if there were no grade involved. I do not assign daily grades but will note attendance and gradually develop a best judgment of your value as a participant (as both speaker and listener) in class. From time to time, I will give each of you feedback on how well I think you are doing in discussion, but you may also ask me any time for my estimation of your participation grade.

ON READING WELL TO DISCUSS WELL

Peter Frederick, Wabash College

Fundamental to the process of reading and discussing well is our active interaction with a “text” (a reading, poem, painting, chart, document, film or artifact). Effective reading is not just going quickly through a text, but rather is a process of questioning it actively, looking for key issues, themes, events, characters, forms and images. Underlining and even writing marginal comments in a “text” highlights these key points and makes them accessible during class discussions and in reviewing for exams. It is helpful, while still fresh in your mind, to summarize at the end of a chapter, or section the main ideas and issues you have just read in your own words! This aids memory as well as clarifying understanding.

In reading any “text”, look for the main message the author intends to convey. What are the key themes? Depending on the length and complexity of the document, there may be several sub-themes as well. Note also how the structure, or form of the text, as well as how its language (imagery and symbolism) supports and reinforces the ideas. Underline and circle words and phrases that have power for you. Note also how the text reveals the history traditions and cultural way of life of the time and place about which the document is written. Finally, think about how the themes and issues of the text still have applications in contemporary culture and in your own life.

In summary, then, in reading, look for and makes notes on:

1. The author’s point of view, main message, themes
2. The structure/form/plot of the text; how an argument or story unfolds sequentially
3. How language, words, images, metaphors, create an emotional tone which supports the message and form of the text
4. Cultural and historical context and information
5. Connections to our lives

When we come to class having not only read but thought about a text in these five ways, with underlining and marginal comments that reflect our thinking and feeling as we read, we are well prepared to discuss thoughtfully, listening well to the observations and ideas of others and trying out our own developing thoughts. Focused, even personalized underlining of texts prepares us in particular for discussions that begin with such questions as:

- “What are the major points or themes that X is trying to make in the text?”
- “What did you particularly like or dislike about the text?”
- “What quotations seemed particularly important to you?”
- “What do you learn about how people lived and thought?”
- “What words, phrases, or images had emotional or intellectual power for you?”
- “What does this reading say about what’s going on in our world today, or in my own life?”

Happy, thoughtful reading!

Appendix D: Cheating

Understanding Cheating⁹

There are many reasons why students cheat. Among them are:

- Pressure to perform well (internal, peer and parental)
- Lack of preparation (students didn't study or don't have an adequate background to be successful on their own)
- Conditions encourage it (lack of adequate proctoring; students sitting too close together; overly suspicious teacher who almost challenges students to cheat)
- Lack of sufficient negative consequence (Nothing will happen to me if I cheat, other than getting a better grade; everyone's doing it; nobody ever gets caught)
- Some teachers deny or refuse to see that their students cheat because it seems to be a personal affront, a violation of trust. Some teachers realize that students cheat, indeed even suspect certain students of cheating, but refuse to act upon it. They may worry about causing the student irreparable damage, of ruining the student's life, or they may just wish to avoid an unpleasant scene or the process involved in going through a university hearing. So, for whatever reason, they remain silent, but to remain silent is to be complicit in the student's dishonesty.
- Finding a measured response to cheating troubles many teaching assistants. Overreacting may do more harm than good. On the other hand, teachers who refuse to recognize the possibility of cheating may also be leading their classes to do just that.
- For Drexel freshmen, cheating may be a way to keep their heads above water. The competition here is much stronger than in high school. For the first time in their lives, they may be getting Cs and their self-image as top-notch students being challenged.
- Whatever the reasons for cheating, we have an obligation to the vast majority of honest students to act decisively when cheating occurs.

In the interest of honesty, teaching assistants should admit up front that some students do cheat. Although teachers may try to deny or ignore this fact, ignoring it only complicates the problem. Until academic dishonesty is confronted as a serious problem, little will be done to change the situation. Ask students in your classes how widespread cheating appears to them. The answer will undoubtedly surprise you.

Much has been written in recent years about the success-at-any-price student of this generation. Competition for jobs or admission to graduate school has made students single-minded in their pursuit of grades. Students are under a lot of pressure. Given this pressure, wherever it originates, some students find it difficult to resist the opportunity to cheat.

As a teacher, it's your obligation not to put the students in a situation where cheating is easy. This isn't to throw the burden of blame for cheating on the teachers--as some students invariably do--but to safeguard the integrity of your class and protect the rights of all students.

Avoiding Cheating on a Term Paper

The research paper can be an opportunity for the student to become familiar with the research materials available at the library and the process of original scholarship, or it can be an occasion for dishonesty.

⁹ Linda G. Schulze. Teaching Assistant Handbook (New Brunswick, NJ, Rutgers University. 1988) pp: 80-83.

Everyone is familiar with the term paper mills, where a student can buy a paper from a library of thousands. Fraternity houses are also notorious sources of recycled papers. The internet is also a rich source of material. To avoid these purloined papers, take some time to ensure that your students submit their own work.

Develop a good topic. Set very definite parameters to the assignment. Even when strict limits are set, some students will try to get away with a paper on a related topic. Be firm.

Don't require the same research topics year after year. Besides making the reading of the papers more interesting for you, it removes a source of easy temptation from the student's path. Choose a topic that will certainly require the use of current research.

If practical, insist that the students hand in outlines, working bibliographies, and duplicates of note cards as they proceed. You'll not have to read all of this, but if you've any questions about the papers you'll have something to which you can refer.

If, after all this, you think a student has handed in someone else's work as his or her own, you must act. First, try to find the source if it's a clear case of plagiarism. If you can't find a source and you're sure that the paper is plagiarized, speak to the student. You might ask some specific questions, what the student means by certain words and phrases or ask questions about some of the sources cited. Don't accuse the student directly of cheating. Explore the situation with such questions as "I was interested in your statement", or "I don't understand how. . .", or "I was puzzled by. . .", etc.

Cheating on an Exam

Students cheat on exams in different and creative ways.

For example, imagine that a multiple-choice exam is being administered to students in a lecture hall or classroom. The students are instructed to sit anywhere they wish but in every other seat. You might witness these documented cheating methods:

- Two students sitting one desk apart share an eraser. The students write answers on the eraser and pass it back and forth.
- Students write pertinent information on the visors of their caps, shirt cuffs, shoes or the palms of their hands.
- Students store answers on hand-held calculators, then use and/or share the calculators with other students.

Students arrange themselves at locations and angles so that they can easily pass information. Some of these arrangements include:

- The 'power wedge' where students form a triangle with the knowledgeable student at the bottom point. Other participating students sit at higher levels, fanning out as the rows go upward;
- Students sitting one seat apart but with pertinent books and papers placed on top of the separating desk;
- Students sitting close enough to look at each other's exams.
- Students use a code system such as tapping or hand signals to communicate.
- 'Ghost' persons, knowledgeable in the subject, impersonate the real student, and take the exam.
- Students appear to take the exam but don't turn one in. Later the students accuse the instructor of losing exams and demand to be given a re-test or amenable grades.

- One student creates a diversion by asking a question of the proctor so that the proctor can't observe other students cheating.
- Both a 'ghost' person and the enrolled student take the exam. The 'ghost' person puts the student's name on the exam and completes it. The student takes the exam but puts a fictitious name on it. Both exams are turned in. In the end, the instructor has no alternative but to discard the extra exam.
- Students wear a Walkman' which has recordings of pertinent information.
- Two forms (A & B) of the exam are handed out. Students who have gotten the answers to Form A prior to the test may be given Form B. The students are instructed to code the answer sheet with whichever exam form they were given. These students code in Form 'A' instead of 'B' and then provide the answers they have previously gotten.

Make it difficult for students to cheat on exams. Try to make the atmosphere comfortable within limits. You'll find that taking some reasonable precautions will discourage most of your students from cheating.

Don't use the same exams every term. Besides telling the students that you're a lazy and disengaged teacher, it makes it very easy for them to get a copy of the old exam.

Give the students a number of small tests and papers rather than one or two large ones. This relieves some of the pressures that cause students to cheat in the first place.

If possible, use short-answer or essay exams rather than relying solely on true/false or multiple-choice questions. If you do use multiple choice or true/false, make several different versions of the exam, with the order of the questions scrambled.

On the day of the exam, ask the students to seat themselves in alternate seats and rows so they won't be tempted to cheat.

Walk around the classroom during the exam. Don't leave the classroom unattended.

If you see a student cheating during the exam, take action immediately. A student who seems to be trying to look at another student's paper may be stopped with a meaningful look. If the student still seems to be trying to look, suggest to the student a change of desk. Insist upon it if the student balks. If a student is looking at notes during the test, you should take the test and the notes and speak to the student after class.

Dealing with Cheating on Exams

It's the responsibility of instructors to discourage students from cheating and not turn their back on cheating when it's detected. To meet both responsibilities, you need to carefully plan classroom and testing procedures that take into account the many ways in which cheating occurs.

All teachers are responsible for the establishment and maintenance of an environment that supports academic integrity and prevents academic dishonesty.

Advance Communication

Whatever decisions teachers make regarding academic integrity, it's imperative that *full communication ahead of time and during the exam* takes place between them and their proctors.

You need to make a clear statement on the first day of class about procedures students must follow. This statement can also appear in the course syllabus, to be repeated to the class the day before an exam, and/or as an exam begins.

Some suggested procedures for test preparation and test administration follow.

Test Preparation

Prepare more than one form of the exam. Possible alternatives are to have the same questions on each form but:

- present questions in different orders;
- vary the orders of the response alternatives;
- modify values within the same question on different forms so that responses are different (essentially parallel items may be useful where calculations are involved).
- Pre-code answer sheets and test booklets by:
 - using a numbering system so that the number on each test booklet matches the one on each student's answer sheet
- marking the answer sheets in such a way that the coding can't be altered, e.g., by using a felt-tip pen.

Tips on Test Administration

- Always have sufficient proctors for the exam. It's hard to pick an exact ratio, but one proctor per 40 students, when the proctor doesn't know the students, is advisable. If the proctor knows the student, e.g. as a quiz instructor, then having the students sit together by section in pre-assigned seats is advisable. This assists in minimizing 'ghost' exam takers because it's easier for the proctors to recognize and account for their own students.
- Most cheating on tests in large classes occurs when students are allowed to sit wherever they choose. It should be no surprise that cheaters choose to sit near each other! By numbering seats and tests and then assigning students with a test to sit in the seat with the same number, cheating can be greatly minimized. Seating arrangements are effective if they're a surprise to the test takers. Students should be warned that penalties would follow if seating directions aren't followed.
- Be systematic in handing out alternate forms, assuring the alternate order. Take into account students sitting in front and in back of each other.
- When the identity of the exam takers is a concern, require students to bring their student I.D. and another form of identification to each exam. Of course, this only works if proctors carefully look at each I.D. and student.
- Have an enrollment list or card file of names or signatures to be matched against I.D.s or exam answer sheets and checked off as the students enter (or leave) the exam room.
- Make sure your proctors are alert, moving around the exam room. They shouldn't be reading or involved in unnecessary chatter with other proctors. They should never leave the students alone.
- Any suspicious conduct by the students should be attended to immediately. If any conduct is suspicious (but not necessarily conclusive), you should move the students to other locations in the room. This is most successful when it's done immediately and with as little disturbance as possible.

What To Do If You Must Charge a Student with Cheating

Remember that cheating by a single student is eminently unfair to the others in the class; it's your obligation to protect the rights of honest students. If you don't, they in turn will feel cheated by you.

If you do find clear evidence of cheating on an exam or a paper, remember that you're required to report the case to the faculty adviser for the class or the department chair.

Charging students with cheating may not be the easiest thing you've ever done, but if you've followed the above suggestions, you'll have an easier time than will instructors who were less prepared. Having taken adequate preventive measures, you've fulfilled your responsibility for maintaining academic integrity and should consider the following suggestions when charging students:

Be certain that you're acting fairly and objectively and have all the facts.

Become familiar with the sanction alternatives, and at what level of these alternatives student's appeals leave your departmental jurisdiction.

Be able to justify the sanction you wish to impose, attempting to match it with the level or type of cheating that has taken place.

For additional information about Drexel University's judicial process, see the Drexel University Student Handbook, Section 8: Drexel University Student Judicial Policy, or on the web at: <http://www.drexel.edu/studentlife/studenthandbook/judicial8.htm>.

Appendix E: Academic Honesty

Drexel University Student Handbook, Section 10:

How To Use Academic Honesty

In order to articulate fully its commitment to academic honesty and to protect members of its community from the results of dishonest conduct Drexel University has adopted policies to deal with cases of academic dishonesty. These policies are intended not only to emphasize the imperative of integrity, but also to protect the rights of all members of the University community.

When a student is suspected of violating academic honesty standards, the faculty member will, as soon as reasonably possible, notify the student of the suspected infraction, seek the student's explanation, undertake any further investigation the faculty member considers appropriate, and initially determine whether a violation of the academic honesty policy has occurred. If the faculty member concludes that a violation has occurred, he or she will inform the head of the department offering the course of the alleged violation. If, based on the evidence presented by the faculty member and the results of any further investigation the department head may decide to undertake, the department head agrees that an academic honesty infraction has occurred, the department head and faculty member will determine the appropriate sanctions and inform the student of their decision.

If an act of academic dishonesty is determined to have occurred, for a first offense, one of the following sanctions will be imposed, depending on the gravity of the offense:

- reduction of a course grade;
- an "F" for the assignment or exam, or
- failure for the entire course with the inability to withdraw, or other action deemed appropriate by the faculty member.

Examples include, but are not limited to, requiring the student to re-take the exam, re-complete an assignment, or complete an assigned exercise. The decision of the faculty member and the department head shall be reported to the Office of Judicial Affairs, which is responsible for maintaining student conduct records and the incident will result in an official disciplinary record for the student(s).

Any student who believes that he or she has been accused of academic dishonesty unjustly may request a meeting with the faculty member and/or head of the department offering the course. Likewise, if the punishment is viewed by the student as excessive, given the circumstances, the review process may be initiated.

If such a meeting does not resolve the disagreement, and the student still believes the charge to have been unjust, he or she can appeal, in turn, to the dean of the college offering the course, and then to the Provost. Such appeals should be submitted in writing.

Any academic honesty infraction beyond a first offense is subject to the sanctions described above, as well as to disciplinary sanctions that may be imposed through the University Judicial process, administered through the Division for Student Life and Administrative Services/Office of Judicial Affairs. These sanctions may include suspension or expulsion from the University and are subject to an appeals process described in this Handbook.

Cases of academic misconduct relating to falsifying any documents (such as academic transcripts, grade change forms, or course withdrawals forms) or dishonesty (such as having someone not registered for the class attempt to take a test or exam for the registered student), will be referred to the Office of Judicial Affairs for adjudication. The following information is intended to assist students in

better understanding what behaviors may constitute Academic Dishonesty. Interpretation of this information as it relates to alleged violations of the Drexel University Academic Honesty Policy are left to the discretion of the faculty member, department head, dean of the college, and Provost/Senior Vice President for Academic Affairs. Students are strongly encouraged to request that the faculty member specify his/her individual expectations prior to the commencing of projects and/or assignments.

Consultation and advice is available through the Office of Judicial Affairs.

Forms of Academic Dishonesty

Plagiarism

Plagiarism is the inclusion of someone else's words, ideas, or data as one's own work. When a student submits work for credit that includes the words, ideas, or data of others, the source of that information must be acknowledged through complete, accurate, and specific references, and, if verbatim statements are included, through quotation marks as well. By placing his/her name on work submitted for credit, the student certifies the originality of all work not otherwise identified by appropriate acknowledgments. Plagiarism covers unpublished as well as published sources. Examples of plagiarism include, but are not limited to:

1. Quoting another person's actual words, complete sentences or paragraphs, or an entire piece of written work without acknowledgment of the source;
2. Using another person's ideas, opinions, or theory, even if it is completely paraphrased in one's own words without acknowledgment of the source;
3. Borrowing facts, statistics, or other illustrative materials that are not clearly common knowledge without acknowledgment of the source;
4. Copying another student's essay test answers;
5. Copying, or allowing another student to copy, a computer file that contains another student's assignment, and submitting it, in part or in its entirety, as one's own; or
6. Working together on an assignment, sharing the computer files and programs involved, and then submitting individual copies of the assignment as one's own individual work.

Students are urged to consult with individual faculty members, academic departments, or recognized handbooks in their field if in doubt regarding issues of plagiarism.

Fabrication

Fabrication is the use of invented information or the falsification of research or other findings. Examples include, but are not limited to:

1. Citation of information not taken from the source indicated. This may include the incorrect documentation of secondary source materials;
2. Listing sources in a bibliography not used in the academic exercise;
3. Submission in a paper, thesis, lab report, or other academic exercise of falsified, invented, or fictitious data or evidence, or deliberate and knowing concealment or distortion of the true nature, origin, or function of such data or evidence; or
4. Submitting as your own any academic exercises (e.g., written work, printing, sculpture, etc.) prepared totally or in part by another.

Cheating

Cheating is an act or an attempted act of deception by which a student seeks to misrepresent that he or she has mastered information on an academic exercise that he or she has not mastered. Examples include, but are not limited to:

1. Copying from another student's test paper;
2. Allowing another student to copy from a test paper;
3. Unauthorized use of course textbook or other materials such as a notebook to complete a test or other assignment from the faculty member;
4. Collaborating on a test, quiz, or other project with any other person(s) without authorization.
5. Using or processing specifically prepared materials during a test (e.g., notes, formula lists, notes written on the students clothing, etc.) that are not authorized; or
6. Taking a test for someone else or permitting someone else to take a test for you.

Academic Misconduct

Academic misconduct includes other academically dishonest acts such as tampering with grades or taking part in obtaining or distributing any part of an administered or unadministered test. Examples include, but are not limited to:

1. Stealing, buying, or otherwise obtaining all or part of an administered or unadministered test;
2. Selling or giving away all or part of an administered or unadministered test including questions and/or answers;
3. Bribing any other person to obtain an administered or unadministered test or any information about the test;
4. Entering a building or office for the purpose of changing a grade in a grade book, on a test, or on other work for which a grade is given;
5. Changing, altering, or being an accessory to the changing and/or altering of a grade in a grade book, on a test, a "change of grade" form, or other official academic records of the University that relate to grades;
6. Entering a building or office for the purpose of obtaining an administered or unadministered test;
7. Continuing to work on an examination or project after the specified allotted time has elapsed;
8. Any buying or otherwise acquiring any theme report, term paper, essay, computer software, other written work, painting, drawing, sculpture, or other scholastic art work, and handing it in as your own to fulfill academic requirement; or
9. Any selling, giving, or otherwise supplying to another student for use in fulfilling academic requirements any theme, report, term paper, essay, computer software, other written work, painting, drawing, sculpture, or other scholastic art work.

Sources: Portions of this policy were adopted from the Louisiana State University, the University of Florida, and the University of Delaware student codes of conduct.

Appendix F: 44 Things To Do in Class¹⁰

- 1) Hand out an informative, artistic, and user-friendly syllabus.
- 2) Direct students to a support unit for help in basic skills.
- 3) Tell students how much time they'll need to study for this course.
- 4) Explain how to study for the kind of tests you give.
- 5) Put in writing a limited number of ground rules regarding absence, late work, testing procedures, grading, and general decorum, and maintain these.
- 6) Announce office hours frequently and hold them without fail.
- 7) Give sample test questions.
- 8) Give sample test question answers.
- 9) Explain the difference between legitimate collaboration and academic dishonesty; be clear when collaboration is wanted and when it's forbidden.
- 10) Give a pre-test of the day's topic.
- 11) Start the lecture with a puzzle, question, paradox, picture, or cartoon on slide or transparency to focus on the day's topic.
- 12) Use variety in methods of presentation every class meeting.
- 13) Stage a figurative "coffee break" about twenty minutes in to the hour: Tell an anecdote, invite students to put down pens and pencils, refer to a current event, and shift media.
- 14) Incorporate community resources: Plays, concerts, local landmarks and events, government agencies, business, the outdoors.
- 15) Show a film in a novel way: Stop it for discussion, show a few frames only, anticipate the ending, hand out a viewing or critique sheet, play and replay parts.
- 16) Share your philosophy of teaching with your students.
- 17) Form a student panel to present alternative views of the same concept.
- 18) Tell about your current research interests and how you got there from your own beginnings in the discipline.
- 19) Conduct idea-generating or brainstorming sessions to expand horizons.
- 20) Give students two passages of materials containing alternative views to compare and contrast.
- 21) Distribute a list of the unsolved problems, dilemmas, or great questions in your discipline and invite students to claim one as their own to investigate.
- 22) Let your students see the enthusiasm you have for your subject and your love of learning.
- 23) Take students with you to hear guest speakers or special programs on campus.
- 24) Diagnose the students' prerequisite learning by a questionnaire or pre- test and give them feedback as soon as possible.
- 25) Hand out study questions or study guides.
- 26) Be redundant. Students should hear, read, or see key material at least three times.

¹⁰ Joseph Janes and Diane Hauer, *Now What? Readings on Surviving (and Even Enjoying) Your First Experience at College Teaching* (Littleton, MA: Copley Publishing Group, 1988) pp. 92-94.

- 27) Allow students to demonstrate progress in learning: Give a summary quiz over the day's work, or ask for a written reaction to the day's materials.
- 28) Use non-graded feedback to let students know how they're doing: Post answers to ungraded quizzes and problem sets, exercises in class, oral feedback.
- 29) Use a light touch: Smile, tell a good joke, break test anxiety with a sympathetic comment.
- 30) Organize. Give visible structure by posting the day's "menu" on chalkboard or overhead.
- 31) Use multiple media: Overhead, slides, film, videotape, audiotape, models, sample concepts.
- 32) Use multiple examples, in multiple media, to illustrate key points and important concepts.
- 33) Make appointments with all students (individually or in small groups).
- 34) Tell students what they need to do to receive an A in your course.
- 35) Invite students to ask questions and wait for the response.
- 36) Probe student responses to questions and their comments.
- 37) Give students an opportunity to voice opinions about the subject matter.
- 38) Have students apply subject matter to solve real problems.
- 39) Grade quizzes and exercises in class as a learning tool.
- 40) Give students plenty of opportunity for practice before a major test.
- 41) Have students write questions on index cards to be collected and answered the next class period.
- 42) Learn names.
- 43) Find out about your students via questions on an index card.
- 44) Gather student feedback in the first three weeks of the term to improve teaching and learning.

References

Active Learning: 101 Strategies to Teach Any Subject, Mel Silberman (Needham Heights, MA: Allyn and Bacon, 1996). 189 pp.

Citing Piaget, Montessori, and Confucius, Silberman takes a learner-centered approach to “covering the material” in a wide variety of disciplines. His book is a treasure chest of easy to use strategies for engaging college students in cognitive exploration.

The Seven Principles in Action: Improving Undergraduate Education, Susan Rickey Hatfield, Ed. (Bolton, MA: Anker Publishing Co., 1995). 156 pp.

Hatfield first describes the work of the American Association for Higher Education (AAHE) in culling several decades of research on teaching and learning to define the "key principles which characterize the practices of exceptionally successful undergraduate institutions". The AAHE project found that good practice in undergraduate education:

1. encourages student-faculty contact
2. encourages cooperation among students
3. encourages active learning
4. gives prompt feedback
5. emphasizes time on task
6. communicates high expectations
7. respects diverse talents and ways of learning".

Simple checklists called inventories (see Chapter 9) allow faculty, students and institutions to measure their own adherence to the seven principles.

Hatfield sets out a chapter on each principle, giving a short list of resources and several examples of successful implementation of the principle in American colleges. Chapter 4, *Prompt Feedback*, thus includes sections on timeliness, directiveness, specificity, amount and sources of feedback. I found the discussion of clear expectations (pp. 82-82) to be especially helpful for advice on how to communicate evaluation standards to students. The AAHE first published an article on the seven principles in 1987 and has experienced continued heavy demand for reprints and inventories. Hatfield's lucid and concise presentation makes the book useful for busy faculty who want a quick, dependable source of information on how to improve their own teaching and their students' learning.

Classroom Assessment Techniques: A Handbook for College Teachers, 2nd. edition, Thomas A Angelo and Patricia Cross (San Francisco, CA: Jossey-Bass Publishers, 1993). 427pp

A classic volume on college level assessment presented by two of the most prominent researchers in the field. Excellent basic information on assessment and many alternatives for the faculty use and adaptation.

The Teaching Portfolio: A Practical Guide to Improved Performance and Promotion/Tenure decisions, 3rd edition, Peter Seldin, (USA: Anker Publishing Company, 2004). 349 pp.

Comprehensive and concise presentation by one of the premier advocates of teaching portfolios, Seldin's guidebook addresses common concerns of faculty about the contents and scope of well constructed teaching portfolios. The book is intended for use both by faculty and administrators. It contains two Drexel faculty portfolios and a write-up on the history of the teaching portfolio program here.

Teaching A Diverse Student Body: Practical Strategies for Enhancing Our Students' Learning, Nancy Loevinger, (Charlottesville, VA: Kaminer & Thomson, 1996). 80pp.

How People Learn: Brain, Mind, Experience, and School, John D. Bransford, Ann L. Brown, and Rodney R. Cocking (Washington, D.C.: National Academy Press, 2000). 374pp.