THE STUDENT IS . . .

. . . the most important person on the campus. Without students there would be no need for the institution.

. . . not a cold enrollment statistic but a flesh and blood human being with feelings and emotions like our own.

. . . not someone to be tolerated so that we can do our thing. They are our thing.

. . . not dependent on us. Rather, we are dependent on them.

. . . not an interruption of our work, but the purpose of it. We are not doing them a favor by serving them. They are doing us a favor by giving us the opportunity to do so.

"Education is a kind of continuing dialogue, and a dialogue assumes different points of view."

Robert Maynard Hutchins (1899-1977) President University of Chicago

Effective Teaching[1]

Context and Definition

Teaching occurs under a variety of circumstances such as one-on-one tutoring, guidance in a laboratory course, lecturing in a standard class and directing students in their research and professional development. And, of course, as parents we hope we are teaching our children as we interact with them. Each circumstance requires an emphasis on a different set of skills but the essential elements of good teaching operate in all of these and other environments.

There are literally tens of thousands of publications, documents and surveys all purporting to identify the critical elements of effective teaching. Most list seven to twelve characteristics and the list includes personal traits that any of us would want in a person with whom we interact.

But perhaps we should begin with an understanding of the meaning of "to teach." Most dictionaries define teaching along the lines of: to impart knowledge. This then leads to the question of "what is knowledge?" In my mind the ideal result of effective teaching is for our students to have reconstructed their understanding of a concept and integrated this new understanding into their mind. They will then view the world and what they hear and see with this new conceptual understanding—knowledge. If our goal is to have our students develop a new mental conceptual framework for the topic of interest, then how do we accomplish this?

First, let us always remember that our students are human beings and each one comes with her/his own history and learning styles. This leads to the conclusion that our greatest effort should occur well before the course even begins. We should begin by thinking about the topics, different approaches to explaining concepts and how we will assess student progress. Research suggests that effective teachers generally focus on four questions:

1. What should my students be able to do intellectually as a result of this course?
2. How can I best help them to develop these intellectual capacities?
3. How can both the students and I understand how they are learning and the progress of that learning?
4. How do I evaluate my own efforts to foster student learning?

As we continue to focus on course preparation, it will lead naturally to the development of the course syllabus—a part of teaching that receives too little attention.

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[1] This material was derived from the literature cited at the end of this essay and organized in this format by Lawrence G. Abele, Director, Institute for Academic Leadership, Provost Emeritus, Florida State University.

The Course Syllabus

Although most universities require certain information to be included in the syllabus, as a reminder, I will just list some elements that you may want to think about and include.

1. Introduce yourself. Be fairly detailed so that students will have an appreciation of you and your area of expertise. If you are comfortable doing so, share a little of your personal details and interests. Include office number, office hours, contact information—telephone number, e-mail address.
2. Something that I have seen and find interesting is a student-teacher contract. Some go along the lines of: As your teacher I commit to you that I will be on time and well prepared for each class. I will do my best to answer all of your questions in a respectful manner. You, as the student, commit to attending every class and to have prepared for every class by completing the readings and homework assignments.
3. Your approach to teaching. Some faculty turn this into a teaching philosophy statement. My recommendation is that if you wish to do this, keep it short.
4. Where does this course fit into the broader intellectual area of the discipline? Why is it important that the student take this course?
5. Include a general description and outline of the course in broad outlines. (This can be separate or part of number 4 above.)
6. Course objectives. These should be as specific as possible and tie to the specific objectives that you will list for each and every class meeting.
7. Reading assignments and resources for the course, both online and in hard copy.
8. Course calendar. Many faculty like to place the course calendar in the syllabus but my own preference is to separate it as it is more convenient for students and reminds me to have an assignment and at least three objectives for each class meeting.
9. Course requirements. This should include the prerequisites—if access to a computer is needed and if any class activities might be scheduled outside of the regular meetings.
10. Course assignments. Term papers, laboratory work, etc.
11. Course policies. What happens if you miss a class or exam, late assignments? Some faculty include here comments on expectations of civility, texting, the use of cell phones in class and general expectations of behavior but you can also include these in your course contract.
12. University policies on disability access, religious days, and similar notices.
13. Academic dishonesty. Given the use of the Internet it is worth your time to both state here and verbally your expectations of citations and use of Internet material.
14. How you will assess student learning. Are exams essay, multiple-choice, etc.?
15. Grading policies. It is important to be as clear and concise as possible to avoid disputes later.
16. Strategies for Success. Some faculty like to have some comments in the syllabus but I like to have them as part of the course calendar.

Course Calendar

It is here that I place all of the readings and assignments for each class period. I also list the specific objectives for each class—what I hope will be learned in each class period.

Seven Good Practices in Undergraduate Education

There are many versions of good practices and all capture the same themes. The ones below are from an older paper by Chickering, A.W., and Gamson, Z.F. (1987). The Wingspread Journal 9(2).

1. Encourage contact between students and faculty, especially around intellectual topics.
2. Develop reciprocity and cooperation among students.
3. Use active learning techniques (see High Impact Activities, page 10)
4. Give prompt and meaningful feedback.
5. Emphasize time on task. Effort and time pay off.
6. Communicate high expectations.
7. Respect diverse talents and ways of learning.

The Seven Best Classroom Practices

1. Create a natural critical learning environment.
2. Get the students' attention and keep it.
3. Start with the student, not the discipline.
4. Seek commitments from the students.
5. Help students learn outside of class.
6. Engage students in disciplinary thinking.
7. Create a diverse learning experience.

Characteristics of Effective Teaching

Following is what students say represents a good course:

1. The instructor has deep knowledge of the field.
2. The course is highly organized such that the content, flow and expectations are clear.
3. The students have an opportunity to recover from one bad performance, either on an exam or an in-class interaction.

We can elaborate on the list above as further discussions with students reveal the following factors most important to students:

1. Subject Matter
   a. Demonstrates knowledge of the subject matter.
   b. Shows enthusiasm for the subject.
2. Presentation/Facilitation
   a. Is well prepared for class (clear syllabus and schedule, organized in class).
   b. Stimulates interest in the subject.

4

      c.   Encourages discussion/class interaction.
      d.   Explains information clearly.
   3.   Approach to Students
      a.   Shows concern for students.
      b.   Is readily available to students.

Assessing Teaching Through Observation

Over the past few years there have been a number of studies focusing on assessing teaching through observation using various protocols. The one below is referred to as Teaching Dimension Observation Protocol (TDOP) while others include RTOP (Reformed Teaching Observational Protocol), UTP (The UTeach Observational Protocol) and several others. See AAAS 2012 Report cited in the selected references and the Chronicle of Higher Education, Feb. 10, 2014: Dissecting the Classroom.

An Example of the Teaching Dimension Observation Protocol (TDOP) Approach.
An observer sits in the class with a matrix of the codes noted on the following pages. Every two minutes the observer checks off one of the codes. Note that the abbreviation for each code is what actually appears on the TDOP in both hardcopy and web-based versions. Also, each code is applied within the 2-minute interval in which it is observed—in cases where they bridge two intervals the code is applied once in each interval. Sample matrix below:

See Appendix 1 for larger chart.

TEACHING METHODS

L Lecture: The instructor is talking to the students and not using any visuals or demonstration equipment.

LPV Lecture with pre-made visuals: The instructor is talking to the students while using premade visual aides, such as slides, transparencies, posters, pre-written chalkboard notes, etc. The instructor must be referring to topic contained in the visual within the coded time segment.

LHV Lecture with handwritten visuals: The instructor is talking to the students while actively writing and presenting notes, creating charts/diagrams, etc. (must either be writing or referring to what they are writing).

LDEM Lecturing with demonstration of topic or phenomena: The instructor uses equipment (e.g., lab equipment, computer simulation, or other physical objects other than handwritten visuals) to convey course content. The objects must be actively referenced by the instructor. (Note: this will always be co-coded with IL and CN)

LINT Interactive lecture: The instructor is talking to the students while asking multiple, successive questions to which the students are responding, and student responses are either guiding or being integrated within the discussion. (2+ rounds of dialogue; a round equals at least one relevant student response to instructor)

SGW Small group work/discussion: Students form into at least 2 groups of 2+ for the purposes of discussion and/or to complete task.

DW Deskwork: Students complete work alone at their desk/chair.

CD Whole class discussion: Instructor initiated/prompted discussion where students are answering and asking questions amongst themselves for a sustained period of time. This is different than an interactive lecture in which the instructor is directing all of the questions. This code is also different from small group work/discussion because conversations are not in groups but involve the entire class in a single conversation.

MM Multimedia: The instructor plays a video or movie (e.g., YouTube or documentary) without speaking and the students watch (instructor not speaking). If the instructor is talking extensively while using multi-media, then also code LPV.

SP Student presentation: The students are giving presentations to the class or otherwise acting as the primary speaker or instructor in the classroom. (Only select this code and no others as long as the primary instructor is not actively teaching the class. That is, do not switch coding to what the student is doing—just use this code and no other until the primary instructor returns.)

PEDAGOGICAL MOVES

MOV Moves into audience: The instructor walks up aisles or enters the student seating area of classroom.

HUM Humor: The instructor tells jokes or humorous anecdotes; this code requires laughter from students—at least 2 students must laugh.

RDS Reads: The instructor reads verbatim from prepared notes, text, or PowerPoint slides**.** (Must be extensive reading and not just reading slide headings or definitions and then elaborating extemporaneously.)

IL Illustration: The instructor uses real-world examples or illustrations to demonstrate, show, or otherwise convey course content. Anecdotes and stories that are not substantive demonstrations or illustrations of the course material should not be coded. Extended thought experiments, if they include the illustration of abstract content, may also be

coded here.

ORG Organization: The instructor writes, posts, or verbally describes the outline of class and/or clearly indicates transition from one topic to the next, including transitions from previous class to the present class (end of class overview). These transitions can be between large topics or sub-topics—the main point is that students are being alerted to a shift in focus. (This can be a brief statement, so be careful to watch for these organizational markers.)

EMP Emphasis: The instructor clearly states relative importance—that something is important for students to learn or remember. (This includes statements about things being important or exams, future careers, and the course as a whole. This does not include "negative" emphases, such as "you don't need to know this" types of statements.)

A Assessment: The students take a test or quiz. This includes the use of clickers to answer questions that explicitly seek content-related knowledge from the students. (Verbal questions are not coded under this code, but are captured in the interactions category.)

AT Administrative task: The instructor and/or students make announcements, discuss upcoming assignments or exams, or engage in other logistical tasks.

STUDENT-TEACHER INTERACTIONS

RQ Instructor rhetorical question: The instructor asks a question without seeking an answer and without giving students an opportunity to answer the question. (Instructor waits less than 5 seconds for an answer—if they wait longer it is a display question.)

DQ Instructor display question: The instructor seeks a specific factual or conceptual answer, or asks students to solve a computational problem or a conceptual dilemma.

CQ Instructor comprehension question: The instructor checks for understanding (e.g., "Does that make sense?") and pauses for at least 2 seconds, thereby indicating an opportunity for students to respond.

SNQ Student novel question: A student poses a question to the instructor that seeks new information (i.e., not asking to clarify a concept that was previously being discussed).

SCQ Student comprehension question: A student poses a question to the instructor that seeks clarification of a concept that is part of the current discussion, from the past class period, or about other topics that have already been covered.

SR Student response: A student responds to a question posed by the instructor. (This does not include responses to instructor comprehension questions.)

PI Peer interactions: 2+ pairs or groups of students are speaking to/with one another about topic. This will be co-coded with SGW but not LINT, as the latter will be guided by instructors.

COGNITIVE DEMAND

RRI Recall and retain information: Instructors provide verbal or handwritten definitions of terms or equations, or students are asked to define a term or recall basic facts through a verbal question or clicker question.

PS Problem solving: Instructors ask students to actively solve a problem or computation. This includes computations or evaluations of conceptual dilemmas, and is evident through explicit verbal requests to solve a problem, or to engage in thought experiments or conceptual dilemmas that require students to consider alternatives and identify solutions. This may also include verbal requests to "look at the dataset and identify patterns."

CR Creating: Instructors ask students to engage in creating their own ideas or products, as indicated by instructors clearly stating that students should be creative and/or generate their own ideas and products. The outcome is open-ended rather than fixed.

CN Connections to the real world: Students make connections between the course material and their daily lives, as indicated by instructors using physical demonstrations or verbal illustrations that link material to popular culture, the local environment, etc. The connections made may be very brief, and these connections may also include similes and metaphors, as long as they are clearly intended to make the abstract or conceptual more concrete for students.

STUDENT ENGAGEMENT

VHI Very High: More than 75% of the students in the immediate area of the observer are either (a) actively taking notes, or (b) looking at the instructor/course materials.

HI High: Between 50% and 75% of the students in the immediate area of the observer are either (a) actively taking notes, or (b) looking at the instructor.

MED Medium: Between 25% and 50% of the students in the immediate area of the observer are either (a) actively taking notes, or (b) looking at the instructor.

LO Low: Less than 25% of the students in the immediate area of the observer are either (a) actively taking notes, or (b) looking at the instructor.

TECHNOLOGY

PO Poster: Posters such as the periodic table or a map of tectonic plates.

B Book (s): Books used during the class period.

N Notes: Lecture notes actively used by instructor during the class.

P Pointer (e.g., laser pointer, metal pointer)

CB Chalkboard/white-board

OP Overhead/transparencies (e.g., includes slides projected using a projector)

PP PowerPoint or other digital slides

CL Clickers

D Demonstration equipment

DT Digital tablet: This refers to any technology where the instructor can actively write on a document or graphic that is being projected onto a screen. This includes document cameras, as well as software on a laptop that allows for writing on .pdf files. (Note: transparencies being written on are coded as OP)

M Movie, documentary, video clips, or YouTube video

SI Simulation: Simulations can be digital applets or web-based applications.

WEB Website: Includes reference to course website or other online resource (besides YouTube videos) as active part of instruction.

How Do We Measure Effective Teaching?

1. Student achievement: Performance in
   a. Current course.
   b. Subsequent course.
   c. Program of study.
   d. Professional work or next level of school.
2. Ratings of teaching based on
   a. Peer observations.
   b. Expert observations.
   c. Student perceptions.
   d. Observations based on a video of yourself.

One of the more contentious issues in evaluating effective teaching is both the use and value of data derived from students on their perception of the faculty member's teaching. Remember student evaluations should be only one of a number of evaluative approaches and no one has ever suggested that these results are the only information one should use in evaluating faculty teaching. [Theall, Abrami and Mets (2001) provide a good summary of the criticisms and value of student survey results.]

Evaluating and discussing student responses can have important and valuable consequences. First, a conversation about teaching almost always yields good ideas and suggestions for improvements. Second, student surveys allow us to identify those faculty that students believe to represent the best teachers and those who may need assistance in improving his/her teaching. Both categories are to some extent arbitrary. For the best teachers, as viewed by students, simply select the top 1% or less of the results and let the individuals know that you, as the department chair, saw the results and appreciate the effort. A nice note to a colleague is always appreciated.

For faculty colleagues who may need improvement it is important to focus on student results that are clearly outliers. For example, if the current range of responses to the question "Overall assessment of Instructor" is around 5% in the Poor or Fair category or their equivalent, an outlier would be 30% in these same categories. Anyone can have a poor evaluation for a single course as a result of any number of factors. However, if there is a trend the chair has an obligation to the students and other colleagues to address the concerns expressed by students taking the class.

Addressing Student Concerns About Teaching.

The first poor evaluation should result in a meeting with the department chair to discuss the issues. A trend of poor evaluations should result in a written teaching improvement plan. A teaching improvement plan should be a constructive process with the goal of assisting your colleague in identifying and improving areas of concern. It can be developed and implemented with the assistance of Teaching Center staff and, at least initially, should be a confidential process or with the guidance of a senior colleague or learning specialist and approved by the chair. It should begin with a detailed list of concerns identified through student perception surveys, peer evaluation and videos of the individual teaching. The concerns should be listed and a specific, measurable objective listed for each area of concern. A colleague or learning specialist should be sitting in every class with an

instrument that permits assessment of the improvement objectives. Student surveys should be conducted at least every four weeks during the course to assess the students' perception of progress.

The goal is to assist the individual in improving teaching and should always begin with that goal. If the individual is uncooperative and chooses not to make an effort to improve, other actions are appropriate.

How Do We Measure Effective Learning?

Measuring effective learning is much more difficult than it would seem because of the nature and variety of student learners.   Consider the following types of learners (see Bain 2004:42 for discussion and references):

Received learners- assimilating what the teacher says without critical thinking or questioning.

Subjective learners—understanding that experts can disagree but then concluding that knowledge is largely subjective and is simply a matter of opinion.

Procedural learners—often confused as "our best students" as they have learned the criteria for judgment and will give us what we want but without any critical judgment of their own. They give us back our own thoughts and therefore sound brilliant.

Deep understanding learners—independent and critical thinkers, evaluating ideas and consistently integrating them into their thinking.

Connected learner—have deep understanding and look at the merits of other ideas often biasing themselves toward the idea they are examining.

Separate learners—have deep understanding but always remain skeptical of ideas and challenge them.

How do we distinguish among students who are "procedural" and those who have "deep understanding'?   This is a very hard question to answer. There are few, if any, instruments available to make a distinction between types of learners and real assessment requires prolonged oral interactions. In the mid 1980s some physics faculty (Hallou and Hestenes, 1985) conducted an interesting experiment. They gave students a pre-test prior to the students enrolling in a standard physics class and then at the end of the class they carefully interviewed students who had completed the University Physics course. Both the interviews and the post-test demonstrated that even students who did well in the class continued to hold erroneous beliefs about Newton's Laws. This was true across different sections of the course taught by faculty with very different teaching styles. It is not possible to hold oral exams for the thousands of students who take physics courses each year and Halloun and Hestenes recommend building the teaching approach and testing around correcting the most common misconceptions.

The Voluntary System of Accountability attempted to address the question of learning gains (or "value added") in college by comparing the exam results of entering college students and seniors (http://www.voluntarysystem.org/index.cfm). They looked at three different exams and found that it is possible to measure improvement on the exams but it is still not clear if this measures gain in abilities or the maturations process of students in the college setting.

High Impact Experiences

Research by George Kuh and others using the NSSE (National Survey of Student Engagement)[2] found that the practices listed below elicit strong and positive responses from students and result in students having a deeper understanding of the material.

First-Year Seminars and Experiences

Many schools now build into the curriculum first-year seminars or other programs that bring small groups of students together with faculty or staff on a regular basis. The highest-quality first-year experiences place a strong emphasis on critical inquiry, frequent writing, information literacy, collaborative learning, and other skills that develop students' intellectual and practical competencies. First-year seminars can also involve students with cutting edge questions in scholarship and with faculty members' own research.

Common Intellectual Experiences

The older idea of a "core" curriculum has evolved into a variety of modern forms, such as a set of required common courses or a vertically organized general education program that includes advanced integrative studies and/or required participation in a learning community (see below). These programs often combine broad themes—e.g. technology and society, global interdependence—with a variety of curricular and co-curricular options for students.

Learning Communities

The key goals for learning communities are to encourage integration of learning across courses and to involve students with "big questions" that matter beyond the classroom. Students take two or more linked courses as a group and work closely with one another and with their professors. Many learning communities explore a common topic and/or common readings through the lenses of different disciplines. Some deliberately link "liberal arts" and "professional courses;" others feature service learning.

Writing-Intensive Courses

These courses emphasize writing at all levels of instruction and across the curriculum including final-year projects. Students are encouraged to produce and revise various forms of writing for different audiences in different disciplines. The effectiveness of this repeated practice "across the curriculum" has led to parallel efforts in such areas as quantitative reasoning, oral communications, information literacy, and, on some campuses, ethical inquiry.

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[2] Source: *High-Impact Educational Practices: What They are, Who Has Access to Them, and Why They Matter* by George D. Kuh, (Washington, DC: AAC&U, 2008). For information and more resources and research from LEAP, see www.aacu.org/leap.

Collaborative Assignments and Projects

Collaborative learning combines two key goals: learning to work and solve problems in the company of others, and sharpening one's own understanding by listening seriously to the insights of others, especially those with different backgrounds and life experiences. Approaches range from study groups within a course, to team-based assignments and writing, to cooperative projects and research.

Undergraduate Research

Many colleges and universities are now providing research experiences for students in all disciplines.   Undergraduate research, however, has been most prominently used in science disciplines. With strong support from the National Science Foundation and the research community, scientists are reshaping their courses to connect key concepts and questions with students' early and active involvement in systematic investigation and research. The goal is to involve students with actively contested questions, empirical observation, cutting-edge technologies, and the sense of excitement that comes from working to answer important questions.

Diversity/Global Learning

Many colleges and universities now emphasize courses and programs that help students explore cultures, life experiences, and worldviews different from their own. These studies—which may address U.S. diversity, world cultures, or both—often explore "difficult differences" such as racial, ethnic, and gender inequality, or continuing struggles around the globe for human rights, freedom, and power. Frequently, intercultural studies are augmented by experiential learning in the community and/or by study abroad.

Service Learning, Community-Based Learning

In these programs, field-based "experiential learning" with community partners is an instructional strategy—and often a required part of the course. The idea is to give students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community. A key element in these programs is the opportunity students have to both *apply* what they are learning in real-world settings and *reflect* in a classroom setting on their service experiences. These programs model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life.

Internships

Internships are another increasingly common form of experiential learning. The idea is to provide students with direct experience in a work setting—usually related to their career interests—and to give them the benefit of supervision and coaching from professionals in the field. If the internship is taken for course credit, students complete a project or paper that is approved by a faculty member.

Capstone Courses and Projects

Whether they're called "senior capstones" or some other name, these culminating experiences require students nearing the end of their college years to create a project of some sort that integrates and applies what they've learned. The project might be a research paper, a performance, a portfolio of "best work," or an exhibit of artwork. Capstones are offered both in departmental programs and, increasingly, in general education as well.

Academic Freedom and Teaching

Academic freedom is surely the most misused and abused word in academia. Various writers and speakers have given it a status that is neither historically nor legally accurate. Below is the earliest reference I could find for a formal definition.

"Academic freedom is the freedom of a teacher or researcher in higher institutions of learning to investigate and discuss the problems of his science and to express his conclusions, whether through publication or the instruction of students, without interference from political or ecclesiastical authority, or from the administrative officials of the institution in which he is employed, unless his methods are found by qualified bodies of his own profession to be clearly incompetent or contrary to professional ethics." [A. Lovejoy, *Intl. Encycl. Social Sciences*, 384 (1930)].

Clearly, we have great latitude in what and how we teach but there are boundaries; and any boundaries are best set by the community of scholars within which we operate.

Ethical Conduct in Teaching

Most of the factors of effective teaching listed above could fall under "professional obligation" or "ethics" and are familiar to all of us. That is, we should always be prepared, be respectful toward students and provide meaningful feedback in a timely manner.

I would only add a short example of something that did not occur to me until a colleague pointed it out. I violated ethical standards when, walking across campus with a colleague, I remarked that a student who passed us had done horribly in my class. My colleague said that the student was doing well in her class but that she would now take a closer look at his work and his behavior during exams. That was unfair to the student and was a violation of my ethical obligation to the student.

Questions

1.   What do you think is the best method to assess learning?

2.   What are the best practices in undergraduate education?

3.   Do you use something similar to the following list to evaluate your teaching?
   a.   Does the syllabus have all of the important elements?
   b.   Is the course and material well organized?
   c.   Do I really know the material?
   d.   Are there multiple opportunities for assessment, beginning early in the term—for the student; of my own teaching?
   e.   Are the students engaged in the class?
   What measures do you use to assess effective teaching?

4.   How do you measure effective learning?

5.   Have you or your departmental colleagues used the Teaching Dimension Observation Protocol? Do you think there is value in its use or in one of the modified forms?

6.   Is there any value in student perceptions of teaching?

7.   Do you review the students' evaluations of your teaching? If so, have you found them helpful and/or made changes in your teaching?

A small sampling of the literature related to teaching and teaching effectiveness

AAAS. Describing & Measuring Undergraduate STEM Teaching Practices. 2012: A Report from a National Meeting on the Measurement of Undergraduate Science, Technology, Engineering, and Mathematics (STEM) Teaching December 17–19, 2012.

Addison, W.E., Best, J., & Warrington, J.D. "Students' perceptions of course difficulty and their ratings of the instructor." *College Student Journal*, 2006, *40*(2), 409-416

Angelo, Thomas A., and K. Patricia Cross. *Classroom Assessment Techniques: A Handbook for College Teachers*. 2nd edition. San Francisco: Jossey-Bass, 1994. A comprehensive and practical introduction to the use of classroom assessment techniques. Fifty assessment techniques from a variety of fields are provided.

Bain, K. 2004. What the best college teachers do. 1-207. Harvard University Press. A very good view of research and observations on a variety of college teachers thought to be the very best. Will cause you to think about how we interact with students in a learning environment.

Banner, James, and Harold C. Cannon. *The Elements of Teaching*. New Haven: Yale University Press, 1999. The authors divide their study into the "elements" that go into the making of a good teacher: learning, authority, ethics, order, imagination, compassion, patience, character, and pleasure. All teachers have all these attributes to varying degrees; the important thing is how the traits are developed and used to the students' best advantage.

Beran, T., & Violato, C. "Ratings of university teacher instruction: How much do student and course characteristics really matter?" *Assessment & Evaluation in Higher Education*, 2005, *30*(6), 593-601.

Bligh, Donald A. *What's the Use of Lectures?* San Francisco: Jossey-Bass, 2000. A thoughtful, thorough work on when and how to use lectures most effectively, and especially how to be aware of, and compensate for, the inadequacies of lectures for many kinds of student learning.

Boice, Robert. *Advice for New Faculty Members*. Boston: Allyn and Bacon, 2000. A useful handbook covering not only teaching but all aspects of a new professor's responsibilities.

Braga, M. Paccagnella, M. and Pellizzari, M. 2011. Evaluating students' evaluations of professors. http://papers.ssrn.com/sol3/papers.cfm?abstract id=2004361. Interestingly, these authors reached many of the conclusions of the Carrel and West paper cited below.

Carrell, S.E. and West, J.E. 2008.   Does Professor Quality Matter? Evidence from random assignment of students to professors. National Bureau of Economic Research, Working Paper 14081. A fascinating and detailed look at the results of analyzing student performance in courses where both the students and faculty are randomly assigned. Following the various statistical analyses will require some time and effort but worth it.

Christensen, C. Roland, David A. Garvin, and Ann Sweet, eds. *Education for Judgment: The Artistry of Discussion Leadership*. Boston: Harvard Business School Press, 1991. An excellent, thoughtful work on achieving highly productive and successful discussions.

Davis, Barbara Gross. *Tools for Teaching*. San Francisco: Jossey-Bass, 1993. Gross has written a particularly comprehensive and practical introduction to effective teaching.

Delaney, J. , Johnson, A., Johnson, T., Tresian, D. 2010. Student perceptions of effective teaching in higher education. 26th Annual Conference on Distance Teaching and Learning. http://www.uwex.edu/disted/conference/. A nice summary of much of the survey literature on the topic.

Edgerton, Russell, Patricia Hutchings, and Kathleen Quinlan. *The Teaching Portfolio: Capturing the Scholarship in Teaching*. Washington, D. C.: American Association for Higher Education, 1991. A thorough and practical orientation for teachers who would like to document and reflect on their teaching through the creation of a personal teaching portfolio.

Erickson, Bette LaSere, Calvin B. Peters, and Diane Weltner Strommer. *Teaching College Freshmen*. 2nd ed. San Francisco: Jossey-Bass, 2006. Teaching first-year students presents particular challenges. This book offers valuable insight into students' intellectual development and strategies to promote effective learning.

Fink, L. Dee. *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses*. San Francisco: Jossey-Bass, 2003. Fink makes an effective argument for learner-centered rather than content-centered course design, drawing on recent research and offering various theoretical frameworks.

Gravestock, P., and Gregor-Greenleaf, E. Student course evaluations: research, models and trends. Higher education quality council of Ontario. 2008. 1-152.

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Case Studies
Teaching Effectiveness

1. The reports you have received regarding a tenured faculty member's performance in teaching indicate that problems exist. In addition, the teaching evaluations from students indicate a problem. You have addressed the issue with the faculty member and he denies that there are problems.

   How would you handle this?

2. Students have complained to you and your administrative assistant that a certain faculty member arrives at the very last moment for class and sometimes is five to ten minutes late; that he/she posts office hours but is seldom available; that he/she does not care if the student learns or not.

   How would you approach this problem?

3. The short-tempered dean of the college is a tenured faculty member in a certain department. He thinks of himself as a superb teacher and insists on teaching a required undergraduate course. In fact, he has the deserved reputation of being one of the worst teachers in the university. The students are outraged at the poor quality of instruction and the lack of organization in the course and are vigorously protesting. In addition, one of the younger faculty members in the department is upset because he is more qualified than the dean to teach this particular course.

   What can the chair do about his own dean?