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Seven Principles for Good Practice in Undergraduate Education

Seven Principles for Good Practice in Undergraduate Education" first appeared in the American Association for Higher Education (AAHE) Bulletin in 1987. In this article, Arthur Chickering and Zelda Gamson describe a set of pedagogical standards derived from decades of educational research, and designed to improve the quality of teaching and learning in colleges and universities.

These principles have had an enormous impact on university teaching influencing research, faculty development and student learning across the world. They are referenced, quoted and remain a cornerstone of teaching and learning practices to this day.

Chickering and Gamson state that **good practice** in undergraduate teaching:

1. ### Encourages contacts between students and faculty

   Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.

   Some examples: First year seminars on important topics, students taught by senior faculty members, establish an early connection between students and faculty

2. ## Develops reciprocity and cooperation among students

Learning is enhanced when it is more like a team effort that a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions sharpens thinking and deepens understanding.

Some Examples: Even in large lecture classes, students can learn from one another. Learning groups are a common practice. Students are assigned to a group of five to seven other students, who meet regularly during class throughout the term to solve problems set by the instructor. Many institutions use peer tutors for students who need special help.

3. ## Uses active learning techniques

Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives. They must make what they learn part of themselves.

Some examples: Active learning is encouraged in classes that use structured exercises, challenging discussions, team projects, and peer critiques. Active learning can also occur outside the classroom. There are thousands of internships, independent study, and cooperative job programs across the country in all kinds of colleges and universities, in all kinds of fields, for all kinds of students. Students also can help design and teach courses or parts of courses.

4. ## Gives prompt feedback

Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. When getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement. At various points during college, and at the end, students need chances to reflect on what they have learned, what they still need to know, and how to assess themselves.

Some examples: No feedback can occur without assessment. But assessment without timely feedback contributes little to learning. Institutions assess entering students as they enter to guide them in planning their studies. In addition to the feedback students receive from course instructors, students in many colleges and universities receive counseling periodically on their progress and future plans.

5. Emphasizes time on task

Time plus energy equals learning. There is no substitute for time on task. Learning to use one's time well is critical for students and professionals alike. Students need help in learning effective time management. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis of high performance for all.

Some examples: Mastery learning, contract learning, and computer-assisted instruction require that students spend adequate amounts of time on learning. Extended periods of preparation for learning also give students more time on task. Providing students with opportunities to integrate their studies into the rest of their lives helps them use time well.

6. Communicates high expectations

Expect more and you will get more. High expectations are important for everyone -- for the poorly prepared, for those unwilling to exert themselves, and for the bright and well-motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations for themselves and make extra efforts.

Some examples: In many colleges and universities, students with poor past records or test scores do extraordinary work. Sometimes they outperform students with good preparation. Most important are the day-to-day, week-in and week-out expectations students and faculty hold for themselves and for each other in all their classes.

7. Respects diverse talents and ways of learning

There are many roads to learning. People bring different talents and styles of learning to college. Brilliant students in the seminar room may be all thumbs in the lab or art studio. Students rich in hands-on experience may not do so well with theory. Students need the opportunity to show their talents and learn in ways that work for them. Then they can be pushed to learn in new ways that do not come so easily.

Some examples: Individualized degree programs recognize different interests. Personalized systems of instruction and mastery learning let students work at their own pace. Contract learning helps students define their own objectives, determine their learning activities, and define the criteria and methods of evaluation.

Chickering, A.W. and Gamson, Z.F. (1987). Seven principles for good practice in undergraduate education. AAHE Bulletin. Online at: http://www.aahea.org/articles/sevenprinciples1987.htm

Seven Principles of Effective Teaching

Teaching is a complex, multifaceted activity, often requiring us as instructors to juggle multiple tasks and goals simultaneously and flexibly. The following small but powerful set of principles can make teaching both more effective and more efficient, by helping us create the conditions that support student learning and minimize the need for revising materials, content, and policies. While implementing these principles requires a commitment in time and effort, it often saves time and energy later on.

Credit: Eberly Centre - Teaching Excellence & Educational Innovation, Carnegie Mellon University. Principles of Teaching. Accessed September 15, 2013 from http://www.cmu.edu/teaching/principles/teaching.html

1. **Effective teaching involves acquiring relevant knowledge about students and using that knowledge to inform our course design and classroom teaching.**

When we teach, we do not just teach the content, we teach students the content. A variety of student characteristics can affect learning. For example, students' cultural and generational backgrounds influence how they see the world; disciplinary backgrounds lead students to approach problems in different ways; and students' prior knowledge (both accurate and inaccurate aspects) shapes new learning. Although we cannot adequately measure all of these characteristics, gathering the most relevant information as early as possible in course planning and continuing to do so during the

semester can (a) inform course design (e.g., decisions about objectives, pacing, examples, format), (b) help explain student difficulties (e.g., identification of common misconceptions), and (c) guide instructional adaptations (e.g., recognition of the need for additional practice).

2. Effective teaching involves aligning the three major components of instruction: learning objectives, assessments, and instructional activities.

Taking the time to do this upfront saves time in the end and leads to a better course. Teaching is more effective and student learning is enhanced when (a) we, as instructors, articulate a clear set of learning objectives (i.e., the knowledge and skills that we expect students to demonstrate by the end of a course); (b) the instructional activities (e.g., case studies, labs, discussions, readings) support these learning objectives by providing goal-oriented practice; and (c) the assessments (e.g., tests, papers, problem sets, performances) provide opportunities for students to demonstrate and practice the knowledge and skills articulated in the objectives, and for instructors to offer targeted feedback that can guide further learning.

3. Effective teaching involves articulating explicit expectations regarding learning outcomes and policies.

There is amazing variation in what is expected of students across classrooms and even within a given discipline. For example, what constitutes evidence may differ greatly across courses; what is permissible collaboration in one course could be considered cheating in another. As a result, students' expectations may not match ours. Thus, being clear about our expectations and communicating them explicitly helps students learn more and perform better.

Articulating our learning outcomes (i.e., the knowledge and skills that we expect students to demonstrate by the end of a course) gives students a clear target to aim for and enables them to monitor their progress along the way. Similarly, being explicit about course policies (e.g., on class participation, laptop use, and late assignment) in the syllabus and in class allows us to resolve differences early and tends to reduce conflicts and tensions that may arise. Altogether, being explicit leads to a more productive learning environment for all students.

4. **Effective teaching involves prioritizing the knowledge and skills we choose to focus on.**

Coverage is the enemy: Don't try to do too much in a single course. Too many topics work against student learning, so it is necessary for us to make decisions – sometimes difficult ones – about what we will and will not include in a course. This involves (a) recognizing the parameters of the course (e.g., class size, students' backgrounds and experiences, course position in the curriculum sequence, number of course units), (b) setting our priorities for student learning, and (c) determining a set of objectives that can be reasonably accomplished.

5. **Effective teaching involves recognizing and overcoming our expert blind spots.**

We are not our students! As experts, we tend to access and apply knowledge automatically and unconsciously (e.g., make connections, draw on relevant bodies of knowledge, and choose appropriate strategies) and so we often skip or combine critical steps when we teach.

Students, on the other hand, don't yet have sufficient background and experience to make these leaps and can become confused, draw incorrect conclusions, or fail to develop important skills. They need instructors to break tasks into component steps, explain connections explicitly, and model processes in detail. Though it is difficult for experts to do this, we need to identify and explicitly communicate to students the knowledge and skills we take for granted, so that students can see expert thinking in action and practice applying it themselves..

6. **Effective teaching involves adopting appropriate teaching roles to support our learning goals.**

Even though students are ultimately responsible for their own learning, the roles we assume as instructors are critical in guiding students' thinking and behavior. We can take on a variety of roles in our teaching (e.g., synthesizer, moderator, challenger, and commentator). These

roles should be chosen in service of the learning objectives and in support of the instructional activities.

For example, if the objective is for students to be able to analyze arguments from a case or written text, the most productive instructor role might be to frame, guide and moderate a discussion. If the objective is to help students learn to defend their positions or creative choices as they present their work, our role might be to challenge them to explain their decisions and consider alternative perspectives. Such roles may be constant or variable across the semester depending on the learning objectives.

7. **Effective teaching involves progressively refining our courses based on reflection and feedback.**

Teaching requires adapting. We need to continually reflect on our teaching and be ready to make changes when appropriate (e.g., something is not working, we want to try something new, the student population has changed, or there are emerging issues in our fields). Knowing what and how to change requires us to examine relevant information on our own teaching effectiveness.

Much of this information already exists (e.g., student work, previous semesters' course evaluations, dynamics of class participation), or we may need to seek additional feedback with help from the university teaching center (e.g., interpreting early course evaluations, conducting focus groups, designing pre- and post tests). Based on such data, we might modify the learning objectives, content, structure, or format of a course, or otherwise adjust our teaching. Small, purposeful changes driven by feedback and our priorities are most likely to be manageable and effective.

"**The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires.**"

— William Arthur Ward

What Less Effective Teachers Do Wrong

Doing the right things with your teaching is of course critical but so is avoiding the wrong things. Richard M. Felder, North Carolina State University and Rebecca Brent, Education Designs, Inc., have come up with a list to the ten worst mistakes teachers make. They are summarized here in increasing order of "badness".

Mistake #10: When you ask a question in class, immediately call for volunteers.
When you do this most students will avoid eye contact, and either you get a response from one of the two or three who always volunteer or you answer your own question

Mistake #9: Call on students cold.
If you frequently call on students without giving them time to think ("cold-calling"), the ones who are intimidated by it won't be following your lecture as much as praying that you don't land on them. Even worse, as soon as you call on someone, the others breathe a sigh of relief and stop thinking.

Mistake #8: Turn classes into PowerPoint shows.
Droning through lecture notes put into PowerPoint slides is generally a waste of time for everyone.

Mistake #7: Fail to provide variety in instruction.
Effective instruction mixes things up: board work, multimedia, storytelling, discussion, activities, individual assignments, and group work (being careful to avoid Mistake #6). The more variety you build in, the more effective the class is likely to be.

Mistake #6: Have students work in groups with no individual accountability.
The way to make group work function is through using cooperative learning, an exhaustively researched instructional method that effectively promotes development of both cognitive and interpersonal skills.

Mistake #5: Fail to establish relevance.
To provide better motivation, begin the course by describing how the content relates to important technological and social problems and to

whatever you know of the students' experience, interests, and career goals, and do the same thing when you introduce each new topic.

Mistake #4: Give tests that are too long. If you want to evaluate your students' potential to be successful professionals, test their mastery of the knowledge and skills you are teaching, not their problem-solving speed.

Mistake #3: Get stuck in a rut. Things are always happening that provide incentives and opportunities for improving courses. This is not to say that you have to make major revisions in your course every time you give it-you probably don't have time to do that, and there's no reason to. Rather, just keep your eyes open for possible improvements you might make in the time available to you.

Mistake #2. Teach without clear learning objectives/outcomes. A key to making courses coherent and tests fair is to write learning objectives-explicit statements of what students should be able to do if they have learned what the instructor wants them to learn-and to use the objectives as the basis for designing lessons, assignments, and exams.

Mistake #1. Disrespect students. If you give students a sense that you don't respect them, the class will probably be a bad experience for everyone no matter what else you do, while if you clearly convey respect and caring, it will cover a multitude of pedagogical sins you might commit.

See this website for the origin of this list and other characteristics of effective teachers: https://teachingcommons.stanford.edu/resources/teaching/planning-your-approach/characteristics-effective-teachers

"In learning you will teach, and in teaching you will learn."

— Phil Collins

Taking Learning Seriously

By Lee Schulman   What do we mean by "taking learning seriously?" Five interesting questions reflect what's involved in taking up that challenge. I shall ask and answer these briefly to begin this article. I shall then elaborate on those answers. First, What does it mean to take anything seriously? I answer that when we take something quite seriously, we profess it.

Second, What do we mean by learning? I argue that learning is far more than bringing knowledge from outside the person to inside. Indeed, learning is basically an interplay of two challenging processes--getting knowledge that is inside to move out, and getting knowledge that is outside to move in.

Third, What does learning look like when it's not going well? I ask this question because I've spent much of my career in medical education, so I'm concerned not only with health, but with pathology as well. I propose that the major pathologies of learning involve malfunctions of memory, understanding, and application and can be called amnesia, fantasia, and inertia.

Fourth, What do you need to create in order to take learning so seriously that you take active responsibility for understanding and treating its pathologies as well as enhancing its successes? I claim that you must create a scholarship of teaching to pursue those goals.

[VIU free access on campus computer] Read rest of article at
http://www.tandfonline.com/doi/abs/10.1080/00091389909602695#.Vb0I1vlVhBd*"Taking Learning Seriously," in Change, July/August 1999. Volume 31, Number 4. Pages 10-17.*

Face-to-face (F2F) and Online Examples of Effective Teaching Characteristics

In 2008, Memorial University undertook a study to determine student perspectives on effective teaching in higher education. 17000 students completed the survey. Researchers distilled the data down to nine key characteristics of effective teachers. These characteristics are:

- Respectful
- Knowledgeable
- Approachable
- Engaging
- Communicative
- Organized
- Responsive
- Professional
- Humorous

The following chart gives an overview of these characteristics and examples of teacher behaviours that illustrate those characteristics. Adapted from: Delaney, J.G., Johnson, A.N., Johnson, T.D. & Treslan, D. L. (2010) *Students' Perceptions of Effective Teaching in Higher Education.* St John's, NL: Distance Education and Learning Technologies.

Characteristic	Face-to-Face	Examples for Face-to-Face	Online	Examples for Online
Respectful	Fair, understanding, flexible, caring, patient, helpful, compassionate, open-minded, sincere, diplomatic, concerned, reasonable, consistent, kind, empathetic, humble, trustworthy, realistic	Compassionate with regards to students' circumstances; open to "stupid" question; willing to explain many times and in different ways if necessary; uses common courtesy; tactful with criticism; shows concern for students' academic success; willing to admit own mistakes	Fair, understanding, flexible, caring, patient, helpful, compassionate, open-minded, diplomatic, concerned, reasonable, consistent, kind, empathetic, trustworthy, realistic	Prepared to answer more questions than F2F; offers expressive feedback; shows concern for students; must be able to trust teacher's answers; fair and reasonable with expectations, create real world tasks
Responsive	Available, helpful, perceptive, accommodating	Timely, thorough constructive feedback; set office hours; responds to email ASAP; involves students more during class time; has awareness of students' needs; reads students' body language; accepts that students learn at different paces	Available, helpful, accommodating	Responds to posts and questions in a timely fashion; asks students for clarification to check students' understanding; builds on what students already know; gives students options to accommodate different learning styles; monitors and participates in discussion forums
Knowledgeable	Flexible, competent, eclectic, credible, current, practical, reflective, qualified	Must be credible; conveys content that can be understood; shares real life experience; varies teaching strategies; relates content to real-life	Flexible, competent, eclectic, credible, current, practical, reflective, qualified	Must be competent; conveys content in a way that can be understood; shares personal anecdotes; uses a variety of resources to share content; must be up-to-date on research and practice in their field
Approachable	Friendly, personable, helpful, accessible, happy, positive	Smiles; makes a comfortable atmosphere; maintains appropriate office hours and responds to email in a reasonable time	Friendly, personable, helpful, accessible, happy, positive	Understands that not everything can be communicated using a written approach; uses recordings to convey information; responds promptly to questions; makes students feel like instructor wants to be there; uses friendly tone in posts

Characteristic	Face-to-Face	Examples for Face-to-Face	Online	Examples for Online
Communicative	Clear, understandable, thorough, constructive, attentive	Speaks clearly; has astute listening skills; uses a variety of teaching methods; is approachable; understands students questions and gets to the point; is organized; maximizes use of class time; gives prompt quality feedback	Clear, understandable, thorough, constructive, attentive	Clear, "listens" and gets points across via electronic (written) communication; uses a variety of teaching methods, quick response time; clearly communicates expectations; personal feedback helps connect student to instructor; offers constructive feedback
Organized	Efficient, focused, prepared	Organized lectures, clear visual aids; stays on topic; provides sufficient feedback in a reasonable time	Efficient, focused, prepared	Organized online content; clear expectations at the beginning of the course; provides timelines; responds to emails and discussion posts promptly
Engaging	Enthusiastic, interesting, passionate, motivating, creative, positive, charismatic, stimulating, interactive, energetic, assertive	Interacts with students, has a passion for course content; smiles; varies tone of voice; actively involves students in a lecture; uses creative approaches	Enthusiastic, interesting, passionate, motivating, creative, positive, charismatic, stimulating, interactive, energetic, assertive	Posts interesting info related to the course from news; relates material to real life etc.; offers creative discussion topics
Professional	Dedicated, punctual, dependable, efficacious, hygienic, confident	Dresses appropriately; is punctual, trustworthy, honest; has well-planned lectures; be faithful to the syllabus; confidence helps students develop self-esteem	Dedicated, punctual, dependable, confident	Is willing to investigate effective teaching techniques for distance learning; makes sure all interactions are quality interactions
Humorous	Friendly, available, positive outlook on teaching, kind, happy	Helps students feel more relaxed; creates a positive learning environment; humour prevents students from falling asleep in class	Friendly, available, positive outlook on teaching, kind, happy	Adds a personal touch to the course; makes the material come alive; makes light observations