

# Twelve Principles of Effective Teaching and Learning

(Source: Tiberius & Tipping, "Twelve Principles of Effective Teaching and Learning For Which There Is Substantial Empirical Support, University of Toronto, 1990 ©)

(As with the "Faculty Inventory", you can use these twelve principles to help identify your areas of strength and areas for improvement.)

These twelve principles are intended as guidelines to faculty and administrators interested in the improvement of teaching and learning. The list is derived, in part, from a study co-sponsored by the American Association for Higher Education and the Education Commission of the States (AAHE Bulletin, March 1987). That study reported seven principles of good practice and six powerful forces in higher education which has been extracted from fifty years of research on teaching and learning in higher education. The study was conducted by a team of prominent educators, including Alexander W. Astin, Howard Bowen, Carol H Boyer, K Patricia Cross, Kenneth Eble, Russel Edgerton, Jerry Gaff, Joseph Katz, C. Robert Pace, Marvin W. Peterson, and Richard C. Richardson Jr.

We have added five principles, based on our review of the literature (including review articles such as T.M. Shermin et.al. "The quest for excellence in university teaching" in the Journal of Higher Education, Vol 58, No 1, 1987, pp.66-84; and John Centra et. Al. "A guide to evaluating teaching for promotion and tenure", 1987, a publication of Syracuse University).

1. Teachers' knowledge of the subject matter is essential to the implementation of important teaching tasks

Teachers who know their subject matter thoroughly can be more effective and efficient at organizing the subject matter, connecting the subject with the students' previous knowledge, finding useful analogies and examples, presenting current thinking on the subject, and establishing appropriate emphases.

2. Active involvement of the learner enhances learning

Learning is an active process which requires that the learner work with and apply new material to past knowledge and to everyday life. Some of the methods that encourage active learning in the classroom are: discussion, practice sessions, structured exercises, team projects, and research projects. In the words of William James:

Teaching without an accompanying experience is like filling a lamp with water. Something has been poured in, but the result is not illuminating.

3. Interaction between teachers and students is the most important factor in student motivation and involvement

Interaction between students and faculty, particularly informal interaction, is one of the most important factors in student motivation for learning. The opportunity to know a few faculty well often enhances students' intellectual commitment and provides valuable role modeling.

#### 4. Students benefit from taking responsibility for their learning

Students are more motivated when they take control of their own learning. This is the belief which has stimulated active interest in self-directed learning.

#### 5. There are many roads to learning

Students learn in different ways and vary in their abilities to perform certain tasks. Understanding that each student has unique strengths and weaknesses related to the ways in which they approach learning is an important component of effective education. Providing a variety of learning activities for a class enables individual students to choose the activity which is the most effective for them at the moment.

#### 6. Expect more and you will achieve more

Simply stated, if an educator conveys to students that he or she believes in their ability to succeed learning is enhanced.

#### 7. Learning is enhanced in an atmosphere of cooperation

Learning is enhanced when it is perceived as a collaborative and cooperative effort between students. The opportunity to share ideas without threat of ridicule and the freedom to respond to the ideas of others increases complexity of thinking and deepens understanding.

#### 8. Material must be meaningful

If new material is presented in a pattern or framework that the learner can perceive, it is more readily learned and retained. New material will be more easily learned if the learner is helped to see its relationship to what s/he already knows. Material which is seen by the learner as relevant to his or her own problems and experiences will be more readily learned.

#### 9. Both teaching and learning are enhanced by descriptive feedback

Without feedback neither learner nor teacher can improve because they will not know what they need to know or to what extent they are fulfilling their goals. The learners' behavior will more quickly reach the objectives if they are informed (or given feedback) frequently about the correctness of their responses. Correct responses should be immediately reinforced to increase the "permanence" of learning. A positive reinforcer is anything that will increase the probability that the desired behavior will be repeated. A smile or comment to let the learner know he or she has successfully completed the task is especially good because awareness of successful completion is, in itself, the most effective of all reinforcers.

Feedback about progress is helpful because learning is facilitated when the learner is aware that he or she is progressing towards the goals.

#### 10. Critical feedback is only useful if the learner has alternatives to pursue

There is no use giving teachers or students feedback about their performances unless they can do something about it, that is, unless they have some alternative course of action or behaviour.

#### 11. Time plus energy equals learning

Lectures or seminars that are canceled will not help the learner. Conversely, teachers who arrive at their lecture or small group setting a little before the scheduled time and stay around for a few minutes afterward provide opportunities for valuable interaction between students and teachers. Office hours also help students to arrange time to talk with teachers. Students must learn how to organize their time so that they can find time to study. And the curriculum must be organized to allow students time to study.

#### 12. Experience usually improves teaching

Experience is associated with increasing teacher effectiveness for some teachers, probably for those teachers who obtain feedback about their teaching and who are flexible enough to modify their methods in response to the feedback.