

Resources

Print Resources

Below is a list of articles on teaching and learning; you may find them helpful in thinking about teaching and learning. Please contact the Center if you would like copies of any of these articles. We can provide the set of articles annotated below as a reading packet, or we can send copies of individual articles. If these articles raise specific questions or issues you would like to explore in more depth, we can provide you with bibliographies on any teaching topic or issue you select.

Frederick, P. (1980). The Dreaded Discussion: Ten Ways to Start, *Improving College and University Teaching*. (109-14) Washington, D.C.: Heldref Publications.

Frederick offers a list of "assumptions and principles" for discussion sessions. He elaborates on these principles by suggesting ten specific and practice-oriented techniques for engaging students in discussions. An extremely popular and widely reproduced essay, this piece is a must for TAs who led discussion groups.

Arons, A. (1985). Critical Thinking and the Baccalaureate Curriculum. *Liberal Education* 71.(2) 141-157.

Arons, a physicist, offers a fairly comprehensive overview of the term 'critical thinking,' a skill that many of us want to inculcate in our students, but may have trouble defining precisely. Arons sets out a list of intellectual and reasoning abilities that constitute the capacity for critical thinking in a higher education setting. He spells out the implications of his definitions for some fundamental teaching tasks, such as testing and ascertaining student difficulties in the classroom.

Bruffee, K. (1993). Consensus Groups: A Basic Model of Classroom Collaboration. Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge. 28-51. Baltimore, MD: Johns Hopkins UP.

Bruffee proposes a complex and theoretically informed model for engineering student small-group work in the classroom. He argues convincingly for the effectiveness of this kind of model for increasing student learning and teaching our students some important lessons about the nature and construction of knowledge.

Hodges, E. (1997). Negotiating the Margins: Some Principles for Responding to Our Students Writing, Some Strategies for Helping Students Read Our Comments. Writing to Learn: New Directions for Teaching and Learning 69 77-89.

If you teach writing, you should be aware of Hodges' study. She taped and analyzed the oral explanations of teachers who were writing comments on their students' papers, and then did the same for the students as they first read and digested those comments. The disparities between what the teachers intended the students to understand and what the students actually understood are striking and telling. She concludes the article with some basic principles for responding effectively to student writing in a way that helps our students understand our reactions to their work and learn from them.

Treisman, U. (1992). Studying Students Studying Calculus: A Look at the Lives of Minority Mathematics Students in College. *The College Mathematical Journal 23.5* 362-372.

Treisman conducted a study of minority students in calculus classes, and tried to understand why they did not perform as well as their colleagues. His answers are arresting, and focus upon the study patterns and habits of the minority students, who worked in isolation from their peers. Treisman explains how he transformed those habits at his university, and drastically increased the success rates of the minority students in calculus classes. The conclusions of the article have broad applications for anyone who teaches traditionally underrepresented minority groups.

Reading Packets

The Center is in the process of putting together a set of reading packets for faculty members interested in looking more deeply at particular teaching issues. Call the Center and we can provide you with prepared sets of essays on the following topics:

- Initiating and Leading Class room Discussions (Coming Soon)
- Teaching and Evaluating Writing (Coming Soon)
- Conducting and Evaluating Science and Engineering Labs (Coming Soon)
- Grading Problem Sets (Coming Soon)
- TA and Professor: Effective Collaboration (Coming Soon)

Human Resources

The Center provides individual consulting to faculty members in both electronic and personal formats. Contact the Center for details.