

Chapter 3

Learning To Teach

Learning to teach sounds like a methods approach. While there are methods that make teachers more effective, the focus here is on learning in order to teach. Learning in order to teach focuses on learning that is shared with others. Since having college students share what they learn with other students is a departure from the traditional lecture approach, *learning in order to teach requires new learning models!*

LEARNING IN ORDER TO TEACH

As teachers, our goal should be as much the need for life-long learning for ourselves as we hope it is for our students. We should be continually practicing education, like medical doctors practice medicine, as we strive to structure the very best learning environment that we can for our students. As we continue to learn, we can provide our students with the benefits of our experiences as a life-long learner to motivate and interest them in becoming life-long learners.

Learning Is Modeling

Learning is modeling, and both learners and teachers can be good models. Working with curious and active learners in an interactive learning environment encourages other students to become active learners with each other. Interactive learning environments promote curiosity and further interactions among learners, as each learner is a model for others. *Learning in order to teach follows naturally.*

Learning and Teaching are Natural

As we consider the concept of learning in order to teach it is important to think about the dynamics of learning and teaching. The temptation to make teaching more formal and learning less natural is great, often in the name of “efficiency.” Efficiency in learning? Usually not. Efficiency in teaching? Usually, and at the college level, most likely efficiency in delivering information to students. *Such an approach to teaching does not promote natural learning.*

Students enter college confronted by a whole new set of resources and freedoms. Astin (1993) writes “*Give...young people a good deal of freedom, coupled with some new challenges and new responsibilities, and some good things will happen...the students will seldom disappoint us.*”

How willing are students to share their knowledge with other students? They are more willing to share in cooperative learning environments than in competitive ones. Students enjoy sharing their knowledge when solving problems together in small groups. Professors can be models in such a setting by working closely with groups of students rather than just delivering information to them.

If professors share what they know in natural interactive ways, their students will likely do the same. Astin (1993) points out that the extent to which a faculty is student-oriented has important positive implications for student development. By designing a learning environment that maximizes the roles of positive student models, professors promote positive peer group interactions in the classroom.

When we have in-depth knowledge of a subject, we are confident rather than hesitant when sharing our knowledge with others. When student learners feel comfortable in a learning environment that is conducive to asking questions

and sharing answers, they will also be comfortable asking questions and sharing their ideas with other students. *Students become teachers naturally in a comfortable social learning setting.*

TEACHING IN ORDER TO LEARN

What is the meaning of “teaching in order to learn” in a student-oriented interactive learning environment? Learning is natural and teaching follows naturally. Having to learn before teaching places the responsibility for learning on the future teacher, the current learner! Even experienced teachers need to keep learning in order to be effective teachers. *Learning can take place without teaching, but teaching cannot take place without learning.*

Having shared knowledge with others demonstrates that we have learned it, and is one of the reasons why this book emphasizes learning and sharing—cooperative learning—among students. Teaching others is a meaningful review and test of one's level of understanding. It is one of the best ways for college students to reinforce their knowledge and understanding of concepts and applications.

Can professors trust students, the inexperienced learners who do not know nearly as much as professors do about a subject, to be effective teachers of other students? Yes, we can expect students to learn from other students in a learning environment that recognizes the collective knowledge the students enrolled in our courses have. *If we can't, what kind of miracle are we expecting after they graduate?*

Since professors do not know everything, demonstrating that they too are learners is a good model for the students. *“I would rather teach what I do not know than what I do know”* was one of my mottoes as a teacher because it was

more fun to solve problems with inquiring students than to just deliver information to them.

The Connectedness of Information

We all tend to make connections between what we have learned and what we are learning, but college courses are often structured in ways that isolate information more often than integrate information.

One of the criteria that I used when deciding what to share with my students was whether my experience would help them make connections faster. For example, I could relate animal behavior to physiological processes that depend on nutrition by sharing my field observations that the students had not yet observed. My students could contribute their knowledge of behavior, physiology, and nutrition to our common knowledge base. Since many of my students had just taken courses in these areas, their knowledge was surely more up to date than mine, having taken the courses 40 years ago! By integrating our knowledge we could all increase our understanding of these relationships in the natural world. *The essence of cooperative learning, of learners being teachers and of teachers being learners, is n-dimensional information transfer among all learners rather than vertical transfer from the professor down to the students.*

Sharing What We Have Experienced

Give students opportunities to teach their peers, and they will realize that everyone is a teacher; they are all sources of knowledge that can be shared with others. Add a generous spirit of cooperation, a heaping philosophy of learning is fun, and some catalytic activity by the professor...and a group of

learners may emerge that will surprise even the most skeptical professor!

The concept of a community of learners, a society of learners, of human beings as social creatures cannot be denied. Johnson and Johnson (1994) write: “*The human species seems to have a cooperation imperative.*” Logic suggests then that human beings learn while cooperating with others; there seems to be an educational imperative.

A diverse group of learners increases the diversity of information and knowledge being considered. Professors need to guide the learning environment so students keep on a steady course toward course goals. For example, with the vast amount of information resources available now, guiding their use is necessary to keep the community of learners from going in too many directions. There are connection limits and therefore connection priorities in a dynamic learning environment, while still encouraging creativity.

When professors share ideas, questions, and knowledge with students, they demonstrate that teaching and learning are part of a two-way street. It is better for professors to work closely with students to ensure that they have learned than it is to test them too soon to see what they have not learned.

Learning with students is enhanced when their knowledge and productivity are considered valuable resources. Think of the number of term papers that have been written, graded, and then discarded. Why ask students to use their intellect to prepare such valuable resources and then discard the product? Writing as an act of thought, and sharing writings with others is sharing thoughts with them. Students should write to learn, and their writing should be shared with other students. Publishing their writings on electronic information systems makes them available to all

of the students. Students come and go, but their work can live on!

It is the responsibility of college professors to encourage, help, and expect their students to write well. Should low grades be given until they do? No! Rather than grading their writing too quickly, editorial assistance should be given instead. What are some important things to do to help students learn to write better?

- *Praise students for good writing.*
- *Have students write less but write more carefully.*
- *Have students edit each other's writings.*
- *Help students be responsible for their writing quality.*
- *Publish their writings for the class and others to read.*

So much can be done to help students become better writers, especially now that word processing and electronic publishing are available to all of us!

Students are the most valuable resources in a cooperative learning environment. They can provide editorial assistance to each other similar to the peer review process used by professional journals. Professors can work with groups of student editors to develop editorial guidelines, and students can learn to find mistakes by following these guidelines. Good examples of student writings serve as models for other students to follow. *The key is making students responsible for their own writing rather than depending on teaching assistants and professors to tell them what is wrong with it.*

Peer editing, accompanied perhaps by careful editing of a page or two of the writing of each student by the professor early in the writing process, will do wonders for student interest, writing ability, and the quality of their writing. It will also even out the workload! Students will learn about

the benefits of good time management by such a simple procedure as this, and they may even turn their papers in before the end of the semester in order to provide more time for editing by others.

When writing to learn replaces learning to write as the accepted philosophy, making what students write available to their classmates and to students for years to come is clearly a strong motivator. As one of my students wrote at the end of the semester...*“It gave me a great sense of accomplishment to hand my work in and have it published for other students to read.”*

CONCLUDING REMARKS

The first three chapters of this book have set the stage for making a move toward cooperative learning in college classrooms and laboratories. The “writing to learn” discussion in this chapter is an example of the transfer of responsibility from teacher to student, with beneficial results for all. It is not a simple task, however, and the move cannot be made by a decision alone. There must be an understanding of what cooperative learning really is, of the commitment needed, and of how a transition can be made.

The next four chapters (4-7) are based on several years of design and development (Moen et al. 2000) as I moved in the direction of cooperative learning in the college classroom. By sharing my experiences with readers, the number of years it might take others to make the transition to cooperative learning (Chapter 8) might be reduced. *Making the commitment is the first step.*

A Course Continuum