

ESO 270

TOOLS FOR TEACHING

Glenn C. Himes

Department of Agricultural Economics  
and Rural Sociology

The Ohio State University

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Effective classroom teaching is an integral part of the learning process. Its importance is hard to quantify, and it is often difficult to see the forest because of the trees; sometimes we are so caught up in what we do that it is difficult to have 20-20 vision of our teaching style and philosophy.

### The Educational Process

It may first be helpful to review what is meant by the term effective teaching. "The process of learning is the vehicle by which the individual is changed from a bundle of potentialities to an acting organism with ideas, habits, skills, preferences, and other distinguishing personality characteristics."<sup>1</sup> According to Mednick<sup>2</sup>, "learning comes about as a result of practices, results in a change in behavior, is a relatively permanent change and is not directly observable. The ultimate objective in learning is for individuals to acquire means of behaving or performing in order to

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\*Professor, Department of Agricultural Economics and Rural Sociology, The Ohio State University, Columbus, Ohio.

<sup>1</sup>Harris, Theodore L. and Wilson E. Schwahn, Selected Readings on the Learning Process, Oxford University Press, New York, 1961, p. 11.

<sup>2</sup>Mednick, Sarnoff A., Learning, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1964, p. 18.

adapt and make better adjustment to the demands of life." It is not enough to accumulate facts. To be educated is to have knowledge that allows us to understand our society, the ability to look at the world and its problems, and to have a set of values and the courage to defend them.

The formal educational process contains a myriad of relationships between curriculum, faculty, and students. The curriculum represents the rules of the game and is comprised of requirements (University and/or College) and free electives. Courses in the social sciences, humanities, and natural sciences are very beneficial to the student. The right combination provides keener insights into self-expression and sensitivities, develops greater understanding of the concepts upon which our society is built, and provides an opportunity to share in an appreciation of the basic scientific disciplines.

The teacher directs student abilities to meet specific goals and becomes an integral part of the learning process. In other words, the teacher sets the stage for the discovery process.

"It is possible for a student to follow the teacher's instructions explicitly and perform the prescribed task without learning anything."<sup>3</sup>  
The teacher must become sensitive to the effects of instruction on the

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<sup>3</sup>Drawbaugh, Charles C. and William L. Hull, Agricultural Education: Approaches to Learning and Teaching, Merrill Publishing Company, Columbus, Ohio, 1971, p. 8.

learner so that the acquisition of information or attitudes result in behavioral changes advantageous to a full and meaningful life.

### Individuals

When you walk into your favorite hardware store you see many tools. But, upon closer examination you observe different kinds of tools such as hammers, saws, sanding blocks, chisels, and planes; each suited to a particular purpose. Likewise, when a teacher walks into a classroom on the first day of class, many people are seen. But, as is the case in the hardware store, each class is made up of individuals, each there for a slightly different purpose. Each of these individuals has a unique set of background experiences, aptitudes, abilities, interests, needs and levels of aspirations. Class size, course level and nature of the course do not alter this individualism.

It then becomes the teacher's role to conduct the class in such a manner that as many students as possible are challenged by the classroom experience and receive worthwhile, applicable, and well-organized information.

### Interaction

Some tools are used to sand, shape, plane and cut wood, i.e., sandpaper, wood rasp, plane, saw. These "interaction tools" are most valuable to a carpenter or cabinet maker, having very specific uses.

Interaction tools are needed by the teacher as well as the cabinet maker. An effort should be made for substantial classroom involvement so that the learning process can be enhanced. Interaction will tend to create interest and bring about further understanding in the subject matter being discussed.

Involvement can be brought to the classroom by the use of personalized antidotes. Making reference to the family allows the students to "know me" and effectively reduces the "class size."

Knowing the names of as many students as possible is desirable. An instructor is not going to know each student well in a large section; however, it is possible for the student to get to know the instructor fairly well and to relate to his examples.

But, mental interaction is not enough. Physical interaction complements it. Occasionally discussing a topic while moving down the aisles of the classroom breaks down the distance barrier for the students in the back.

To some extent, one's achievements are determined by what a student thinks of himself, as well as what his teacher thinks of him. A good teacher/student experience can reinforce the student's self concept and create much confidence and motivation.

There is a linkage that transpires between the learner and an enthusiastic, sincere teacher. Not only does the student react to the

enthusiasm of the teacher, but the teacher also shares from the enthusiasm of the students. Frequently, two sections of the same course can be as different as a cow path and an interstate. The same lecture format is used, but the uniqueness of the mix of students creates a totally different "learning environment."

### Gimmicks

One person's junk is another person's treasure! To some individuals, a given tool is a gimmick that lacks utility. To others, it provides utility.

As teachers, each of us tends to become comfortable with "gimmicks" that fit our personalities and tend to compliment our classroom effort. They provide variety and definitely add to a course. Granted that in some instances, the "Hawthorne Effect" exists -- positive response because of newness of contrivance. If so, so what? Let it work as long as it will!

Personally, I have found Computer Assisted Instruction to have the positive value of a gimmick, but the lasting value of a tool.

An important segment of the course in introductory agricultural economics deals with production principles and the related cost concepts. These concepts are difficult for many of our students to master, and many need a supplement to the text and classroom discussions to adequately grasp the material in the allotted time.

After consideration of a number of alternative methods, Computer Assisted Instruction was selected as the method for providing supplemental

teaching of production principles. CAI met a number of important criteria:

- 1) It could provide realistic problem situations that reinforced the learning process;
- 2) It provided the opportunity for the student to schedule his own learning experience;
- 3) It provided immediate feedback, giving the learner continuous knowledge of his progress;
- 4) It permitted the student to proceed through the material at his own pace;
- 5) It provided comparable treatment of subject matter topics in a multisection course;
- 6) The programs could be authored by the instructors themselves;
- 7) The programs and language were very flexible, allowing personalized interaction;
- 8) It provided extensive record keeping and evaluative capabilities; and,
- 9) It provided a review tool for students enrolled in advanced courses in agricultural economics.

The student is frequently questioned. With a correct response from the student, the program branches into the next unit of the CAI materials. For an anticipated wrong answer or unanticipated answer, however, additional tutoring or explanation is provided. This amplification of the topic allows additional exposure to the material and enhances retention by linking new material to existing concepts.

The personalization of the material through frequent use of the students' name and previous responses gives each learner a proprietary interest in the material. Students with such ego involvement are more likely to learn and remember the material, and are more likely to incorporate the salient concepts in future situations.

Lecturing is abstract, but a contrived experience like CAI is much less abstract and very meaningful. I have found visiting lecturers, team teaching, movies, and prepared handouts are other desirable ways of adding variety to the learning process. How these are used, of course, is dependent upon the instructor and the nature of the course.

### Positive Charge

A positive, enthusiastic atmosphere is essential in the classroom. It has been said that people differ less in mental capacity than in the ability to utilize the powers they have. I concur.

Many tasks are performed by perserverance, not strength. A positive, highly motivated student believes that it is better to try and carry out an assignment than to fail because he has not tried.

In the classroom, I try to be positive to each question asked and each topic discussed. Each question asked is a good question. Each topic discussed is somehow related to the objective of the course. Sometimes it is difficult for the student to visualize how the pieces of the puzzle go together. The instructor can, and should, provide this assist.

Praising the student whenever possible builds confidence. This positive environment allows the student to believe in himself and perform better in the course.

### Summary

Every instructor has a tool box and a single tool has little relationship to the finished product. For example, it is impossible to examine a



cabinet and know the exact use of the rasp or plane alone. The finished product does, however, reflect the skill of the craftsman in combining the use of the available tools.

Likewise, you cannot examine a piece of furniture to learn if some new-fangled power tool or some age old hand tool was used. It is the quality of the finished product and not the individual tool, alone, that is important.

The good teacher coordinates the use of classroom tools and the quality of the finished products reflect his ability as a craftsman.