

The art of teaching effectively has received less spectacular rewards. Why? Is it because teaching is less important? Is it because teaching is so much more difficult to evaluate? The answer to both questions is No.

Education, guided and promoted by effective teaching, is the very foundation of all those activities in which our society excels — whether it be research, communications, industry, or business. What could be more important?

Granted, art is difficult to evaluate. But what makes the art of research easier to evaluate than the art of teaching? The accepted reply is that publications are easier to evaluate, as a measure of effective research, than any product of the teaching effort. But is this really so? The number of publication is not a criterion of research competency. Ask the editor of any research journal about the ease of evaluating journal articles. He may burden you with the problem of being a tight-rope walker between the reviewers on one hand and the authors on the other. Naturally, the authors think highly of their product. Some of the reviewers may say the manuscript is good. Others will be critical — often very critical. And when the battle is over and the manuscript — in a greatly altered form — finally receives the blessing of approval, the authors may question either the judgement of their reviewers or whether publications are, after all, worth all the struggle. The research authors have thus been tested and evaluated. Then comes the testing and evaluation by the journal readers who may publish their criticisms in subsequent journal articles.

Everything a researcher does is subject to scrutiny and challenge. His laboratory must always bear a welcome sign for any colleague to enter, examine the procedures, and stop to argue the logic of the approach toward the solution of any problem. In other words, a researcher is constantly being challenged and evaluated by his peers and his administrators.

By contrast, teachers prior to World War II enjoyed a sheltered existence — like monks of the Middle Ages. In the classroom the teacher reigned supreme, his teaching a rather well guarded secret from his colleagues and administrators. Students were a captive audience — not likely to make much complaint.

But today things are changing. Students are clamoring for a voice in the kind of subject matter to be presented and a voice in evaluating the art of teaching. Instructors, frustrated by the better rewards of their research colleagues, are asking similar

rewards for equal merit. Administrators and legislators, pressed by the urgent need for good teachers, are eager to oblige with appropriate rewards if merit differentials can be established. National agencies are undertaking projects to improve and upgrade course subject matter, and to familiarize teachers with the complex electronic and other technological aids that are available. Seminars and workshops on a regional and national scale are being organized to quicken the interest of teachers in further developing their capabilities and competencies in the art of teaching.

While college teachers in agriculture are still being employed without any training in how to teach, or any understanding of how students learn and how to involve and motivate them, there is a growing consciousness of inadequacy on the part of teachers who lack this background of training and experience. And graduate students aspiring to become college teachers are encouraged to obtain this special training along with their subject matter training.

Teachers are becoming objective about their competencies in the art of teaching just as their research colleagues did with their research competencies several decades ago. Progressive teachers, bent on the evaluation of excellence in teaching, are willing to submit to mandatory student evaluations as one measure of excellence. They recognize that only through student evaluations of their teaching can they improve. Such teachers welcome visits to their classes by colleagues, department chairmen, and deans of instruction. They are concerned about their excellence and about the art of teaching — how to advance teaching into the modern day on a par with the advances in research. Just as researchers seek team efforts toward solutions of their problems, college teachers are beginning to bring their problems out into the light of day for group consideration and action. Likewise, the team approach to teaching certain courses is now proving effective where well coordinated into a team effort.

Researchers have long since admitted their weaknesses and limitations. They have been amply rewarded for their objectivity. Now the college teachers' day is dawning. It's high time to abandon false modesties, admit there are no perfect teachers — as there are no perfect researchers — and get on with the most exciting and challenging endeavor of our times — striving for excellence in the art of teaching that will involve and motivate students.

Creative College Teaching

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College teachers generally are subject matter specialists who have had little or no formal training in the teaching-learning process. The modern college professor is expected to be creative, not only in his research but as a teacher. To become a creative teacher one must be a student of both the subject that he teaches and of the teacher-learning process. When any person who calls himself a teacher knows all he cares to know about teaching, either he never was or he has ceased being a student of teaching. Unless he is motivated to increase his understanding of teaching, he is not very likely to become a creative teacher.

Creativity results in a product. What is the product of creative teaching? Certainly it is more than students who have been imbued with the knowledge possessed by their professor! The product of creative teaching is changed learners. They are changed in attitude, understanding, or ability to act or think effectively. The creative teacher not only teaches what is to be learned but he also teaches the learner. He may use conventional methods or the newest teaching techniques and

equipment, but his primary identification is that he always knows what his objectives are in teaching and he has developed the skills necessary to accomplish these objectives with a majority of his students. He is much more than an information dispenser or an interesting lecturer. He is competent in motivating and guiding students in the learning process.

Any teacher with a sincere desire to become creative in his teaching can do so by continuing to be a student of teaching while maintaining his competence in the subject that he teaches. Probably the two most productive approaches to becoming a creative college teacher are: (1) the selection of valid, clearly conceived teaching objectives, and (2) the development of a teaching procedure, appropriate for the accomplishment of his teaching objectives and suited to his personality.

Choosing Objectives For Creative Teaching

Certainly one of the most common causes of poor teaching in college is the lack of well-defined teaching objectives on the part of the teacher. The failure to have definite and well-chosen teaching objectives leads to confusion of the

student and to frustration of the teacher. Without definite teaching objectives for any lesson or course, lectures are likely to become, as they have been described – the process by which the contents of the professor's notebook are transferred to the student's notebook without passing through the mind of either.

A teacher must choose his teaching objectives from many worthwhile learnings. He cannot teach all that is important, but he may expect some by-product learning to occur as each individual student participates in the learning process. Since the primary aim of a creative teacher is to cause a desirable change in the attitudes, understandings, and abilities of his students, the teaching objectives can be expressed in terms of these behavioral changes. Information is essential in accomplishing valid teaching objectives, but generally it is a means of attaining the objectives of creative teaching, not the objective itself. Whatever his teaching objectives are, the teacher must have them clearly defined in his own mind if he is to be effective in guiding prospective learners toward the objectives sought. If the students also know and accept as their learning objectives the teacher's teaching objectives, the efforts of both teacher and students will be much more fruitful.

Developing A Creative Teaching Procedure

No technique, teaching method, or device is suited to every teacher or to all teaching situations. Each teacher must develop teaching procedures suitable to his own personality, to the background and capabilities of his students, to the objectives that he seeks to accomplish, and to the facilities available for teaching. Probably the most important guide for the teacher as he plans his method of teaching is to keep in mind the nature of learning. Learning has been defined as "the process by which one, through his own activity, becomes changed in behavior".¹ The learning takes place as the result of the learner's mental or physical activity, it is not imparted by the teacher. The teacher's role in the process is to cause the learner to engage in the type of activity that will result in the kind of learning sought.

Certain principles are characteristic of all good teaching techniques. These are: (1) One learns best that which he feels will be of value or that which is satisfying to him; (2) concepts are formed, principles are learned, and transfer of learning occurs through generalization on the part of the learner; and (3) one learns what he engages in or practices.

A. Creating the desire to learn

Basically, creating the desire to learn is leading the student to feel that learning what is being taught would be satisfying or of value to him. Some teachers may question the implication that motivation is their responsibility. However, few would question the value of desire to learn in increasing effectiveness of the teaching-learning effort. Creative teachers accept motivation as an essential step in accomplishing their objectives with a majority of students.

Effective motivation is seldom, if ever, accomplished by a single act or comment on the part of the teacher. The most effective means of creating the desire to learn is the teacher's own attitudes and actions as he teaches. Students usually detect sincere interest, or the lack of it, on the part of the teacher in what he is teaching and in them as learners. The creative teacher is so sincerely devoted to the search for truth himself and is so interested in causing others to discover and use their own minds that his students are inspired by his enthusiasm and accept his teaching objectives as their learning objectives.

B. Causing students to generalize as they learn

The ability to apply concepts to situations outside the classroom is dependent upon the ability to generalize with them. To actually teach a principle, one must secure generalization relative to a concept until the learner is able to recognize or otherwise react relative to it in a variety of situations.

A student is unable to generalize until he recognizes relationships between knowledge and its use. Seeing such relationships is fundamental to genuine interest and sincere desire to learn. Usually students who desire to learn but who fail to see relation-

ships resort to memorizing. Not only is memorizing hard work for most people, but things memorized are not retained very long nor are they usable while they are retained, except for passing certain types of examinations. The teacher cannot generalize for the student. He must cause the student to engage in generalization as he learns.

The teacher who can teach a principle in such a way as to cause his students to have the feeling of discovery of the principle is a skilled teacher. It is frequently unnecessary for the teacher to state the principle himself when he has been successful in causing all his students to discover it. When a statement of a principle is given to the class before the concept which it represents has been developed, the students may accept the statement, memorize it, restate it on an examination, and feel satisfied that they know it even though they have not generalized relative to the concept themselves. In such situations there is little likelihood that the students will be able to apply the principle in a new situation. The principle has not been learned.

C. Causing students to practice what is to be learned

One of the laws of learning is that one learns what he engages in or practices. This applies as well to mental activities as to physical activities or skills. If one of our aims is to develop thinking students, our students must be caused to engage in the thinking process as concepts and principles are being taught. Learning to think, like learning anything else, is a result of the learner's own activities. One does not learn to think by being told how to think or by merely exercising his mental capabilities on difficult or uninteresting tasks. One learns to think by thinking.

Understanding is closely related to thinking. One develops understanding as a result of the thinking he does, and understanding increases the amount and quality of thinking done. The creative teacher makes definite and sustained effort to cause his students to secure understanding. He cannot leave it to be developed incidentally as facts are being acquired.

Taking lecture notes and the routine performance of laboratory exercises contribute little to the kind of mental activity that leads to the discovery of truth or the understanding of principles. The creative teacher conducts classroom discussions, laboratory projects, examinations, and personal interviews with students in a manner that causes students to engage in thinking activities that are of the quality and meaningfulness necessary for the formation of concepts and for developing ability to apply the principles being taught.

We may have difficulty in recalling just which teacher has been responsible for the information that we have acquired but we have no difficulty in identifying the teachers who have influenced our thinking and the way we live. These are the creative teachers. The quality of research, education and citizenship in the future depends upon the creativity of today's teachers.

The creative teacher is enthusiastic about the subject that he teaches and has genuine interest in his students. His chief pleasure is seeing his students think for themselves and use their abilities in the best way of which they are capable. He is a genuine influence in preparing students to live useful and satisfying lives. He may have never had a course in psychology or in educational method, and he may have published no research papers, but he applies the principles of learning in his teaching, and he contributes toward the development of abilities to do the kind of thinking upon which the advancement of all phases of human welfare depends. His ultimate contribution to the stature of his college is as great or greater than that of his colleague who is busily engaged in research and publication of the results of scientific investigation.

¹Hammonds, Carsie – "Teaching Agriculture" – First Edition 1950, McGraw-Hill Book Company – New York.