In Quest of Learning-teaching Excellence*

by

John Sjo

I was invited to participate in the Resident Instruction Session because the Association gave me its 1973 professional excellence award in teaching. The certificate confirming that award is the most tangible evidence I have that I am qualified for this assignment. Frequently, I am presented contrary evidence. Reading student evaluations of my teaching is a humbling experience. Each term one or more not only classify me as the poorest teacher they ever had, but suggest I'd do all future students a favor if I'd find work more suited to my talents.

Quality of teaching is so intangible it is difficult to recognize, imprecisely measured, and often unjustly rewarded. Outstanding instruction for one student, may be miserable instruction for another. Techniques that motivate and excite one student may leave another unmoved. A teaching charactertistic getting affirmative results in one, may get negative results in another.

Both the student and the teacher sense and know when learning-teaching situations have been effective. But they are hard pressed to identify how those situations differ from ineffective learning-teaching situations. Each participant here is in quest of excellence in learning-teaching. Each

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is attempting to apply learning theory to the teaching of agricultural economics.

I interpreted the invitation as a request to state my philosophy on and experience in teaching agricultural economics, so what is presented is personal and reflective rather than an analysis of empirical data. It is the result of 20 years of observing teaching and experimenting with instructional techniques.

University faculty are engaged in developing knowledge, in preserving knowledge, and transferring knowledge. Preserving knowledge we leave to the authors and the librarians. Agricultural economists have searched for, adapted and used methods of developing knowledge in their research work. Fully 1/3 of graduate studies is on research methods--including application of logic, mathematics, statistics, and computer science to economics analysis. No departemnt would employ an agricultural economist without training in research methods. Yet no department requires similar training in teaching methods. Who among our teachers has even an introduction to the theory of learning?

Those of us presenting papers on learning-teaching are poorly trained in the theory of learning, but the students, who were asked to critique the papers have even less training in that area than the authors.

To have meaningful and productive dialogue ought not the best trained and experienced agricultural economists in the learning-teaching process be sought to present and discuss papers on the methods and art of transferring agricultural economic knowledge among people?

OBJECTIVES OF THE LEARNING-TEACHING EXPERIENCE

Learning is very personal, occuring within oneself, but is nurtured and brought forth by the presence and encouragement of a teacher. Learning

is gaining facts, understanding causal relationships among facts, using that understanding to solve problems and to develop sound judgment, and finally to create ideas that add to knowledge.

Although learning can occur only within the individual, the teacher can increase the efficiency of the learning process. Efficiency depends upon the student's ability, motivation, communication skills, previous learning experiences, and the learning environment provided by the teacher. The teacher can provide an environment that motivates the student--through encouraging, challenging, daring, and exciting the student's desire to learn--by identifying material to be learned and providing sources of information.

How one approaches the learning-teaching experience depends on one's concept of the nature of knowledge. I have found two basic ways to view knowledge. One view, and for me the simplier view, is the belief that knowledge is finite and pre-exists. Part, or most of it, is yet unknown to man, but it is there waiting to be discovered. Each discovery as it adds to the perceived knowledge reduces the unknown by that amount. Then an aspiration for complete knowledge would be attainable, albeit difficult and time consuming.

Another view is that knowledge is infinite and exists only as creation of minds. Then knowledge does not exist waiting for discovery, but must be created. Creation of a bit of new knowledge is explosive and opens new opportunities for further creation. The only limit to knowledge is the capabilities of minds. An aspiration for complete knowledge is unattainable, because the more that is known, the more it is possible to know.

One's approach to teaching, particularly in upper division courses, is quite different depending on one's concept of knowledge. If it is the first, then the emphasis is to develop the student's skills to explore and to dis-

cover. If it is the latter, the emphasis must be to develop the creative potential of the student.

Philosophically I lean to the concept that knowledge is created, not discovered, and that as a teacher my principal responsibility is to develop creativity in students. Yet I recognize that many students are only frustrated in trying to be creative. Many are satisfied to be discoverers of ways to apply knowledge created by others.

The teaching environment affects the relative effort to be given to developing skills of creativity or discovery. For example large introductory classes by their nature deal mostly with factual and descriptive material. Whether or not that material came about through discovery of creation, makes little difference. Grasping and understanding basic facts absorbs most of the students energies. They have neither the basis nor the time in an introductory course for much creative growth. A teacher, whichever his or her concept of knowledge, must first prepare students in the discipline. For them learning is mostly discovery of knowledge others have created.

In a small upper division class the teacher has greater freedom to implement his philosophy of knowledge and learning. The emphasis there is less on factual information and more on problem solving and evaluation. In that situation there is greater opportunity for differentiation of the teaching process to fit the teacher's concept of learning.

I have taught under both conditions. My early experience was with upper division small classes. Under those conditions there was a strong congruence between my concept of knowledge and the way I was able to teach. It was under those conditions I developed my beliefs about the characteristics needed by a master teacher. It was then I developed the belief that the ideal learning conditions occur when there is a one-to-one relationship be-

tween the teacher and the student. I developed a strong conviction that teaching occurs best when its methods are adapted to each individual student's needs. Then it was possible to view each student as a significant individual. I never saw the class as a group, rather I saw it as several different personalities each needing to be treated individually.

Learning, particularly development of creativity, occurs best when the student-teacher relationship is close and open enough so each perceives the other as each perceives himself. The learning-teaching environment is mutually created by the teacher and the student. Each student-teacher combination requires its unique conditions. To be sensitive enough to recognize the needs of each student is the first and greatest skill required of a teacher. The first and greatest skill required of a student, if the optimal learning environment is to develop, is to help the teacher find and understand the student's individual needs. That was the ideal teaching model for my personal characteristics, abilities, and beliefs. Then I felt I did well. Students were responsive to my teaching. I saw evidence of changes in the students who attended my classes. Student evaluations were affirmative. Department heads and deans complimented me on my teaching.

That success lead to a second phase of teaching. Those same department heads and deans requested I use those "talents" in the introductory large lecture course. They argued "we need our best teacher in that class." That was enough to con me into accepting their request. I immediately found the congruence between my beliefs about learning and my teaching environment were mostly lost. So often we mistakenly assume a teacher effective in one-size class will be effective in another size class.

I could no longer satisfactorily fulfill the interpersonal relationship I considered so important. The students still knew me as an individual. They still saw me as one individual before the class. But for me

they usually became one of the group, I did not know each alone from the mass. The student, even in lecture classes of 100 or more, wants a one-to-one relationship--he to the teacher and the teacher to him. It is difficult as a teacher to establish that one-to-one relationship where there are so many; each melds into the whole. The individuality, that is so precious, is lost.

I have spent six years experimenting, searching for ways to organize and handle effectively a class of 150 lower division students. I was not the kind of lecturer who could pack the hall if students had the freedom of choice. I lacked the charisma and style that would charm the class into believing I was giving each individual consideration. Lacking the ability to charm the class, I have sought ways to approximate the conditions of the more personal relationship of the smaller class. To do that the teacher must seek and get the help of each student. The learning-teaching situation requires a mutual participation of every student and the teacher, to create those conditions where each student within the large class feels the teacher is teaching just for him.

The identification and exposition of the process by which that is achieved is greatly needed if undergraduate instruction in agricultural economics is to be more effective. Some of our most dedicated and effective undergraduate teachers must take leadership to study philosophy of knowledge, theory of learning, and theory of communication then apply that learning to develop knowledge transfer processses for learning-teaching agricultural economics.

THE CHARACTERISTICS OF OUTSTANDING TEACHERS

Even without much knowledge of the learning process some agricultural economists have been great teachers. Great teachers have identifiable common characteristics.

In addition to being a master of the subject they teach and cause those who hear them to want to share their mastery outstanding teachers:

Accept students as worthy and significant individuals, are sensitive to their feelings and needs, and hear their views and ideas as meaningful.

Show a genuine affection for all students and give time to each.

Awaken students to their full potential and urge it to be developed for service to mankind.

Breathe hope into every student's life and dare them to dream great dreams that can be fulfilled by work, discipline, and sacrifice.

Light the spark of creativity in every student so they may go forth to enrich their and the lives of others.

Nurture, by example of their own lifes, the growth of the student's innermost self.

Urge students to seek forever the unity that comes from knowledge.

Give of themselves without demand for reward.

But above all great teachers are true and honest in word and deed each time they touch a student's life.

The subject matter, in our case agricultural economics, and the techniques of communication are fairly well mastered by most of us. Differences in the quality of teaching come less from those differences than from disferences in the effectiveness of our interpersonal relationships with students.

Until agricultural economists committed to improving teaching make as rigorous use of learning theory, teaching methods, and communication technology as research economists have of logic, mathematics, statistics, and computer technology, there will be little real improvement. Occasionally great teaching will occur through luck, the intuitive ability of some, and through trial and error that chance upon effective methods. Outstanding learning-teaching thus resulting cannot be broken into separate processes, identified, classified, recorded, and passed from teacher to teacher. The real hope for more effective learning-teaching lies in a pioneer teacher who is able to integrate learning-teaching knowledge and agricultural economics so that the process of developing teaching skills can be transferred among agricultural economists and taught as a intergal part of a graduate program as research methodology is today.

DISINCENTIVES FOR EFFECTIVE TEACHING

I strongly believe effective teaching results primarily from the creativity and craftsmanship of the individual teacher. Great teaching can occur with three ingredients: a student, a teacher, and a subject, all brought together. Other factors such as quality of instructional facilities, equipment, institutional arrangements, and employment conditions are not the difference between outstanding and poor teaching. Excellence in those conditions do not assure outstanding teaching. The lack of excellence in those conditions will not cause poor teaching. The great teacher rises above the conditions to fulfill his creativity and craftsmanship potential. The poor teacher remains a poor teacher regardless of the conditions.

Yet environmental conditions can increase the incentive for a teacher of any level of competence to fulfill his potential. Whether he is an out-

standing or a poor teacher, we should not lose a portion of his effectiveness because of the conditions under which he teaches.

Today there are factors that are disincentives to effective teaching. Because each of us perceives his environment differently and each of us has had a different set of experiences, the emphasis I give the disincentive factors will likely be different from the emphasis each of you might give.

Increasing Class Size

Total expenditures for higher education have been increasing rapidly because of increasing enrollment, inflation, and new programs. To meet citizen concern for higher total expenditures, university governing bodies and administrators have sought ways to show increasing productivity. The usual way has been to increase the average size of classes more than expenditures increased. Then per student credit hour expenditures over time can be shown to have increased less than total expenditures and that is claimed to be evidence of increased "productivity". The number of students met is an inadequate proxy for learning so we delude ourselves and misinform the citizens when lower per-student-credit-hour expenditures are presented as evidence of increased teaching productivity. For many teachers the pressure to increase class sizes to provide that inaccurate measure of productivity is a disincentive for effective teaching. The measure of educational output must be total learning.

Large classes result in "objective" testing. True-false and multiple choice tests provide the student no chance for self expression and development of communication skills.

We do not know what lessening student's individual significance at the very time it is highly important to them does to their motivation for and

attitude toward learning. Almost universally they resent mass treatment in large classes. Their whole future learning may be stunted.

There are alternatives to larger class size when confronted with rising costs. Total enrollment may be restricted to keep costs down. Cost savings may be implemented in graduate rather than undergraduate instruction. Priorities among programs may be established and low priority-high cost programs terminated.

Student Evaluation of Teaching

During the 1940's I was a student activist in initiating student evaluation of teachers at Kansas State University. The purpose of that evaluation was to provide students the opportunity to inform teachers how the students reacted. Until the end of the 1960's student evaluations were limited to use by the faculty member as a basis for improving his instruction. Since that time student evaluation has become one part of the administrative evaluation of faculty and affects tenure, promotion, and pay. Administrative use of student evaluation was a response to student demand for a participatory role in policy making. At that time administrators were also confronted with meeting new federal regulations and aggressive teacher organizations. It was necessary to justify personnel decisions and administrators found such evaluations a way to spread the responsibility to students and faculty.

I see several disincentives to quality teaching in administrative use of student evaluations. Student evaluations are given anonymously and may violate the teacher's rights. He is unable to confront and answer his critics. If the students identify themselves on the evaluation, they then must accept responsibility for the evaluation and may be subject to a liability suit.

his past scholastic preformance behind and start anew? Aren't the results of the tests influenced by too many variables to be taken too seriously? I think even one chance in twenty of harming a student is too great a risk for me to take.

Formulated Budgeting

The trend to quantify information and to substitute predetermined formulae for subjective judgments in resource allocation in universities has several implications for undergraduate instruction. Allocating resources based on the previous year's data has a self generating effect that perpetuates a trend. If agricultural economics enrollment was up last year, this year's agricultural economics allocation will be increased. Increased resources may cause expansionary efforts not justified by the market for graduates.

An example of formulated budgeting is the allocation of salary increases by formula based on a system of evaluation scores. My experience is that faculty evaluation scores are skewed on the high side. No administrative unit wishes to admit to having an average or below average faculty. That results in little spread among faculty evaluation scores, consequently little spread in merit salary increases. Such a system rewards and encourages mediocrity.

Third Party Liability

Student liability suits against faculty, administrators, and the university and faculty liability suits against administrators and the university are profoundly affecting teaching programs. Administrators having to defend salary, promotion, termination, and tenure decisions either in or out of court have sought ways to reduce their liability. They have developed and used objective methods of evaluation supported by quantitative

data. They have found ways to spread responsibility such as using student and faculty evaluation data and using advisory and grievance committees.

Teachers concerned with having to defend their evaluation of students have attempted to devise testing and grading schemes that reduce the grounds for student grievances; for example using only objective tests where the quality of the answer cannot be debated.

Reaction to the threat of liability has caused both administrators and faculty to narrow the range of evaluation and to put all individuals as near the mean as possible. Failure to differentiate quality of instruction by faculty and quality of learning by students removes what has been an important part of the achievement incentive. Without some new incentive for achievement, the quality of both learning and instruction will decline.

The threat of liability suits has caused faculty to chose teaching methods having the least chance of physical harm to students. Class trips and field work in some instances have been discontinued because of possible liability. Often the safest methods are less than the optimum learning method. State universities as a part of the state government have been immune to suit. That made the individual teacher and student fully responsible for student safety. The Kansas Supreme Court in the "Wichita State football case" (most of the football team and coaching staff were killed in a plane crash) ruled the State (University) itself could be held liable and subject to suit. That means the teacher and student at least in Kansas, no longer stands alone on the liability issue. The university must share in the responsibility for student safety. Today the state is scrambling to provide liability protection for its agencies.

Changing Attitudes Among Students and Teachers

In the last decade faculty, students, and administrators have greatly changed several attitudes. Most of the changes have been positive, for

instance, the greater openness of the interrelationships among the three groups and the demand for recognition of individuality. But some of the changes, perhaps a small portion of the total, are disincentives to learning and teaching.

Attitude to memorization:

Learning facts has little prestige. Many teachers prefer teaching problem solving and evaluative learning. Students similarly in their demand for relevancy judge their learning experience by how problem and present-time oriented it is. Asking today's students to use the storage capacity of their brains and to do memorization tabs a teacher as hopelessly old fashioned. Yet most introductory courses are learning the language and facts of that discipline. Both require memorization.

Attitude to communication technology:

The development of communication technology (television, computers, etc.) has resulted in the idea that knowledge can be directly transferred between people. We so often think all that is needed is that magic hookup between the student and the teacher and knowledge and wisdom flows into the student. We forget that learning occurs within the individual. The teacher with all his aids--books, audio-tutorial equipment, computer aided instruction, blackboards--can only guide, encourage, and motivate the student to learn. The student still learns by his own effort.

Attitude to experience:

Learning comes through reading, listening, and experiencing. Today we have neglected development of reading and listening skills. For some years we have been on an "experiencing binge." Learning through experience is important but inefficient unless preceded by learning based on reading and listening. Experience is the best teacher only if the student is prepared for that experience.

Attitude to the learning experience:

We suffer today from the learning-can-be-fun syndrome, when in fact most learning is a tedious, time-consuming effort that requires self discipline. Techniques making learning fun are best suited to the once-over-lightly courses. In-depth-study often is plain drudgery and we should be honest about it. And students need to know before they enter the commercial world that the easily attained has little value.

Attitude to relationship between research and undergraduate instruction:

The complementarity between agricultural research and teaching at the undergraduate level has lessened. The research results of several decades ago have become the basis for most undergraduate instruction. Most present research is too sophisticated for undergraduates to participate in it as a part of their curriculum. Complementarity remains, but its portion of the learning possibility curve is diminishing except in graduate instruction where a large degree of complementarily remains.

Attitude to theory:

The too-theoretical-criticism of some students and some faculty has sent us searching for immediate relevancy. A curriculum emphasizing methods of application (how to do something) short changes the student. What he learns may have higher marginal value in the first years after graduation, but diminishes rapidly thereafter. Concepts, principles, and theories must be the basis for agricultural economics instruction, because they are relevant longest. It is 20 to 30 years after graduation that the professional peak of a career occurs. We must offer a curriculum that assures effectiveness then as well as in the first years. Theories are for the long pull--to be used again and again--to be applied to new problems as they occur. Because application tomorrow or many tomorrows in the future is based on theories and methods of analysis, education in agricultural economics must have a strong theoretical basis.

Attitude to the agricultural industry:

We have retained a strong commitment in the Land Grant System to an agriculture made up of homogenous individuals and business units. Until recently agriculture was made up of individual farms all with many characteristics in common. The technological revolution has left agriculture with great differences among individual firms and their managers. Traditional commonality no longer prevails. Interests today are often in conflict. Agricultural instruction has not adjusted to that heterogeneity.

Attitude to honesty and truthfulness:

There is a pressing need for the university community to reestablish its integrity and credibility. Competition for research grants has at times caused researchers to compromise their academic integrity. Competition among academic units within a university for allocation of funds based on student credit hours has resulted (to attract majors) in inflated information on employment opportunities. The use of academic freedom as license by faculty to do their own thing, leaves students believing faculty have little responsibility to their employer. Faculty on the rise who hop from job to job without fulfilling contractual agreements set an example of irresponsibility. Look at the faculty and administration of your university--how many left previous positions before fulfilling that commitment? An everyday breech of regulations is the practice of backdating forms when the student, advisor, department head, or dean forgot to meet a deadline. With such practices we can little blame students and the public doubting the credibility of the university or its personnel.

Attitude to student responsibility:

Students and teachers often fail to realize students have a responsibility in setting the learning environment. Their receptivity, creativity, and evaluative skills contribute to a teacher's effectiveness. A class cannot sit back and leave the learning-teaching environment to be set by the teacher

alone. What happens between the student and the teacher is important; both share in the responsibility to create an effective learning environment.

Rewards of Teaching

I am a teacher because I feel I am doing something worthwhile. I have a strong conviction that each person has a responsibility to contribute to making our world a better place to live. By teaching agricultural economics to undergraduates, I am convinced I am doing that. Close association with students for 20 years has given me a full and meaningful life. Their creativity, which I hopefully contributed to, in building successful personal and professional lives assures me I have done a bit to make our world a better place.

Their youthful eagerness and optimism have been a continual source of regeneration. Among my greatest teachers have been the students.

Their strong commitment to life and their expectations of fulfilling those commitments increase my faith in mankind and its future.

Their appreciation of my efforts to assist them in their learning has given me a deep inner feeling of satisfaction and a sense of my own worthiness.

Their understanding and affection has helped me develop a sense of compassion toward others and a feeling of deep satisfaction with my life.

For me, and I believe for most teachers, that is the reward for teaching. Praise, pay, and promotion may fill faculty coffee room talk, but those are not what keeps a teacher anxious to meet a new class.

Teaching is the profession among all others that so often lets one give of himself freely and to receive freely from others, the students. In that free exchange of each to the other comes life's deepest satisfaction and meaning. That is what teaching has meant to me and why I remain a teacher.

REFERENCES

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