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An Approach

Instructional Development In A College of Agriculture

Keith Wharton

Abstract

This article describes the instructional improvement activities of the College of Agriculture, University of Minnesota, during the years 1971-76. Based upon the belief that an already good instructional program could be made even better by encouraging and supporting the development of individual faculty members, strategies for accomplishing this were devised. These strategies included efforts to bring faculty members together to study and discuss teaching, to seek fresh ideas from outside the College, to take the program of instructional improvement to the teachers, and to provide tangible rewards to those who were making gains. Examples of these activities of the program include off-campus instructional retreats, "brown-bag" discussion groups, special college-wide seminars, travel-study grants to individual teachers, projects funded by the University Educational Development Program, and assistance provided by the College of Education. Plans are to continue the program, with modifications made to permit more in-depth study and work on specific projects by small groups of teachers.

It is often good to stop what you are doing, back away from it all, try to see what has been accomplished, and plan for the future. We have recently done that with our instructional improvement activities in the College of Agriculture at the University of Minnesota, and I want to share our experiences with you, the members of NACTA, who I know are dedicated to the improvement of instruction in Agriculture. I do so, not with the implication that you should do likewise, but simply to continue the interchange of experiences among colleges and teachers of Agriculture that has helped to bring the quality of instruction in Agriculture to the high level that it is today and will keep it there in the years ahead.

I will review the beliefs upon which we have operated for the past five years (1972-1976), outline the strategy we have followed, give some examples of our activities, and discuss briefly our plans for the future.

Beliefs and Strategies

We began with the belief, based upon the best evidence that we had, that the quality of instruction in our College was already good, but that we could make it better. This may at first glance appear to be a trivial point, one that might be stated out of politeness to avoid offending and alienating the faculty members involved in teaching; but it was, in fact, one of the two primary beliefs that have given overall guidance to our entire instructional improvement program. Given that the quality of instruction in the College was good, we could proceed judiciously to identify and respond to unmet needs and to introduce ideas and innovations that would make good programs better. In other words, we could make fine adjustments to our operating machinery rather than having to begin with a complete overhaul.

The second major belief upon which we have based our instructional improvement program is that the only person who can significantly change and improve instruction is the individual teacher in the classroom. Until that person becomes dissatisfied with what he or she is accomplishing, makes a commitment to do something about it, and follows through on this commitment, not much is going to happen. We have, therefore, directed our attention toward the continued development of the individual faculty member within the context in which he or she is working. This means that we have considered

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the interrelated yet often competing demands of research, extension, and public service activities as well as those of instruction, as we have concentrated our instructional improvement efforts on the individual. Because of many demands upon faculty time, there are only limited amounts of time available for instructional improvement activities. That time, therefore, must be used efficiently and effectively, and the efforts must produce positive results.

Our third belief, closely tied to the second, was that the best ideas for instructional improvement, those that would be most readily accepted and implemented, were those from the faculty. We have not, therefore, tried to "sell" a program of instructional improvement to the faculty; our efforts have been, rather, unobtrusive ones designed to help faculty members consider possibilities and alternatives and then to "buy" those most likely to be of benefit to them.

We all know the benefits that can be derived from the cooperative, team approach to extension and research activities and projects. Two heads are quite often better than one, and many times the sharing of ideas and problems with a knowledgeable, interested colleague or colleagues will create a synergetic situation in which the approach or solution developed by the group is far superior to any that would have been developed by individuals working in isolation. Well aware of this phenomenon, we provide these opportunities to our faculty in their research and extension efforts, yet often deny them, unintentionally, perhaps, to these same people in their teaching. Let me give an example.

Several years ago I was sitting in an airport with a faculty friend, waiting for an airplane that would take us home from a North Central Regional summer instructional improvement symposium. We were talking about the symposium and the effect that it might have upon the participants, when my friend said: "I enjoy going to meetings like this because they give me a chance to learn something new about teaching and I always come away excited and full of good intentions. I only wish I could find some way to keep this going when I get home, but I know what's going to happen. I'll go to the office next Monday morning determined to spend some time on improving my teaching, but the first thing I'll find on top of the stack of papers on my desk will be a research progress report or porposal with a due date of last Friday. While I'm frantically trying to get that done, one of my graduate assistants will come in for help with a problem he is having in his project. At coffee break the conversation will be about the upcoming field day at one of our research stations, and the secretary will remind me that I have an 11:00 meeting of the Buildings and Grounds Committee and that they are looking forward to hearing my report. And so it will go. People will talk about everything except teaching, and my good intentions will become just so much more asphalt to pave the road to you-know-where."

I suspect this experience is not unusual among teachers in Agriculture. It is difficult to find time to discuss teaching with our colleagues, but it should be done and can be with a little help.

One of our basic strategies for instructional improvement, therefore, has been to provide opportunities for our teachers to get together to study and talk about teaching. Starting with those teachers who had already demonstrated a genuine interest in improving teaching, we have attempted to create "critical masses" and "communication networks" that would keep this interest going and growing and to make it easy for others to join and participate as their interests became aroused.

A second strategy has been to seek out and bring in fresh, novel, stimulating ideas and approaches to teaching from outside our College. We all seem to have a natural curiosity about what someone else in our profession is doing, and taking a look at their program can help us to see our own in a different light and point out things that we can do or change to make it better.

Our third basic strategy has been to bring the program of instructional improvement to the teachers and not to ask them to go somewhere else for it. As I mentioned previously, faculty members are extremely busy people, and to ask them to take time from their schedules to travel to another part of the campus every time they need help with their teaching is not realistic; they simply will not do it. The support services of the University, therefore, must be brought to them, at a time and place convenient to them.

The fourth strategy, and the one without which everything else is futile, has been to provide encouragement, support, and **tangible rewards** not only to those who are doing a good job of teaching, but also to those who are trying to improve. It is often said that the "truly dedicated teacher," the "real professional," will labor silently and patiently with no reward other than the satisfaction of knowing students have been served. That may be true in rare cases, but we have found it much easier to sustain the morale and enthusiasm of these individuals and to attract others into the fold when they are given recognition, support, encouragement, and rewards in the form of promotion, tenure, and salary increases equal to those received by their colleagues for excellence in research and extension.

Let me now turn to some examples of the ways in which these beliefs and strategies have been implemented.

Examples

Fall Faculty Instructional Retreats. Every year since 1972, about two weeks before the opening of fall quarter classes, we have held a two-day off-campus Faculty Instructional Retreat involving approximately thirty members of our teaching faculty, administration, and support staff. Planned by members of the Teaching Improvement Committee and other interested faculty, these retreats have been designed to serve three purposes: (1) to get

people together, away from the telephones and other interruptions, in a setting focusing on teaching, (2) to give these people an opportunity to know one another better and to form and strengthen bonds among themselves (the "critical masses" and "communication networks"), and (3) to present ideas for teaching improvement that have immediate application in the classrooms. Participation is by invitation only (this makes it somewhat "special" to the faculty); and, every year since the first, the group has been made up of approximately half who have attended a previous retreat and half who are attending for the first time. The central themes have ranged from the general to the specific, but all have been developed around the goal of helping the participants clarify what they, as individuals, believe about teaching and what they can and should do to improve their competencies as teachers. These topics, by years, have been, "A Look at Teaching: Higher Education and the College of Agriculture" (1972), "Ten Keys to Good Teaching" (1973), "Teaching and Learning from the Learner's Point of View" (1974), "Communication in the Classroom" (1975), and "Teaching Tips for the Beginning College Teacher" (1976).

Brown-Bag Seminars. At least one quarter a year, either fall or winter, we hold a series of informal "brown-bag" seminar-discussion sessions within the College. These are open to any faculty member or graduate student who wishes to attend, and we typically have about fifty people (mostly faculty) taking part, in four or five groups that meet either weekly (the most successful model) or bi-weekly. Many topics have been selected for study and discussion, including testing and grading, "Mastery" teaching, Individually-Paced Instruction, and books such as **Freedom to Learn,** by Carl Rogers, and **Excellence,** by John Gardner. These seminars, without a doubt, have provided a great deal of substance to the participants; but we feel that their greatest contribution has been their promoting discussion and interchange of ideas about teaching.

Special Seminars. The College of Agriculture Teaching Improvement Committee sponsors two regularly-scheduled seminars or workshops each year, fall and winter quarters, and one or two others throughout the year as opportunities present themselves. These are open to all members of the faculty, but individual invitations are usually sent to about thirty-five persons who may have a special interest in the topic. Three examples of these seminars, all of which have been led by persons from outside the College, are Lawrence M. Aleamoni, University of Arizona, "Learning Principles"; Louis Mahigel, Minnesota, "Non-verbal Communication in an Academic Setting"; and David and Roger Johnson, Minnesota, "A Teaching Strategy: Goal Structuring."

Travel-Study Grants. One exciting and promising aspect of our program has been that of providing an opportunity for selected members of our faculty to visit and observe exemplary teaching programs at other universities around the country and to bring back ideas that may be adapted or incorporated into our programs. Faculty members who wish to make one of these trips apply to the Teaching Improvement Committee, whose members select the recipients of the grants.

These visits began in the spring of 1975, when three grants were awarded. An additional three were made during the spring of 1976, and it is anticipated that approximately ten will be made during the academic year 1976-77. The amounts awarded have ranged from $100 to $400, with the average being $240.

Educational Development Program. Invaluable contributions to the teaching improvement program of our College have been made by the Educational Development Program of the University. This program, established in 1970 by the Regents on recommendation of the University Senate, provides funds to support efforts of the faculty and students to improve undergraduate and graduate teaching. The amount available, when full funding is reached, will be 3 percent of the total costs of instruction at the University, budgeted in approximately equal amounts at three administrative levels: departmental, collegiate, and all-University.

The College has had thirty proposals funded, averaging slightly above $1,700 each, since these monies were first made available in the 1971-72 academic year. Examples of the kinds of projects carried out include a College-wide feasibility study of a cooperative education (internship) program, a lecture improvement project involving video-taping and reviewing lectures, development of a simulation-gaming laboratory exercise for students in an economics area, and the preparation of auto-tutorial materials for an animal science course.

Assistance from the College of Education. A wealth of professional expertise which could provide tremendous assistance to teachers in Agriculture is present in Colleges of Education. Education professors are at the frontier of knowledge in learning and teaching and are eager to have someone test and use the findings of their research in actual teaching situations. College of Agriculture teachers are teaching an increasingly larger, more diverse, and more challenging group of students, and need help, especially that from their professional Education colleagues.

These two faculties, which obviously could benefit so greatly from close contact and interaction, are kept apart by the same problem that plagues teaching programs everywhere — the forces and situations that isolate, insulate, and block communication — and this potential gold mine is frequently untapped or only partially exploited.

We have tried, and have been successful in several instances, to bring Education and Agriculture together. We first had to find out what Education was doing, and who was doing it. By paying careful attention to notices and announcements of seminars, workshops, and presentations from the College of Education (two of our College office staff are on the Education mailing list), we have been able to identify programs that appear to be of interest and value to our faculty. We have attended these

programs and followed-up the more promising and appropriate ones with individual discussants, who have frequently been more than willing to come to the College of Agriculture and work with our faculty. We are, for example, in the second year (1976-77) of a three-year project in which staff from the Psychological Foundations Department are working intensively in the classrooms with six of our teachers in an attempt to structure teaching styles and methods to meet the learning development stages and needs of the students.

Plans for the Future

We believe that we now must both broaden the scope of our activities and at the same time make them more specific and individual for the persons involved. We plan to continue our general offerings — the fall retreats and college-wide seminars and workshops — but an increasing emphasis will be given to a wider range of in-depth individual and small-group projects. Some of our study groups, for example, will work intensively over a fairly long period of time on one topic; e.g., those involved with the Psychological Foundations project, a group working on objectives and examinations, and another pursuing ways to improve communication (lectures and discussions) in the classroom. We are planning off-campus working sessions for some of these groups; others will be augmented by travel-study visits.

We do not believe that we will ever finish this work. The best teachers, it seems, are never satisfied with what they are accomplishing. They are constantly examining what they are doing and searching for ways to do it better. The challenge to us is to give them the help they need.

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BOOK REVIEWS

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N. W. Simmonds. *Evolution of Crop Plants*. London and New York: Longman, 1976. 339 pp. Hardbound $35.00.

Evolution of Crop Plants by N. W. Simmonds is an extremely valuable collection of short articles (2,000-6,000 words) about 174 major and minor temperate and tropical crops. Each of the chapters on the major crops is written by an authority on the crop and its evolution and includes an introduction, cytotaxonomic background, early history, recent history, prospects for future development, and a short list of key and source references. A chapter on minor crops is a collection of very short discussions, one to nine paragraphs in length, summarizing available information on evolution of 81 minor crops. There is also a chapter on various genera of timber trees.

There are no illustrations of the crops, but maps and diagrams are used to show breeding systems, evolutionary histories, and cytogenetic relationships among cultivated species and their wild progenitors. Indexes of authors cited, scientific names, and common names are provided, as well as full addresses of each of the authors.

The editor has succeeded in bringing together in one volume a great deal of information on the evolution of crops that is up to date with recent contributions of archaeologists, historians, cytogeneticists, and plant breeders. The authors of individual chapters are experts and have effectively summarized information from a great many sources. The articles are well written and easy to understand.

The limitations of the book are a result of the editor's intent to keep the volume compact and inexpensive enough to be within the reach of individuals. Drawings or pictures of the crops discussed would have been useful to many readers but would have undoubtedly increased the size and cost of the book considerably. In this regard, it may be useful to point out that excellent illustrations and botanical descriptions of tropical crops and a great deal of information not found in **Evolution of Crop Plants** on uses, ecology, chemical composition, propagation, husbandry, and major pests and diseases can be found in J. W. Purseglove's **Tropical Crops** (New York, John Wiley, 4 volumes: Dicotlyedons 1 & 2, 1968, Monocotyledons 1 & 2, 1972).

Evolution of Crop Plants will probably not be the choice of many college agronomy teachers for use as a text; however, it will be an extremely valuable reference book for research workers and for teachers of agronomy, plant breeding, and agricultural economics, as well as botanists, anthropologists, archaeologists, and geographers interested in agriculture. It would certainly be a useful addition to any university or agriculture department library. It provides an excellent introduction and first list of references for students beginning individual investigations or research projects on any of the crops covered.

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