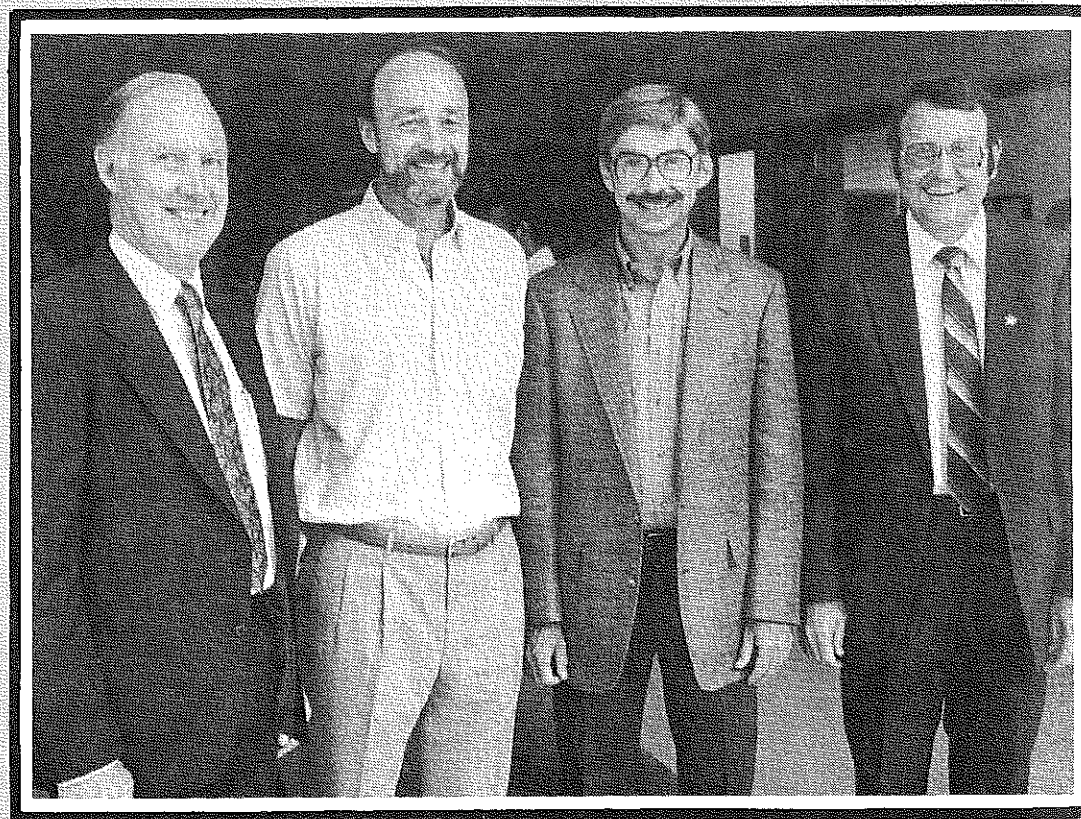


The
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Magazine

September, 1987
Volume 60
Number 3



THEME:
Recognizing Excellence in Teaching

THE AGRICULTURAL EDUCATION MAGAZINE



September, 1987

Volume 60

Number 3

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Guardians of Academic Excellence

Few words spark as much debate as the word EXCELLENCE because everyone in America seeks it. My logic says the 1980s' excellence craving is linked to the U.S.'s becoming the world's largest debtor nation. Fairly or unfairly, the education community has received the blame for America's lack of excellence.

Unfortunately, achieving excellence in education is an exceedingly difficult and long-term proposition. A business can easily measure excellence in terms of increased profits. A farmer can accurately quantify excellence by bushels per acre or pigs per litter. The business executive or a farmer selects a variety of factors, measures them, and then confidently proclaims that excellence is present. Other executives and farmers in the U.S. can use the same factors to accurately gauge excellence.

Measuring Educational Excellence

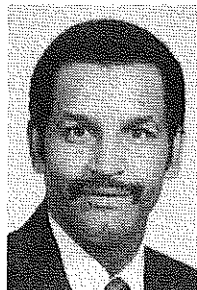
Such simple figuring will not work for education because humans behave quite differently. Thus, getting precise measures of educational excellence is difficult. For comparison sake, an acre is the same size everywhere. A bushel of corn is the same in Maine, Florida, Iowa, or Nebraska. But, ask recognized experts in these states to describe an excellent vocational agriculture teacher. The descriptions will probably have little resemblance. Even more dramatic answers are possible if you ask what it means when a high school senior makes a "B" in vocational agriculture.

When excellence in education is measured, chicken and egg questions usually surface. The classic question of this decade concerns whether (a) America should first pay teachers more and then expect higher quality OR (b) should teachers first upgrade the quality of teaching and then expect a tidy reward?

It appears that educators, politicians, students, parents, and a host of other groups frequently overlook two key realities while they search for excellence. **Reality #1** is that everyone can't be excellent. Further, over-use of "excellence" often means the word is being used incorrectly as a synonym for "average." **Reality #2** is that excellence occurs only when someone judges living folks and says that they are either excellent, good, fair, or poor (failures).

Pseudo Excellence

Our free enterprise system won't allow everyone to be excellent. However, outlandish grade inflation refutes this contention if you are willing to equate grades with excellence. Colleges apparently believe grades equal excellence



By Blannie E. Bowen, Editor

(Dr. Bowen is an Associate Professor in the Department of Agricultural Education at The Ohio State University.)

because they foster "pseudo excellence." Numerous undergraduates with 3.0 or higher grade point averages are barely literate. Even more ludicrous is that graduate students with 3.5 or higher grade point averages can be even less literate.

Grades can also be very misleading if they underestimate educational attainment. Witness the high school student in North Carolina who failed one grade and was barely passing. Our system says this "dummy" could not be one of only 10 students in the U.S. who made perfect scores on the verbal part of the Scholastic Aptitude Test. These vignettes should help diminish the notion that everyone can be average much less excellent. Even when the ceiling is raised and overall quality increases, everyone still cannot be excellent. Thus, measures we use to indicate excellence must do just that. The mockery must cease.

Excellence Standard Bearers

Educators frequently complain that they can't accurately measure teaching excellence. This is partially true, but more of a cop-out. Should we tolerate mediocrity because we cannot measure excellence with 100% accuracy? Of course not, but we do! How many students do you know who failed student teaching? How many teachers have been fired for incompetence? During the 1983 Phi Delta Kappa International meeting, I was appalled to learn that fewer than 20 teachers had been fired in the U.S. over the last 50 years because of incompetence.

Lax enforcement of standards obviously exists even when the best research shows that excellent teachers are business-like, clear, enthusiastic, and they use both humor and a variety of teaching techniques. More importantly, students taught by good teachers perform on cognitive, affective, or psychomotor tests. Excellent teachers have objectives, teach to those objectives, and then measure student performance accordingly. Thus, if students don't learn, teachers haven't taught. Teachers should be judged accordingly.

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Guardians of Academic Excellence

(Continued from page 3)

Sadly, many teachers, supervisors, teacher educators, and administrators erroneously perceive that they cannot enforce standards. However, all educators have options they can exercise so good and excellent teachers aren't unfairly branded by a few rotten apples. Cases of inept teach-

ing and gross incompetence must be thoroughly documented and appropriate legal actions taken to weed them out of teaching.

Professionals in agricultural education cannot allow (1) illusions of excellence because a few teachers don't teach and (2) inflated grades to give false impressions of how much students learn. Paul Vaughn, this month's theme editor, secured authors who know how to recognize excellence in teaching. They share their secrets in this issue.

THEME

Recognizing Excellence in Teaching — A Challenge For All

Recently I attended a Collegiate FFA banquet where a young assistant professor in the College of Agriculture & Home Economics was being recognized by the chapter with a teaching award. The teacher was thrilled at receiving the award and mentioned to the group that teachers "rarely get a pat on the back." He went on to say that receiving the award made him feel that all his efforts were worthwhile.

Unfortunately, his remarks about the "pat on the back" are all too true. Too often, we fail to recognize individuals who excel as teachers. The result is that many excellent teachers become disgruntled and either (1) teach without enthusiasm or (2) leave the profession. Most of us would agree that this is undesirable, so why let it happen? I am convinced the major reason is because we, in the profession, cannot come to agreement as to what is excellence in teaching. Anyone who has brought a group of agricultural educators together and tried to have them come to agreement on a definition of teaching excellence can attest to that fact. It would probably be easier to nail a piece of jello to a tree.

We should not allow differences of opinion to keep us from rewarding effective teaching. While there is bound to be a wide range of differences regarding what is excellence in teaching, there is also bound to be a number of common elements upon which most agricultural educators can agree. In this issue, several individuals provide us their perspective as to what is excellence in teaching. The viewpoints they offer are as (1) student and prospective teacher, (2) graduate student and former teacher, (3) state supervisor, and (4) teacher educator. The information they provide can serve both as a guide in recognizing excellence in teaching and as a goal toward which all of us should strive. I hope you enjoy reading their articles as much as I have.



BY PAUL R. VAUGHN, THEME EDITOR

(Dr. Vaughn is a Professor in the Department of Agricultural and Extension Education at New Mexico State University, Las Cruces, New Mexico 88003.)

About the Cover

Recognizing Excellence in University Teaching —
The three college professors on the right have big smiles on their faces because they have each been given a \$2,000 cash award in recognition of their teaching performance. Pictured (L-R) are Dr. James Halligan, president of New Mexico State University; Dr. Alan Van Heuvelen, Physics; Dr. Dale Alexander, Chemistry; and Dr. Paul Vaughn, Agricultural and Extension Education. The cash awards were provided by the Burlington Northern Foundation as a means of rewarding faculty achievement in teaching. (Photo courtesy of the New Mexico State University Information Services).

The Supervisor's View on Recognizing Excellence in Teaching

Much has been written about excellence in education, what it is, and how we achieve this mythical plateau. Once the teacher has reached that level, how do we recognize it? Is it like the young couple — love at first sight? Do we need to explore the teaching activities of a given teacher to determine the level of excellence that has been reached? Is this the goal of teacher evaluations?

Facilities and Equipment

The first impression a supervisor gains is often long-lasting. The physical appearance of the facility is important. All of us can recite examples of excellent teaching being done in an extremely inadequate facility; however, adequate facilities offer a better opportunity for effective teaching and learning. Many excellent teachers strive for some individual characteristic for the department, classroom, or laboratory that will set that particular facility apart from the other school facilities. This could be in the form of a clean, well-painted facility, an outstanding trophy case that is well arranged, or an attractive bulletin board with many interesting pictures of student activities. Something that will attract visitor and student attention is necessary to accomplish this goal.

Located in a readily accessible area should be a display of current agricultural publications. The area should be well kept, but show evidence of use. Also available should be adequate reference materials including career guidance information. Materials that show no use or outdated materials do not add to a favorable first impression. The area should create a desire by the visitor to know more about the subject.

The availability and condition of laboratory equipment are indicators to observe. Some teachers become anxious about visitors who arrive while tools and equipment are in use. Excellent teaching cannot readily occur in the laboratory if all tools are in the tool room with a lock on the door. The facility is designed for teaching and if excellence in teaching is being achieved, it will show evidence of use. Extensive use should not be confused with shop disarray or lack of repair. Some teachers master the disorderly shop concept to the point of presenting the appearance of education in progress when actually there is only a disorganized shop.

Teaching Performance

A well-organized, well-prepared teacher may find it beneficial to have a student designated to greet visitors, explain what is happening, and serve as a guide throughout the facility. This presents an excellent opportunity for students to demonstrate mastery of instruction and allows



BY JAY EUDY

(Mr. Eudy is Director of Agricultural Education for the Texas Education Agency, 1700 N. Congress Avenue, Austin, Texas 78701.)

the teacher to continue with the class. Should the teacher be available to receive a visitor without interfering with class or laboratory activity, he/she should take the opportunity to explain what the students are doing and where the instruction will lead. Visitors should be provided all necessary safety equipment. (This equipment should be in excellent repair and clean.)

Well-prepared students will continue their activity whenever possible even if visitors are present. A well-prepared teacher will normally have a plan for such interruptions. Excellent teaching will leave the impression that the teacher was expecting the visitor.

Excellent teaching is often rewarded by the number of students present for class or the number of students present for after-class activities. Very few students are unable to identify a quality instructor. The quality instructor can be expected to instill pride in the students. This pride will enhance the overall effectiveness of the program. A major display of trophies, banners, pennants, and ribbons does not necessarily indicate an excellence in teaching, but excellence in teaching will result in awards being presented to the program.

The question often arises concerning the teacher who favors an area of the program and works to excel in that particular area. The emphasis may be in leadership, judging contests, shows, or laboratory. Almost everyone has a favorite activity. Perhaps we should be thankful for those teachers who devote their efforts to a specialized area. At least we get favorable publicity in that area of the program because of the efforts of those teachers. Excellence will be achieved when the entire program is given adequate attention. The aforementioned areas are important but so is the entire curriculum. Teams trained for competitive events are proven interest builders. Most students enjoy competing when they are well prepared; however, caution should be the word — don't make professionals from three or four

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The Supervisor's View on Recognizing Excellence in Teaching

(Continued from page 5)

students while ignoring the remaining class members. At times it appears that some teachers train teams only for the gratification of the teacher rather than teaching students. Fortunately, this appears to be the exception rather than the norm.

Planning and Communication

Excellence in teaching should be the result of planning by the teacher, the administration, and interested individuals in the community. An active advisory committee can greatly increase the effectiveness of the program. Most experienced teachers have worked with advisory committees that were very beneficial. The committee members can serve as a community sounding board for the teacher and as a source of program information for the community. It is often said that we do not have enemies of our program, but in some situations, we do have some uninformed friends. Informed friends can greatly assist us in arriving at excellence in teaching.

Ralph Thomas, a vocational agriculture teacher in Woodward, Oklahoma, and a long-time leader in the National Vocational Agriculture Teachers' Association (NVATA), has said the vocational agriculture teacher is often isolated from the other faculty members because of the facilities and nature of the program. This is true in many cases. The administration tends to ignore the program because of this isolation. An excellent teacher will find a way to keep the administration informed about the activities of the program. An informed administrator can better support the program.

Probably one of the things we should have considered when looking at excellence in teaching is the program budget. No program can operate without finances. Some teachers can manage on fewer dollars than others, but all teachers must have the necessities to operate a program. Difficult financial times are at hand in agriculture throughout much of the nation. Education is facing a similar set of problems. All of us are being asked to be more accountable for our programs. Even with this difficult situation teachers are able to present a program of excellence that earns the support of the community for new facilities, equipment, and supplies. Administrators who are included in the planning stages can greatly influence the budget situation.

An excellent teacher is concerned about "our program," "our teams," and "our students." A teacher concerned about "my program, teams, and students" should take a close look at the program goals. It is difficult for the community or administration to support a teacher who is concerned about how many grand champions "I won" or how many first place teams "I had."

Teaching plans are an important part of an excellent program. They are prepared for basically two reasons: (1) because the administration mandates the filing of plans and (2) because the teacher needs a plan for the class. The latter is certainly the important one as far as the students

are concerned. A plan is just that, a plan. An excellent teacher does not teach the plan but teaches the students following the plan. Few supervisors are concerned about the physical characteristics of the plan. Whatever the teacher develops that will insure coverage of the desired material for that class can serve the purpose. A copy of the plan turned in at the administrative office can help to motivate the teacher toward excellence. A very fine teacher once told a group of college agricultural education majors that wearing a tie serves two purposes for him: (1) it serves to remind the students that this man is the teacher and (2) it serves to remind this man that he is the teacher. The lesson plan can be classified this way also — it serves the teacher as a reminder of who is the teacher.

A successful teacher will recognize the difficulty most students have in taking adequate notes. Student materials or handouts can enrich the presentation considerably. Materials of high quality can prove to be excellent resources for students in later courses of study. Many former students often refer to the information they have in the "ole ag notebook" from high school days. The quality of that notebook is often used as a measure of what the students have been taught in the course of study.

With the help of funds appropriated through the Carl Perkins Act, we find our programs directed more toward special populations. What does the excellent teacher do to help these students? Through the use of video and computer-assisted instruction the teacher can arrange for more individualized instruction. The slow student can be given remedial help; also, the advanced student can move at his/her own pace. Some excellent work has been done along these lines. The use of high technology equipment is a part of many teaching programs today and will continue to grow. The excellent teacher represents the cutting edge of the new technology in teaching.

Indicators of Excellence

The use of student tests cannot be ignored when evaluating teaching. The test materials will at least identify some of the instructional areas covered and the level of student comprehension in these areas. An excellent teacher will have on file some reference copies of tests.

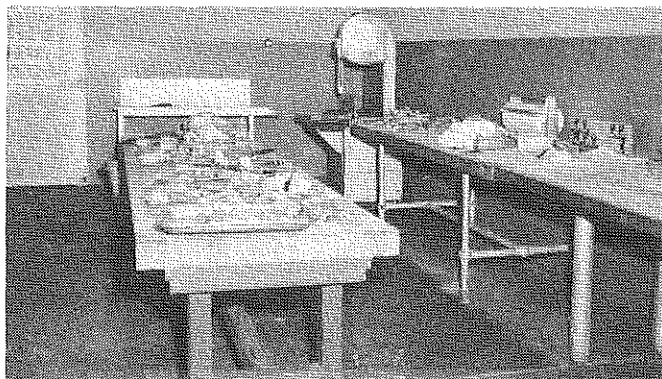
No vocational agriculture program should be considered outstanding without Supervised Occupational Experience Program (SOEP) records for each student. The SOEP is a vital part of a well-rounded program. There should be evidence of emphasis on this part of the program.

An active FFA chapter governed by the members is a cornerstone to an excellent program. There should be evidence of individual and chapter awards won by the members. Publicity covering these awards is important to the students, the teacher, and the school.

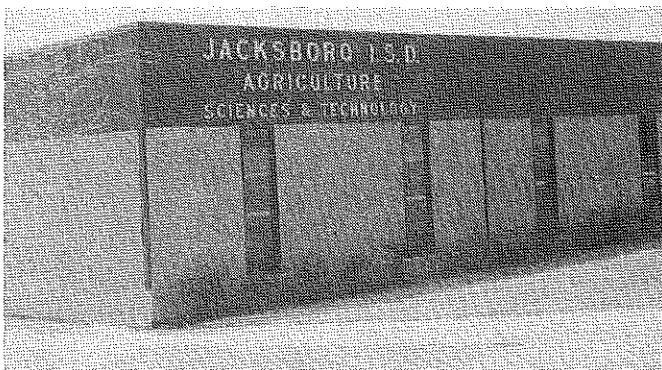
The excellent teacher will be present at inservice and professional meetings. This teacher will attend workshops for new and innovative teaching activities.

Once we have identified "Excellence in Teaching," we must remember it is not possible without that outstanding teacher. That teacher should be recognized for the contributions being made to education. Peer recognition at all levels is most important. Recognition by the state staff is a

link in this chain. The teacher can receive recognition by being asked to serve as chairperson or resource person at workshops or be assigned to various state committees or on the State Professional Improvement Conference program. The teacher of excellence deserves to be rewarded with recognition.



If excellence in teaching is achieved, the lab will show evidence of use. (Photo courtesy of the author).



The physical appearance of the facility is important. The name should be displayed with pride. (Photo courtesy of the author).



An outstanding trophy case that is well arranged can help set the department apart as a place of action. A periodic rearranging of the display will attract interest. Excellence in teaching will result in awards being won by the students. (Photo courtesy of the author).

NEW PRODUCT

* How many gardeners know how and when to harvest vegetables for maximum flavor and nutrition?

* How many know that vitamin C is highest in fully ripe crops and then decreases as they pass their prime?

* . . . that tomatoes shaded by foliage have 37% less vitamin C than fruits ripened in full sun?

* . . . that B vitamins are highest in new shoots and leaves?

* . . . that the more intense the color of the vegetable at harvest time, the higher the vitamin A concentration?

* . . . that harvested vegetables store best and hold nutrients when in plastic bags, unwashed and whole?

* . . . that when preparing vegetables, the less you trim, peel and pare, the more vitamins you save?

These are just a few of the words of wisdom on healthful harvests from the staff at *National Gardening*. The National Gardening Association (NGA), publisher of *National*

Gardening magazine, is a nonprofit, member-supported organization based in Burlington, Vermont.

"At NGA, we know gardeners have put in hours tending their gardens and we want to help make their harvests the best," said Charles Scott, president of NGA. "Our magazine features articles such as 'Harvest Primer' to provide today's gardeners with the most up-to-date information for successful gardening."

Information on harvesting the 12 most popular vegetables grown in America's gardens is featured in the August *National Gardening* issue. Gardeners can find out how and when to harvest for maximum flavor and vitamin content and learn tips for storing and cooking to keep quality, freshness and nutrition at its peak.

A sample copy of *National Gardening* magazine featuring these harvesting tips and more is available for \$1 to cover postage and handling. Send to National Gardening Harvest Tips, 180 Flynn Avenue, Burlington, Vermont 05401.

Undergraduate Students' Viewpoint on Recognizing Excellence in Teaching

Incoming college freshmen are like raw clay, constantly being shaped and molded by the university environment. They are easily influenced and often unaware of the vital role their professors play in the transformation.

As undergraduate students, we had the responsibility to attend class, take notes, and study hard to succeed in our courses of study. So, what made the difference in how well we excelled? Did teachers make that difference? Our answer is definitely a "yes."

Teachers do make that difference; a difference in the amount we learn and retain; a difference in how we perform; and in some instances, even a difference in who we become.

When we stop to consider how teachers make that difference, we automatically look back through our past at those teachers who affected our way of thinking, influenced our decisions, and in effect brought about some type of positive change in us. On the other hand, we look at the teachers who left little, if any, lasting effect upon our lives. Which traits separate these teachers? Is it certain characteristics or the lack of these characteristics that determines their effectiveness? Let's look at those qualities that distinguish the outstanding undergraduate teacher.

Skills of the Instructor

There exists an endless array of teaching personalities and with each personality, an even wider array of teaching skills the individual may possess. Some are, consequently, better than others while some are quite simply "unique" in their style of presentation. It is this trait that tends to be most noticeable and will contribute most to success in the teaching field.

Students are often required to take classes that they consider boring or uninteresting in order to complete their curriculum. Such a situation tends to create a negative attitude toward both the subject matter and the instructor. Quite frequently, however, these barriers may be overcome by incorporating certain methods into the teaching pattern, thus creating a more favorable environment for learning.

Knowledge

A prerequisite for excellent teaching is embodied in the personal qualifications of the teacher. The basic foundation of education is knowledge of the subject matter being taught. A teacher needs adequate training in the technical and practical areas as well as related fields. It is essential that the teacher possess the ability to gain the respect and confidence of the students.



BY STEVE DIMITROFF AND ROBERT TORRES

(Mr. Dimitroff is a Graduate Teaching Specialist in the Department of Agricultural and Extension Education at New Mexico State University, Las Cruces, New Mexico 88003; and Mr. Torres is a Vocational Agriculture Instructor at Wilcox High School, Wilcox, Arizona 85643.)

Motivation and Enthusiasm

One seldom accomplishes anything except as the result of motivation. Some instructors think of motivation as a "pep talk" at the beginning of each lesson, but true motivation cannot be a separate and distinct step in the teaching process.

Enthusiasm is yet another excellent characteristic. At times we step into a classroom and find a teacher who seems uninterested in either his/her subject matter or the students. Although this individual may possess adequate knowledge and skills, he/she lacks that spark of inspiration we seek. Enthusiasm is the ability to stimulate a sincere interest in the subject and the dedication necessary to teach that subject with pride.

Interest in Students

Interest in students is another important aspect of teaching excellence. It is vital to show concern for students as individuals both in and out of the classroom. Little learning can occur where a student feels fear, disgust, or resentment. Teachers need to be accessible and empathetic.

Humor

Incorporating good, clean humor adds color and spice to any teaching style. Humor tends to relax the student, creating a more comfortable learning environment. If a teacher fails to use some humor in his/her methods, the student begins to develop a feeling of drudgery resulting in a very negative attitude.

Material Presentation and Evaluation

An instructor should strive to evoke meaningful classroom response and stimulate creative thinking by using stories or analogies by sharing experiences or research.

Fairness and impartiality in grading are crucial to professional excellence.

Course Content and Organization

Excellent teaching is not judged solely by manner or method of teaching. Knowing the needs of the student builds a strong foundation for learning. Conditions are

more favorable when the student experiences a need for the subject matter. Materials need to be current, pertinent, and in some cases, speculate the demands of the future. Content organization should express both sequential and cumulative aspects while relating to past and future studies.

Conclusion

As undergraduates, we found these characteristics in our professors most appealing, however, let us not limit ourselves to these traits but continue to seek new and inspiring challenges in our pursuit of teaching excellence.

THEME

The Teacher Educator's Viewpoint on Recognizing Excellence in Teaching

Instead of writing a verbose article full of noble platitudes about excellence in teaching, I thought you might find the following letter more interesting.

* * *

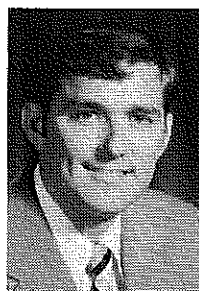
Dear Agricultural Education Professor,

When I graduated with a degree in agricultural education last month, you said to let you know when I had signed a teaching contract. I did today. I start my new position at Medicine Lodge in three weeks. I'm excited about the new challenge but am terribly confused. I need some help. Let me explain.

Since I graduated, I've been helping out here on the home farm. Sitting for hours on the tractor has given me time to do some thinking. I've been thinking back over the agricultural education classes I had under you and the other professors. All of you emphasized the importance of excellence in teaching. You said it was vitally important that we be high quality teachers. You and the other professors told us what it would take to be excellent teachers. That is what has led to my confusion. You professors told us a lot of things, but you didn't practice them yourselves. My question is, "Am I supposed to teach the way you said to teach or the way you actually taught?" Let me give some examples.

Your Methods Class

In the methods class, you spent several weeks talking about the different teaching methods. You described the advantages and disadvantages of a lecture, debate, role playing, panel discussions, opposing panels, supervised study, demonstrations, small group work, etc. You went into great detail describing the mechanics and implementation of each teaching method. You even mentioned that research has found that effective teachers use a variety of



BY GARY MOORE

(Dr. Moore is a Professor in the Department of Agricultural, Extension and International Education at Louisiana State University, Baton Rouge, Louisiana 70803.)

teaching methods. But you never used any of these methods in teaching the class; you just lectured. If all these methods are good and should be used, shouldn't you teacher educators use them in teaching us how to teach?

Another topic you discussed in the methods class was the importance of motivating students to learn; I think you called it "establishing learning set." You said that it was crucial that we try to get our students interested in the lesson to be taught. You even used a quote of Horace Mann that went something like, "A teacher who is attempting to teach without first inspiring the student with a desire to learn is hammering on cold iron." Yet, in all your classes, you never did anything to get us motivated to learn about the topic for the day. I guess you assumed because we were majoring in agricultural education we were self motivated and didn't need any special preparation to learn. Is establishing learning set a skill needed only by secondary teachers, but not professors?

Problem solving also has me confused. You were adamant that we should use the problem solving approach to teaching. You mentioned that the educational reform movement emphasized thinking skills and that problem solving teaching was one way to develop these thinking

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The Teacher Educator's Viewpoint on Recognizing Excellence in Teaching

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skills. If I remember correctly, we spent three weeks just on the process and procedures to follow in problem solving teaching. I'm sold on problem solving. But my question is, "If problem solving is so good, why don't you agricultural education professors use it?" I took a course in operating the FFA chapter and a course in SOEP. It appeared to me that the content in these two courses would be ideal to teach from a problem solving viewpoint. What is the best way to elect officers? Why is it important to train officers? Susie lives in a trailer park; what type of SOEP could be arranged for her? Everything taught in those two courses could have been taught using the problem solving technique. If you really want us vocational agriculture teachers to use problem solving, you professors need to use it in your teaching.

Lesson planning also has me puzzled. You emphasized the importance of using an up-to-date lesson plan. You explained how it should guide our teaching. You even mentioned that research has found effective teachers to be organized. But I don't remember seeing you with a lesson plan very often, and when you did use one, the paper was yellow with age. Perhaps up-to-date lesson plans are to be used only by secondary teachers.

I'll never forget the week you taught us something called teaching skills. If my memory is correct, these included questioning, cuing, stimulus variation, probing, closure, and a few others. I don't remember you using many of these teaching skills. It seems like you would lecture right up to the bell and pick up at that point the next class period. We never did arrive at what you termed closure.

Another teaching skill which has me confused is the use of questioning. You talked about high order and low order questions, steps in asking questions, and even discussed the research by Rosenshine and Furst that found the use of questions in teaching to be associated with effective teaching. However, in our class you asked very few questions. Is questioning a teaching skill to be used only in the secondary classroom?

Other Classes

I remember we had several classes on the use of instructional materials. You mentioned flip charts, flannel boards, overhead projectors, slides, filmstrips, etc. Yet, in our entire methods class the only aid you used was the overhead projector. Maybe the other instructional aids are not appropriate for university classes.

Teacher Behaviors

Enthusiasm is another variable you mentioned that was correlated with excellence in teaching. I guess it is pretty hard for a professor to be enthusiastic at 8:30 in the morning, the time our class met. It appeared to me that teaching class was some type of punishment for you professors. You never did seem very enthusiastic about class. Perhaps you have taught the same class too long and need a change. I

think it would be a good idea for you to rotate out of a particular class from time to time and let somebody else teach it.

You might also want to consider swapping places with an agriculture teacher for a few weeks. Getting in front of high school students for five periods a day for several weeks might be a good experience. I realize you are in a number of vocational agriculture programs observing student teachers from the back of the room, but that is not the same as being up front teaching. I know because I spent a good bit of time before and during student teaching observing other vocational agriculture teachers. There is a difference between observing and teaching. This might help rekindle some enthusiasm.

Now that I have thought a little, I do remember several mornings when you were enthusiastic. These were the mornings you were discussing the research projects in which you were involved. Unlike some vocational agriculture teachers, I have no problems with you doing research. I do realize that the university community expects you to do research. When I start my new teaching job at Medicine Lodge, I am going to have to spend a good bit of time teaching about wheat production because it is important in that community. You have to gear your actions to the needs of the community and the university community expects professors to do research. I can live with that; but my concern about your research is the topics you folks choose to research. Are the attitudes of sheep producers in three Eastern counties of the state toward the FFA Sheep Proficiency Award really a major concern of the agricultural education profession? I don't think so. The profession has some major problems facing it that need to be researched. Some of the problems I think you should be researching are:

Do vocational agriculture teachers on 12 month contracts have higher quality programs than teachers who don't have 12 month contracts?

Does the FFA really produce better citizens?

How can vocational agriculture programs be restructured to both meet the needs of a changing agriculture and the excellence movement? In other words, how is vocational agriculture going to survive?

You might also want to work on revising the curriculum guides to include material on tissue culture, embryo transplanting, genetic engineering, and the other new developments in agriculture. Many of our curriculum guides are out of date. I know you have to do research at the university but is there some law against it being practical and useful?

Other Points

In our senior seminar, I remember the presentation on the effective vocational agriculture teacher of the future. The points made were that the teacher of the future will use computers and technology more and more, there will be a need to teach agriculture from a world viewpoint, and students will need to be taught where to find information and how to solve problems using this information. I agree with the points but need some help. Are we supposed to become the teacher of the future on our own or will you teacher educators alter your traditional teacher education program to prepare us for the future?

At the university, we learned some computer literacy, such as how to use computers for word processing and spreadsheets and how to write a simple program in BASIC, but we were not really taught how to implement computers in a vocational agriculture program. It might help if you would use the computer as an instructional tool in the teacher education program. There was no emphasis in our teacher training program on global agriculture. And there really wasn't much taught on information sources in agriculture in the future.

In Summary

Well, I know your time is valuable, so I'll close this letter. I hope you will be able to help me. I am very confused. I keep remembering the old adage, "Actions speak louder than words." Am I supposed to model my teachings on the way you teacher educators teach or the way you said to teach?

I don't have all the advanced degrees you folks at the university have, but it appears to me that both vocational agriculture teachers and teacher educators should use a variety of teaching methods and instructional materials, involve students in learning, teach up-to-date material us-

ing a problem solving approach, be organized and enthusiastic, motivate students to learn, teach from a global perspective, emphasize where to find current information, and use current and future technology in teaching. I think if we do this, we will have excellence in teaching.

Sincerely yours,
A Confused Student

* * *

After reading this letter, you may be asking, "Is this a real letter?" The answer is yes and no. After obtaining a B.S. in agricultural education from one university, taking graduate work from a second university, and receiving an M.S. in agricultural education four years later from yet another university, I wanted to write a letter like this to some (not all) of the professors I had in class. I had never taken the time to sit down and write the letter until now. Even though I am now a teacher educator, I still have similar concerns about excellence in teaching and in teacher education as I did as an undergraduate and later as a graduate student in agricultural education.

THEME

Graduate Students' Viewpoint on Recognizing Excellence in Teaching

As professional members of the agricultural education community, the desire to pursue graduate education will often occur. This is in part inspired because as vocational agriculture teachers, we realize rather quickly that a "short ladder" of opportunities for career advancement exists within the profession of teaching vocational agriculture. As a result, alternatives are sought through graduate studies in seeking advancement opportunities.

For some, advancement on the salary schedule, teacher certification standards, or new opportunities within the profession will serve as the motivating force in pursuing graduate studies or returning to graduate school. For others, the need to stay current and grow as a professional educator in agriculture will bring one to the colleges and universities of this nation to study at the graduate level. Whatever may be the motivational force specific to the needs and desires of the individual agricultural educator, teacher education departments and teacher educators must realize and respect the expectations that graduate students perceive. To offer advanced courses in agricultural education without careful consideration of what the students expect should be considered heresy to the profession.

For this reason, teacher education departments and teacher educators play a vital role in recruitment, selection, and retention of graduate students which in turn may culminate with a graduate degree.

By GARY S. STRAQUADINE AND JAMIE CANO

(Mr. Straquadine and Mr. Cano, formerly vocational agriculture instructors, are Graduate Teaching Associates in the Department of Agricultural Education at The Ohio State University, Columbus, Ohio 43210-1099.)

Teacher Education Departments

Courses Based on Need

Graduate education must first be based upon the needs of the teacher in order to fulfill the requisite roles demanded by the profession. If the vocational agriculture teacher is having difficulty incorporating the microcomputer into the curriculum, why then is the teacher education department not offering courses relevant to the specific needs of the teacher? Granted that the majority of the courses currently offered are important in the preparation of professionals in agricultural education, but aside from meeting the needs of those with special interests or those interested in advancement on the salary schedule, perhaps teacher education departments have not accurately assessed the current needs of the teacher. When was the last time your teacher education department conducted a needs assessment to ascertain the needs of the vocational agriculture teacher?

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Graduate Students' Viewpoint on Recognizing Excellence in Teaching

(Continued from page 11)

Of course anyone who believes that he or she has the ability to read the minds of the vocational agriculture teachers certainly belongs with the carnival show that visited your county fair last year. The authors do understand that the task of meeting all the needs is next to impossible, however, sometimes teacher education departments completely miss the boat in terms of course offerings.

Courses Based on Observations

Many teacher education departments have come to realize this no-win situation and have called in an assortment of parties to share in this endeavor. First, teacher education departments must work directly with teachers in the field. This task must go on beyond the visits made by the supervising teacher educator usually conducted during the student teaching experience of a pre-service teacher. Rush (1986) suggested that teacher educators actually go into the local high schools and teach courses to high school students. Isn't this a great way for the teacher education departments to become familiar with the needs of the teachers?

Theoretically, the student teaching sites are selected based upon some predetermined standards. These standards generally call for some outstanding qualities in all components of the total vocational agriculture program. To assume that all teachers have the same needs as this select group is unrealistic. Therefore, teacher education departments need to assess the total population of vocational agriculture teachers. What are the needs of the outstanding teachers, the poor teachers, the new teachers, or the seasoned veterans?

For those teacher education programs that do not enjoy the luxury of visiting all teachers on a regular basis, state supervisory staff members need to share their perceptions of teacher needs with the teacher education departments. A major purpose of state level supervision in agricultural education is the improvement of instruction (Barrick, 1980). To assure long range improvement and continued growth, state supervision must work with teacher education departments in identifying the needs of all vocational agriculture teachers and then finding mechanisms to meet or fulfill those needs.

Courses Based on Advice

A final group of professional individuals who can serve to enhance graduate education in agricultural education would be the departmental advisory committee. It is indeed ironic how we tout the importance of advisory committees for the local vocational agriculture program, yet seldom consider such a group in higher education to provide advice in the direction of a graduate program. Think of all that can be learned from a well organized and representative advisory group. Here especially is an opportunity for the vocational agriculture teacher association to provide direct input into graduate course offerings.

Teacher Educators

Another concern vocational agriculture teachers have for graduate studies in agricultural education is the qualifications of the instructional staff. Nothing could be worse than having the most timely course taught by a teacher educator with little more to offer than what the course participants already know. The instructor must have a thorough knowledge of a course before he/she attempts to stand before a group of teachers and profess to teach. Nothing can take the edge off a sharp group of teachers than dull, shallow instruction.

Standards

The National Council for the Accreditation of Teacher Education (1982) presented a series of standards for faculty members in higher education. These standards call for all faculty members who conduct graduate studies at all degree levels to have experience which relates directly to their respective fields and engage in scholarly activities that support their field of specialization. Being that teacher educators are teachers of teachers, shouldn't the teacher educator be a master teacher?

Although these standards are incorporated on a voluntary basis by teacher education departments, perhaps it would be a reasonable goal for all teacher educators to become familiar with these standards.

Scholarship

Professional knowledge must come through scholarship. While a variety of tasks should be done in colleges and universities, none should outweigh scholarship. But, this is exactly what is happening. Scholarship has been relegated to secondary status or viewed as the responsibility of a handful of researchers. Of course the importance of teaching is one of the commonly held values in agricultural education. Yet, at the same time, there is little argument that scholarship is essential to good teaching. The commitment to ongoing study qualifies a teacher educator to teach. Teacher educators who do not share this commitment contribute to education's second-class status in the academy (Wisniewski, 1986).

Graduate Students

As a final note, students interested in graduate studies in agricultural education must realize their personal efficacy. Students have the power to produce desirous effects in their graduate studies by realizing that knowledge will come only through study, application, and reflection. Failure to control this inner power will only yield superficial results, both to the individual student and the profession. Regardless of the specific course content or the quality of instruction, learning can best be achieved when the student takes charge of the opportunities.

Summary

It is among the teacher education departments, teacher educators, and the prospective graduate students that communication must exist. A recognition of the needs of the vocational agriculture teacher based upon the requisite roles of the profession is necessary as the foundation of graduate study. Commitment to scholarship necessary for quality instruction must be a worthy goal of all teacher educators. It is through a teacher's commitment and

masterful fulfillment of course offerings that the profession of agricultural education will be best served.

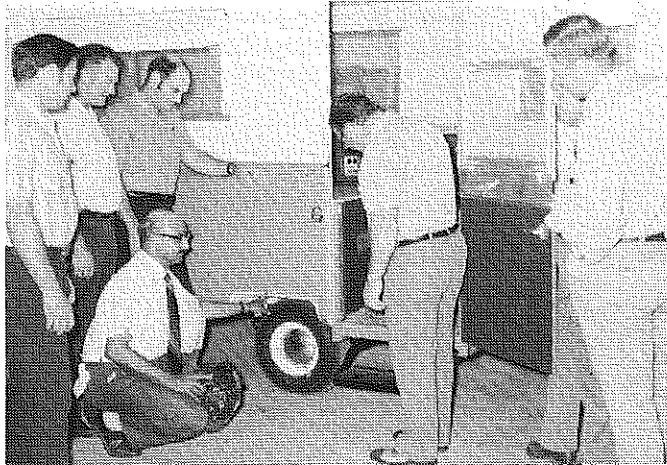
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An excellent teacher will be present at inservice activities. (Photo courtesy of Jay Eudy, Austin, TX).



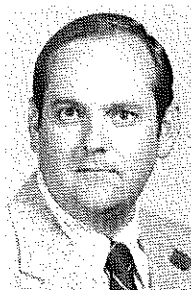
Well-prepared students will continue their activity whenever possible, even if visitors are present. (Photo courtesy of Jay Eudy, Austin, TX).

THEME

A Forest or a Bunch of Trees? — Recognizing Effective Teaching

What constitutes good teaching? Many opinions are available on the subject. It seems like anyone who ever went to school has an opinion. But in many cases they don't see the trees for the forest. Every teacher today can identify teacher(s) in his/her past who were excellent. Those teachers who stimulated and encouraged students to excel in learning hold honorable places in the memories of their educational progeny. Those memories of honorable teachers are described in statements such as, "I am successful today because of Mr. X, my _____ teacher in high school", or "If it had not been for Mrs. Y who taught _____, I would have never finished school." Such statements are made continuously by people who recognize the impact teachers had on their lives.

However, if they were asked to describe what those teachers *did* to encourage them to excel in learning, they may be at a loss to answer. What constitutes effective



BY DAVID COX

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teaching? What are the behaviors performed by a teacher which elicit student learning? Is there a cause-effect relationship between teaching and learning? How does one

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A Forest or a Bunch of Trees? — Recognizing Effective Teaching

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learn to recognize the differences between effective teachers and those who are less effective? Is teaching an art, which one possesses innately, or is it simply performing a prescribed set of behaviors in which one can be trained? The answer, of course, is not simply either.

Three Phases of Teaching

For a teacher to progress toward excellence in teaching, he or she must be able to build upon the science of teaching (the principles and behaviors) and ultimately develop the art of teaching. In accomplishing this progression toward excellence in teaching, a teacher needs to contemplate three phases of the instructional process: (1) instructional design, (2) instructional delivery, and (3) instructional evaluation.

After the teacher begins to assess his/her job in terms of these three phases, the next step, the development of competencies in those phases, becomes necessary — namely instructional design competencies, instructional delivery competencies, and instructional evaluation competencies.

Excellence in teaching encompasses those phases. Instructional design goes beyond the important foundation of curriculum planning to include setting objectives which become the focus of instruction; objectives which must be "content accurate" as well as "difficulty accurate." In other words, teachers must set objectives that are occupationally correct as well as at the correct level of difficulty for the intended students in the class.

The second phase, and the point of focus here, is the pedagogy or instructional delivery skills. In order for teachers as well as administrators to recognize excellence in teaching, they must analyze and learn to recognize the components of the process.

Instructional Delivery

Instructional delivery skills are of increasing importance. If a teacher holds to the argument that teaching is only an art rather than a science, then it cannot be quantified and replicated. There is no question that as teachers improve over the years, certain elements of artistry intuitively evolve. But, to "chalk it up" solely to art ignores the body of knowledge which recognizes that excellent teaching includes behaviors (competencies) which can be taught, practiced, and repeated.

Teachers of vocational agriculture have a rich ancestry in effective teaching. Beyond the ancestry, we have a fertile field in which to practice and improve the pedagogical aspects of our profession. The nature of a curriculum in vocational agriculture lends itself to the utilization of exciting instructional techniques. Certainly the use of real situations, materials, and opportunities to involve students is unequalled in public education.

Structuring Delivery

At least one educational leader, Benjamin Bloom, is credited with identifying four elements of quality instruction (Borg, 1980). Those elements are: The use of cues; reinforcement techniques; feedback/correctives; and active participation of learners.

Cues are used by teachers to structure the educational outcomes so students know what they will be able to do. Practical use of cues include communicating measurable objectives to the pupils early in the class period, asking questions, focusing student attention, reviewing important points, and summarizing and concluding the lesson.

Reinforcement techniques are behaviors which effective teachers of vocational agriculture use to increase learner achievement. Many techniques are available to reinforce student attempts to master competencies in vocational agriculture. Examples are praise, eye contact, smiling, head nodding, encouragement, recognizing individual feelings, moving about the classroom, individual attention in the laboratory, the array of incentive awards in the FFA, and SOE visits, to name but a few.

Feedback furnishes the student with information regarding objective attainment. Correctives, as the name implies, redirect the pupil toward the objective. Teacher response to questions asked by students is the most common form of feedback/corrective employed. However, many other techniques are available such as quizzes and exams, skill project evaluations, laboratory supervision, individual demonstrations, extra credit work, etc. Vocational agriculture teachers must be cognizant of the value of using feedback/correctives and continually employ their use. To maximize the effectiveness, feedback/correctives should be distributed throughout the complete lesson.

Active participation is an element in which vocational agriculture teachers should excel. Active participation or practice has long been advocated in our profession. Binkley and Tulloch (1981) state, "Not until agriculture teachers come to believe in the necessity for practice by the learners can they make their teaching vital." Practice is necessary for learning to occur. Teachers should use practice as a learning technique as much as using it to allow students to practice what has been learned. Active participation is relatively easy to achieve in a laboratory setting. It requires more creativeness to achieve active participation in a classroom setting. However, if students are engaged in tasks such as reading, thinking, problem solving, decision making, reciting, note taking, debating, completing applications, etc. they are actively participating.

Relating Delivery to Design

For a teacher of vocational agriculture to deliver instruction employing Bloom's four elements of quality instruction, lesson plans need to be developed which incorporate those techniques. By planning instructional delivery competencies within the instructional design, a teacher can effectively practice quality instruction every class period.

No matter whether the lesson is managerial, operational, or informational, at least three parts of any lesson are common. Namely, the introduction, body, and summary of the lesson. Figure 1 displays the relationship of instructional design to instructional delivery utilizing the elements of quality.

Figure 1: Relating Instructional Design to Delivery

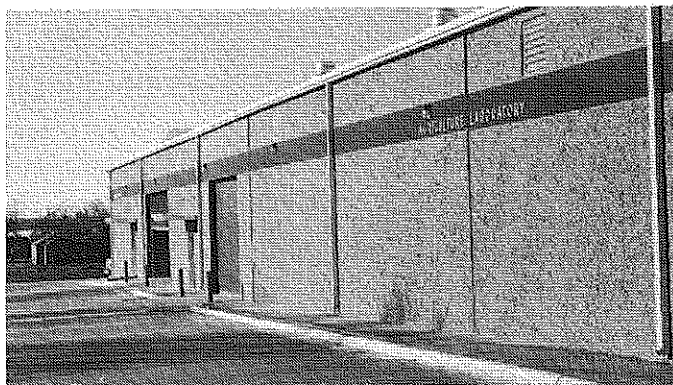
Part of Lesson	Element of Quality
INTRODUCTION OF LESSON	
Communicate Objectives	Cues
Utilize Motivation	Active Participation
Relate to Prior Lessons	Reinforcement
Involve Students	Active Participation
BODY OF LESSON/PROCEDURE	
Questions/Problems for Study	Cues
Answer Questions or Solve Problems	Reinforcement
Demonstrate Procedures	Cues
Students Practice	Feedback/Correctives
Discuss Application	Active Participation
SUMMARY OF LESSON	
Provide Immediate Feedback	Feedback/Correctives
Give Frequent Feedback	Feedback/Correctives
Review Key Points	Cues
Draw Conclusions	Reinforcement

Summary

It is entirely possible for teachers of vocational agriculture to recognize and practice effective teaching by becoming cognizant of instructional delivery competencies and incorporating them into the instructional design process. The forest of teaching soon becomes a group of individual trees (techniques).

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Even in difficult economic times community support for facilities is available. (Photo courtesy of Jay Eudy of Austin, TX).



Well-prepared students can explain to visitors what is being studied in the program. This is excellent experience for the student. (Photo courtesy of Jay Eudy of Austin, TX).

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September — The Time to Improve Your Laboratory Teaching

September brings a new school year and an opportunity to improve the effectiveness of your instructional program. Effectiveness is an elusive term used to describe the positive changes in behavior (learning) which your students are able to demonstrate. If learning is to become permanent, then students must have the opportunity to acquire and practice the new skills. Many basic courses allocate one-third of the total instructional time to individual and group laboratory activities, while advanced secondary and postsecondary courses may allocate two-thirds of the time to activities in the laboratory. As the teacher, you are responsible for planning, organizing, and managing this important aspect of the total program. The quality of your laboratory teaching will bear directly on the effectiveness of the program.

Quality Teaching Is Important

Learning is an active process on the part of the student. Carroll (1963) concluded that learning was directly related to the amount of time the student spent on the task. Henderson (1983) found over one-half of the variance of time-on-task in horticulture was explained by gender of the student, type of supervision, and the laboratory management practices used by the teacher. Shulman (1986) identified five variables which explain the amount learned by the student. Three of the five variables are characteristics of students which you may have limited success in changing. These include the ability, aptitude, and perseverance of the student. The other two are teacher-associated variables: providing an opportunity for the student to learn and the quality of teaching. Now that school has begun, perhaps you should concentrate on the two teacher-associated variables.

Opportunities to Learn

The laboratory must be a safe, organized place for optimum learning. Student safety is critical and a primary responsibility of the teacher. The laboratory should be clean and organized with appropriate tools and equipment. Adequate supplies should be on-hand and readily available for student use. Sufficient space should be available to encourage uninterrupted concentration on the learning task. Current standards recommend a minimum of 25 square feet of greenhouse bench space per student, 150 square feet of floor space in the agricultural mechanics laboratory, and 250 square feet for advanced students involved with larger projects.

Students should have opportunities to learn skills which are clearly identified in agricultural industry. Excellent sources include advisory committee recommendations, recent case studies, and competency surveys. Terminal objectives should be reasonable in scope, properly se-



BY GLEN SHINN

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quenced, and integrated into the laboratory activities. Each laboratory period should be directed by a student activity sheet or laboratory plan. The importance of the skill and its relationship to success on the job should be communicated to the student. Hoover (1976) found that joint teacher-student planning of activities was a useful technique. Such planning tended to help the student develop self-confidence in planning one's own work, both in the present and in after-school years.

A plan for evaluation should be completed prior to the laboratory activity. This plan should include both process and product evaluation. An evaluation score card is an effective means of communicating the key points and the value of each. If attached as a part of the activity sheet, students have the opportunity to evaluate their work as an on-going part of the learning process. This technique provides corrected feedback and identifies sources of error.

Quality Laboratory Teaching

The effectiveness of laboratory teaching is dependent upon several prerequisites. In addition to planning and organizing, the teacher's behavior is a critical factor. Rosenshine and Furst (1971) identified five teacher variables which are strongly associated with student learning. Effective teachers are clear and easy to understand. They use a variety of techniques and activities in the laboratory. Effective teachers are enthusiastic and involved with both the student and the subject matter. Effective teachers are task-oriented, encouraging the student to work hard and to do independent and creative work. Effective teachers provide students with the opportunity to learn high priority materials and evaluate their learning based on the pre-specified objectives.

Effective teachers minimize the amount of time students are off-task. Henderson (1983) found the time-off-task ranged from 8% to 44% among five horticultural programs. Halasz and Raftery (1985) reported secondary students spent 5% of their available class time on break and 24% in off-task activities. Postsecondary students spent 8% of their time on breaks and 9% in off-task ac-

tivities. Effective teachers minimize scheduled whole-class breaks and reduce outside interruptions. For example, the telephone and intercom are convenient tools, but without control, may reduce time-on-task.

Although the research findings are not conclusive, there is evidence that effective teachers communicate the educational objectives of the activity and establish high, yet reasonable expectations for individual students. Brophy and Good's model (1970) suggested that teachers formed differential expectations for individual students and treated students differently based on those expectations. Students responded differently because of the treatment. Consequently, teachers continue the reinforcement schedule, thus supporting the "self-fulfilling prophecy."

Five Minute Managers

Each laboratory can be divided into four sub-periods requiring different teaching techniques. The first should involve group instruction including attendance records, announcements, a review of key points, objectives for the period, standards of behavior, general information related to the subject, and specific individual assignments. This is best accomplished in a classroom setting or a designated part of the laboratory and likely will not require more than five minutes.

The second sub-period involves the teacher and small groups of students in method or result demonstrations. These "five minute" demonstrations provide a review of large group instruction with individual trial and corrected feedback. This can be accomplished while other students are working on individual or small group activities.

The third sub-period should be allocated to individual practice on the assigned task. This variable block of time should be provided to allow the student to perform the task at an acceptable level.

The fourth sub-period will likely require five minutes and should be used for clean-up, review, and organization for the following period. Effective teachers include a "privileged view" of the next assignment with applications for outside-of-laboratory activities.

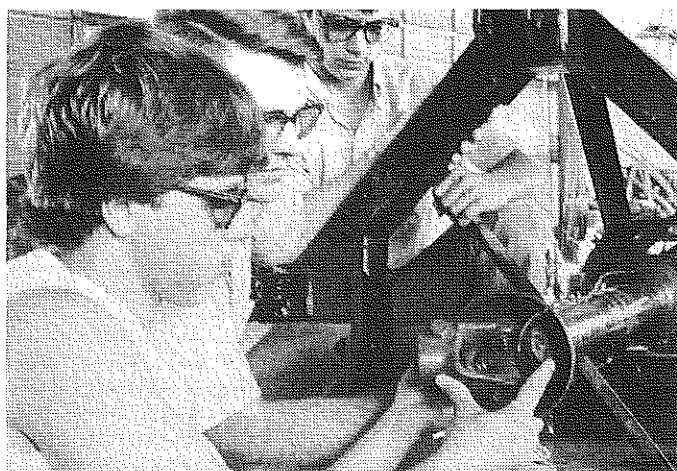
Summary

It is safe to conclude that as a teacher, you are the key player and a "five minute manager." The quality of your laboratory teaching and the extent to which you provide learning opportunities for students explain most of your students' accomplishments. The old adage "practice makes perfect" is only half right. Practice using a known criterion with corrected feedback and reinforcement will improve student learning.

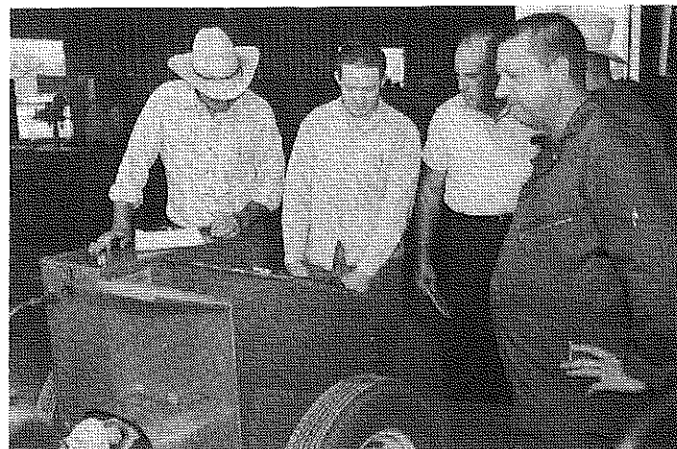
The laboratory period requires the same level of planning and organization as a classroom period . . . perhaps more if you individualize the learning activities. Good, Biddle, and Brophy (1975:192) concluded that, "Teachers need managerial skills if they are to create a situation that allows them time for sustained personalized contacts with individual students." Ben Franklin's grandfather concluded, ". . . if it's still September, it ain't too late!"

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Laboratory teaching should focus on important tasks identified in the industry. A recent study found that the servicing of pto-joints and drive lines was the most frequent repair job in John Deere dealerships in Mississippi. (Photo courtesy of Glen Shinn).



New concepts and innovative ideas from inservice workshops will point the teacher toward excellence. (Photo courtesy of Jay Eudy of Austin, TX).

Excellence in Teaching Vocational Agriculture: Some Clues

Excellence seems to be the buzzword of the 1980s in education. What does excellence in vocational agriculture mean? Is it a fancy, well-equipped facility? Does it relate to elaborate instructional materials or the fact that you may have computers in your program? Perhaps it relates to being well paid as a teacher, or maybe, it's how your students do on various tests. As one studies research related to excellence in schools, it becomes fairly clear that ultimately excellence depends on what happens in the classroom. Whether or not excellence occurs in the classroom depends upon the teacher. This observation is supported by research conducted by Goodlad (*A Place Called School*), Sizer (*Horace's Compromise*), Boyer (*High School*), and others.

In a recent, popular book entitled *In Search of Excellence* by Peters and Waterman, some interesting attributes were found in the most successful corporations in America. These attributes appear to be somewhat unique to the more successful as opposed to the less successful corporations. As one reviews those attributes, it appears that the application of what was found in the successful corporations might indeed be applied to those of us in education and more specifically to those of us in vocational agricultural education. Following are eight of the most prominent attributes identified by Peters and Waterman in the very successful businesses. With each of those attributes, a statement is provided to describe that attribute and then a question will be asked of you related to your teaching. These questions may provide some feeling for how to measure your success as a teacher.

1. A Bias for Action. This attribute implies a need to be doing something and doing it in a productive fashion. It would suggest that we keep what works well for students and modify less successful approaches. It would also suggest that even from the title of your lesson plan to the actual activities performed in the classroom would somehow reflect this bias. Do you use the problem solving approach to teaching?

2. Close to the Customer. This means that the people in business were close to the people they served. In the case of teachers of vocational agriculture, it would imply that teachers know what is going on with their students, have personal insight about those students, and know who they are. It would suggest the personalization of instruction to meet the needs of individual students. Do you make home visits? Do you know what's going on with the supervised occupational experience programs of your students?

3. Autonomy and Entrepreneurship. This suggests that people in business have the opportunity to develop their own ways of finding success. In educational programs,



BY JAMES A. KNIGHT

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students should be encouraged to show initiative in planning and carrying out learning and leadership activities. Do you work with students in long-range planning for their occupational objectives? Do you work with students in developing a strong and comprehensive program of activities for the FFA, and are students encouraged to be the leaders in the organization?

4. Productivity Through People. The successful corporations found that by caring about and making the people with whom they work feel important that the people became more productive. This would imply that programs give responsibility to students for all kinds of activities that go on in the classroom ranging from learning activities to discipline procedures. Do students feel that the information that they are learning is related to their personal needs, that they have something to say about what goes on in their life, and are they given responsibility? Do they feel the weight of that responsibility and are they allowed to succeed as well as to fail both in the classroom and in related activities such as the FFA?

5. Hands-On Value Driven. Nearly every successful corporation was identified by a value or something in which they believed. This would suggest in classrooms that teachers identify and enforce a few basic classroom management principles. The teachers should be clear about their expectations of students. They should work with students in determining what really is important to learn. Do the students know why they are learning the information being taught? Do you give the students the opportunity to learn by doing?

6. Stick to the Knitting. Those businesses that were successful tended to be successful in a world where they kept doing what it was that they did well. In other words, they kept on target doing those things in which they were most proficient. This suggests that teachers emphasize the very major and important things they are teaching. Is it made clear to the students so they understand why the informa-

tion they are learning and the skills they are developing have utility in their lives? Do they see the relevance of that information?

7. **Simple Form/Lean Staff.** Those businesses that were most successful tended to pay less attention to management and more attention to the way they worked with their people. The focus was upon the individual. In education, this might suggest that because a lot is expected of vocational agriculture teachers they should arrange for volunteers to help with paperwork and with some of the activities that occur in the program such as judging contests. Do you have a functional advisory committee and are you utilizing the resources of the community to help carry out the demands of your program? Is the FFA Alumni being involved? Are the Adult and Young Farmers participating or contributing to the development of the program?

8. **Loose-Tight Properties.** In business, this indicated that people in the program had autonomy, yet they operated within certain boundaries. This would suggest to those in vocational agriculture programs the need to give students freedom to operate within guidelines set by the teacher and the school. It would further suggest that those kinds of parameters be made clear to students. Are your expectations of students made clear? Do they understand what those expectations are and is there still freedom to move within those boundaries so students can grow and develop in a normal way?

Conclusion

The eight principles or attributes identified for successful corporations would appear to offer insight for successful vocational agriculture programs. Obviously, the number one condition for good programs is that the teachers must do a good job of teaching. If the content driving the curriculum is student-centered and based on real problems, good teaching is more likely to occur. A diverse program



An excellent teacher will find a way to keep the administrator informed about the activities of the program.

that incorporates not only classroom work but the real world through supervised occupational experience and the FFA enhances the personal growth and development of students. In the final evaluation, that growth and development of students will be the ultimate measure of teaching excellence.

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ARTICLE

Student Views on Excellent Courses

In the course of his or her profession and personal life, a teacher is called upon to perform many roles. Some of these have a direct influence on the act of teaching, others only indirect. There are four roles which can place such demands on a teacher, especially if something new is being attempted and performance in the roles determines whether or not a teacher can be said to be a "successful" teacher (Macdonald, Gilmour, and Moodie, 1985). These roles are:

1. the teacher as a subject specialist
2. the teacher in the classroom as instructor and manager
3. the teacher as a member of a profession
4. the teacher as an employee.



BY ALLYSON MACDONALD

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How do we assess whether teachers are adequate in these roles?

(Continued on page 20)

Student Views on Excellent Courses

(Continued from page 19)

The teacher as a *subject specialist* is traditionally recognized as such by academic qualifications. Opportunities to extend one's subject matter knowledge present themselves through inservice courses, summer school, reading, interaction with colleagues, and experience.

Professional excellence is generally measured by the nature and frequency of activities within professional organizations and the extent of leadership and responsibility therein.

Teachers, as *employees* in a school system, are usually rewarded in small ways for being loyal and responsible, sometimes in bigger ways by promotion. Such rewards may come about because of achievement as a subject specialist or in one's professional activities, but other school-related criteria also exist, including relationships with other teachers, with parents, and of course, with students.

Appraising *excellence in the classroom* can be more complicated. One measure of whether teachers do well instructing their students is how successful students are in examinations. Classroom observations by independent observers could be undertaken or performance in educational laboratory tasks could be used. Berliner (1986).

Another criterion is to consider student views. When lessons begin, the teacher enters another world. Success in the roles of employee and professional does not matter as much now. Performance in the role of subject specialist will interact with instructional and managerial skills. Berliner has suggested:

"We have decided from observations and reflection that two large domains of knowledge must be readily accessed to be an expert pedagogue. We have stipulated those domains of knowledge to be subject matter knowledge and knowledge of organization and management of classrooms."

The management and presentation of the learning experiences is all-important as the teacher, the learner, and the materials start to interact. These ideas lay behind a small study which the author recently carried out in her role as teaching adviser to a small agricultural college in Iceland.

Our Agricultural College

The college is situated in the north of Iceland and is the smaller of two institutions in the country offering training in agriculture. Students entering the colleges must be at least 17 years old, should have completed at least nine years of basic schooling, and have one year's work experience in a field related to their chosen course of study. In practice, the students at our college have an average age of between 20 and 22, depending on the course of study, and about half have completed more than the nine years of compulsory schooling.

The college offers two-year (four semester) diplomas in animal agriculture or fish farming. Both diplomas include the same core curriculum of courses like biology, chemistry, mathematics, bookkeeping, farm equipment, and building science. The rest of the program involves one semester of full-time supervised work experience and ad-

vanced courses in the area of specialization. Practical work is encouraged and emphasized. A few optional courses are offered to both groups - the choice includes horse training, mink and fox farming, forestry, and English.

About 25 students graduate from the college each year, with drop-outs being one or two per year. Almost all students begin work in their chosen field immediately (a few study further elsewhere) and over 70% are still working in their field three years after graduation. Thus, by most standards, the college can be deemed a "success." It does the job it is designed to do, i.e., training young people for agricultural work in Iceland.

Almost all the teachers have at least a bachelor's degree and in many cases, a master's degree. Typical areas of specialization are grassland management, genetics, aquaculture, and fishery science. There is no doubt that they are adequate in their roles as subject specialists and loyal employees. Professional educational activities are limited to two meetings a year with colleagues from the other college and the horticultural college. But none of the teachers have trained as teachers. How well do they succeed when interacting with students? What do students think about the courses they receive? We tried to answer some of these questions.

Determining What Students Think

Recently a study skills course was introduced into the core curriculum during the first semester. This course had two dimensions - one was to improve the reading, note-taking and planning skills of students (learning skills) and the other was to improve the ability to summarize and present information to others, especially teachers, both orally and written (communication skills). One of the exercises we did with the class was to find out what teachers were regarded as being good and which ones poor. We did this by doing an item analysis on paragraphs the students wrote about the best and worst teachers they had ever had. We summarized their views as follows:

"A good teacher is one who controls the class well, explains well, and takes the time to do so, has a good sense of humor, is understanding, and through the use of the blackboard, gives good notes.

A bad teacher is one who is often in a bad mood, covers material quickly and poorly, shows favoritism, has a poor sense of humor, and is boring."

We also turned the tables on the students by asking the teachers for similar paragraphs on good and bad students. Their views indicated that good students were responsible for their own learning by being curious, hard-working, and attentive. Teachers did not find it easy to define bad students.

We then decided to pursue the matter of student views a bit further by asking all students to identify courses they particularly liked and courses that they least liked. For each course so identified (they could choose only two or three in each category), they were asked to choose from a list provided between two and five reasons why these courses were well-liked or least liked. Students were invited to add reasons of their own to the list. About a third did.

This questionnaire was administered to the lower classes at the end of the first semester and to the upper classes at the end of the third and fourth semesters. (The second semester is when students are away at work). By asking students to identify and comment on particular courses rather than in general, we hoped to find out those features which distinguished the exceptional course from the mediocre.

What Students Said

The analysis of the results was simple. The number of times each reason was selected was determined for each course named. In addition, the total number of times a reason was selected was found. These totals were then placed in rank order and the results are shown in Table 1.

Table 1

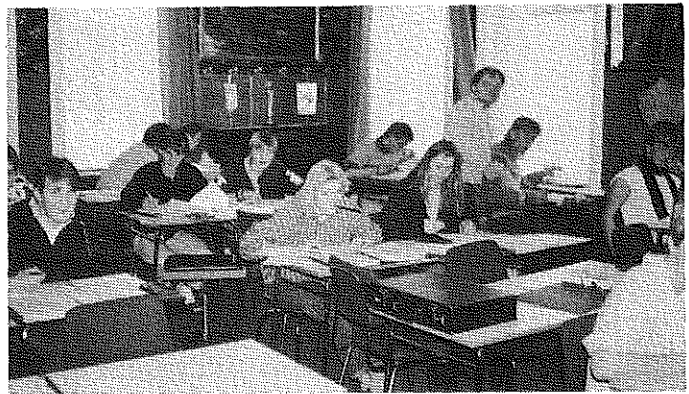
Rank order of reasons why a sample of Icelandic agriculture students liked or least liked courses. Each student selected two or three courses in each category and between two and six reasons per course.*

Reasons for liking a course	Number of times chosen (Maximum possible = 190)
the course was interesting.	142
something useful was being learned.	139
the teacher was well-prepared	119
the teacher explained well.	111
the teacher issued good notes.	88
a reasonable amount of homework was assigned.	42
the course was well-organized.	40
the teacher was punctual.	33
the teacher controlled the class well.	29
the course was easy.	10

Reasons for not liking a course	Number of times chosen (Maximum possible = 188)
the course was boring.	120
nothing useful was being learned.	98
the teacher had muddled explanations.	85
the course was poorly-organized.	75
too few notes were provided.	65
the teacher was poorly prepared.	49
the teacher was not punctual.	37
too little homework was assigned.	20
the teacher had poor control of the class.	19
the course was too difficult.	19
too many notes were provided.	12
too much homework assigned.	6
the course was too easy.	6

*(Eighteen students considered nine first semester courses, twenty-six students assessed 12 or 13 third semester courses and 25 students assessed 9 or 10 fourth semester courses.)

For this group of Icelandic agriculture students, two features of a course were most important - whether or not it was interesting and whether or not it was relevant.



Animal agriculture students at work with their grassland management teacher. (Photo courtesy of the author).

Many students also valued good instructional techniques, such as teachers being well-prepared for lessons, providing clear explanations, having the whole course well-organized, providing good notes, and assigning reasonable amounts of homework.

In addition, management techniques were valued by some students - whether or not the teacher was punctual and could control the class well.

Some Implications for Teaching

This college is particularly lucky in its intake of students. They are generally mature, well-motivated, and realize that they, as well as the college, invest time and money in their training. In most cases, the students rather than their parents pay their fees. Thus, it is understandable that students demand courses which are relevant. Time is valuable and must not be wasted on what appears to be irrelevant topics.

This attitude is particularly strong among the fish farming students who are a year or two older than their animal agriculture contemporaries. Their courses are more applied than the agriculture courses and incorporate a lot of practical work in addition to the work experience. More than the animal agriculture group, they were quick to criticize courses which seemed irrelevant or even unnecessary for their course of study.

There was one important exception though. One optional course in the older class received no ratings on relevance or interest, but was still picked as a well-liked course by half the older class. Most of the members of this class were from the fish farming group. All the reasons for liking the course were that it was a well-taught course - it was well-organized, the teacher explained well, and was well-prepared.

By contrast, three other courses which the staff feel are relevant and essential for the future work of their students was not recognized as being relevant or interesting. Teachers were criticized for being poorly prepared and badly organized.

Students may not always be in a position to recognize the relevance of courses. In those cases, sound instructional techniques will become valuable assets for teachers if the success with the students is to be ensured.

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Student Views on Excellent Courses

(Continued from page 21)

A good teacher will strive to make the course interesting with a careful selection of materials and learning experiences. A good teacher will try to establish the relevance of courses through the extensive use of examples from the field. In addition, a good teacher will be responsible in his or her attitudes to the class and the course with careful preparations not only with regard to organizing the whole course and individual lessons, but also parts of lessons. Difficult or tricky new concepts and skills must be anticipated and clear explanations prepared with care.

Recent research has indicated that it is possible to characterize "good explainers" (Roehler & Duffy, 1986). They will clearly introduce the concept or skill to be learned using appropriate examples and possibly counter-examples. More importantly, they will pass control of the use of the skill or concept to the student in a series of steps until the students are able to use it and apply it to new situations.

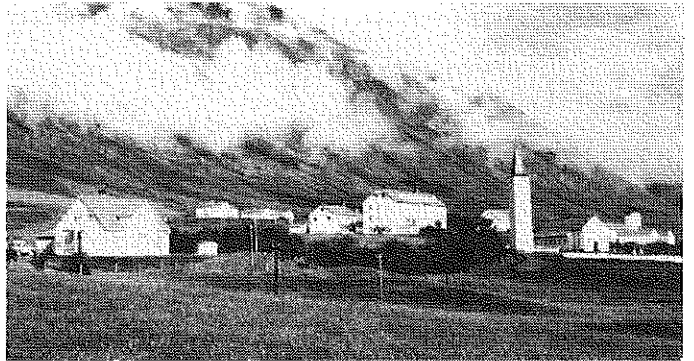
Summary

We have seen that teachers must perform well in a number of roles in order to be considered successful. Performance is measured not only by such criteria as academic qualifications, professional activities, and status within the school, but also and perhaps most importantly, by students. In situations where students may not be able to perceive the relevance or usefulness of a course, not

only will the successful teacher strive to make the course interesting but will use sound instructional and management techniques. Particularly important will be good explanations and careful planning, not only of individual lessons, but of parts of lessons and of sets of lessons.

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Holar Agricultural College is in the center. The church on the right is the oldest church built of stone in Iceland (about 200 years ago). The first translation of the Bible into Icelandic was printed in Holar and one copy is housed in the church. (Photo courtesy of the author).

ARTICLE

Improving Student Performance in Agricultural Mechanics

It's the end of a busy day and you are really tired. The sophomores completed their E6011 butt welds. The freshmen ripped some 2"x6" stock on the radial arm saw for a feeder they are building for the land/livestock laboratory. The juniors adjusted the carburetors on their chain saws under operating conditions. The seniors completed testing the hydraulics on the John Deere 4640 tractor. It takes a lot of planning to have good agricultural mechanics instruction and today was good and safe!

What's the Problem

It's great to have a few minutes of peace and quiet at the end of the day. It's not only great - it's probably an absolute necessity after the abuse your ears and those of your students have taken today! You probably noticed while those 10 students adjusted the carburetors on their chain saws, your ears were uncomfortable at first. After a while, the discomfort went away. You also probably noticed that when class was over, you had a ringing sensation much

BY GLEN M. MILLER

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like a chain saw was still running. When the next class came in and started running the JD 4640 tractor, the ringing sensation went away. What you may not have realized was that your hearing had been jeopardized several times, and the performance of your students had been dramatically affected by laboratory noise.

The radial arm saw the freshmen used today often creates noise levels in excess of 105 decibels [dB(A)]. Industry standards warn that exposures to this much noise for more than one hour could be harmful to you and your students (see Table 1). The chain saws the juniors were operating have been measured as high as 110 decibels

[dB(A)]. The recommended maximum exposure per day to 110 dB(A) is only 30 minutes or less. You noticed the chain saw noise stopped bothering you after a brief period of time. You experienced a shift in sound frequency. The ear was so overloaded it stopped sending the message to the brain that it was hearing a loud noise. Actually, only the sensation of loud noise stopped, not the detrimental effects of the noise.

Your Students are Affected

Your students experienced effects from the noise just as you did. Not only were they at risk from potential damaging noise, but they also experienced reduced efficiency in their ability to think and perform motor skills. Research has shown that noise can cause students to lose a portion of their ability to think and solve problems as well as lose a portion of their motor skills. Such losses have been measured at lower noise levels than your students experienced today. Cognitive and psychomotor performance losses may occur at levels as low as 90 decibels. Ninety decibels is about the level of the arc welding noise when using E6011 electrode.

What Can Be Done?

Isn't it time you did something to protect yourself and your students from exposure to noise? Your budget probably can't afford to put acoustical treatment around your laboratory, but it may be able to provide students with some type of hearing protection devices. Recent research has shown that even the least expensive hearing protection device is capable of gaining back 13 percent of the student's performance lost on cognitive (thinking) activities and about 4 percent of the lost motor skills. The use of a disposable foam type hearing protection device [31 dB(A) reduction] was shown to be effective in gaining back a portion of lost performance when students were exposed to 100 dB(A) of chain saw noise.

Probably the best recommendation to prevent those losses is to issue your students hearing protection devices and insist that they wear them as a matter of routine. Just like the routine of wearing safety glasses, hearing protection devices take some getting used to. If you find wearing hearing protection devices all the time impractical, perhaps you should go to a local electronics store and purchase a sound level meter and monitor your laboratory noise. Sound level meters start at about \$30. You will need to have students use hearing protection devices before taking part in activities expected to produce noise in excess of 90 dB(A).



Many economical and effective hearing protection devices are available for use in agricultural mechanics laboratories. (Photo courtesy of the author).

No doubt your students and you should be wearing hearing protection devices for many of the activities conducted in agricultural mechanics laboratories today. If you are in doubt about the effects of noise, the next time you are with a group of agriculturalists, bring up the subject of hearing loss. You will be surprised at how many agriculturalists have experienced a hearing loss they blame on exposure to noise. For a small investment per student, you can prevent hearing loss and increase student performance.

Table 1
Permissible Exposure Under the Occupational Safety and Health Act.

Sound Level, dB(A)	Permissible Daily Exposure, hours
90	8
92	6
95	4
97	3
100	2
102	1.5
105	1
110	.5
115	.25 or less

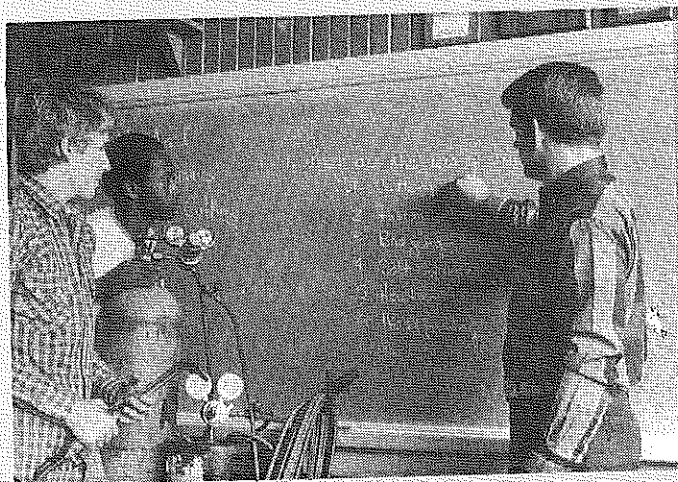
Occupational Safety and Health Act, United States, 1970

EXCELLENCE

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The Teacher as a 5 Minute Manager



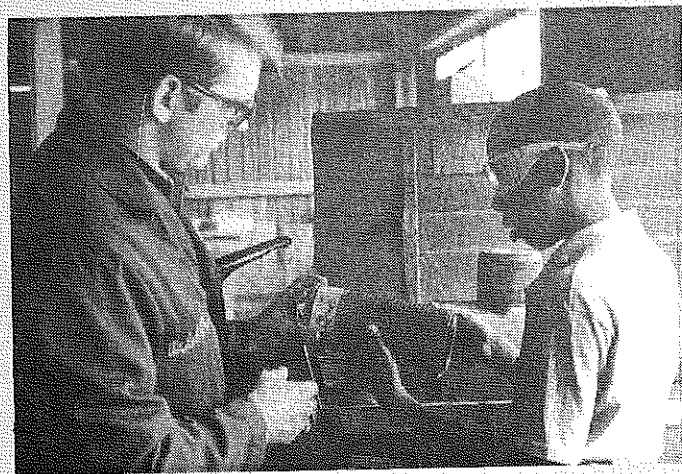
First sub-period — "routine information with specific assignments." Laboratory time is teaching time. The laboratory involves small group demonstrations, individual trial with feedback and enough practice to develop minimum competence on the task. Teachers should plan activities with the student to help develop self-confidence and goal setting.



Second sub-period — "five minute demonstrations." These demonstrations provide review, clarification, and student trial with corrected feedback. The teacher should choose a position to allow direct supervision of students who are assigned to practice during this sub-period.



Third sub-period — "student practice." During this time, the teacher should provide supervision without interrupting the learning process. The laboratory must be a safe place in which to learn. Students need adequate space to practice the task without interruptions. Equipment must meet industry safety specifications.



Final sub-period — a "privileged view." This period allows students to clean-up as well as provides advanced organizers to help plan for the next laboratory assignment. Students learn more when they understand the importance of the task, what they are assigned to do and how it relates to the whole.

*(Photos provided by Glen C. Shinn
of Mississippi State University.)*