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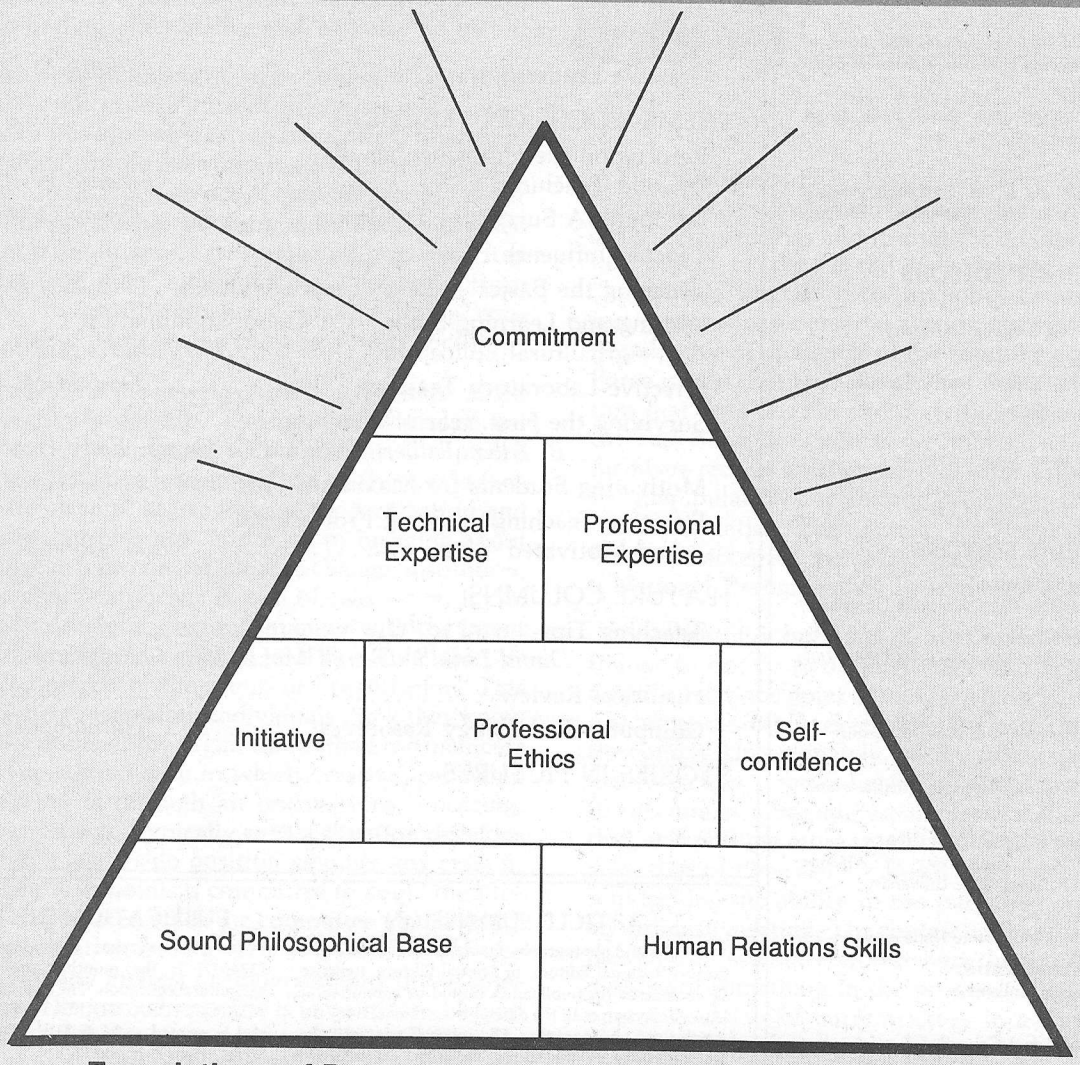

Foundations of Becoming an Effective Agriculture Teacher*

THEME: Focus On Teaching

THE
AGRICULTURAL EDUCATION
MAGAZINE

Today's Science, Tomorrow's Agriculture

September, 1991 Volume 64 Number 3

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Creative Leadership!

By Phillip R. Zurbrick, Editor

(Dr. Zurbrick is Professor, Department of Agricultural Education, The University of Arizona.)

In the last several years a good deal has been written about creative accounting/financing schemes used to finance various projects and make red ink appear as some shade of black. Creative accounting/financing has been used to "help" individuals qualify for home loans they otherwise could not afford and will never be able to pay off in two lifetimes! Twenty years ago such creative accounting/financing schemes were considered fraudulent and promoted by shady characters commonly known as "loan sharks" who preyed on those who had no other choice and/or knew no better.

Home mortgages requiring a large "balloon" payment guaranteed to result in forfeiture of the individual's home is an example of this kind of creative accounting/financing. No sane individual would ever turn his/her financial future over to a loan shark. Such an act of stupidity would never be condoned by a rational thinking individual; yet when society gets in a "tight spot," it is amazing how easy it is to forget. The "con man" simply changes the name from "loan sharking" to "creative financing" and the "game" continues, with a new name, same rules and more victims.

It now appears that the newest of the "shell games" might be labeled "creative leadership." Further, agricultural education appears to be the victim of such a scheme. In a period of rapid change, "creative leadership" can easily be mistaken for a legitimate attempt at progressive modernization and sold on the concept of a new approach to bringing about desirable change in a provincial, slow to change, institution. Creative leadership can occur in one of two ways. It can be created in a conscious, devious, manner with the intent to achieve a preordained personal goal or result which is not in the best interest of the group or organization. This often occurs when overzealous individuals think they know more about the needs of the organization than the members themselves. The second way in which creative leadership situations develop is through an unconscious, uncaring, bureaucratic approach. Typically such a situation develops when no one in a leadership position assumes any responsibility and simply appoints a committee to solve the problem. This is exacerbated when the committee members are selected via nomination from a variety of individuals who may have little if any interest or understanding of the committee's charge. The normal response is to nominate a "good old boy" or friend to serve on such a committee. Revolutionary change in the best interest of the organization is not likely to result from either form of creative leadership!

Let's suppose, for the purpose of illustrating how this "shell game" works, that it was decided the National FFA Organization should have a National Parliamentary Law Contest. There is no state association in the entire country that holds such a contest, but there are "several staff members" of the National FFA Organization who believe the contest, for public relations purpose, should be a Parliamentary Law Contest and not a Parliamentary Procedure Contest.

The National FFA Board of Directors appoints a Parliamentary Law Task Force to develop the objectives, skills, competencies and format for a National Contest. A key aspect of the "creative leadership" approach is to "hamstring" the task force by policy or innuendo so as to assure someone's personal agenda regardless of the educational value or challenge of the resulting contest. The Task Force is told that they should not make any recommendation that does not have to do with implementation. When the Task Force does vote to recommend a name change, the members receive an after-the-fact letter smacking of attempted manipulation and intimidation over the name change recommendation. Fortunately, the National FFA Board of Directors accepted the name change and voted to establish a National Parliamentary Procedure Contest.

Another FFA boondoggle was narrowly avoided! No thanks to one or two individuals who believed that from a public relations point of view the term Parliamentary Law was more desirable, even when it clearly failed to describe the contest. Unfortunately, we are still in danger of creating a contest that is years behind its time, one that has failed to generate member interest and lacks audience appeal. Further, it is nothing more than a demonstration with artificial rules that can be easily "canned" and won by teams of actors lacking the ability to use parliamentary procedure in an ordinary meeting. The contest is so archaic that the rules prevent contestants from watching the contests for fear they may learn something in the process! The format prevents open discussion of current issues in a forum that would generate lively discussion and a great deal of audience interest. Teachers and students who have used both formats unanimously agree the alternative format is by far superior for a contest situation.

The question might logically be asked why the National FFA Organization continues to make these mistakes. Why are they constantly getting the "cart ahead of the horse"? Perhaps the answer is they do not know how to "harness a horse to a cart" (never done the job) and/or are more concerned with "fluff" than substance! In the case of a national parliamentary procedure contest, an excellent activity for

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Refocus on the Fundamentals of Good Teaching

By Edward W. Osborne, Theme Editor

(Dr. Osborne is Associate Professor and Chair, Department of Agricultural Education, University of Illinois at Urbana-Champaign.)

With the new school year just underway, now is the perfect time to take a good look at your teaching. What method(s) and techniques do you use? What are your strengths as a teacher, in terms of the processes you use? In what areas do you need to improve your teaching? If someone asked you what separates excellent teachers from average or mediocre teachers, could you answer without hesitation? The last 20 years have provided tremendous gains in research-based knowledge on what constitutes effective teaching. All teachers, including secondary, community college, and university teachers, need to be aware of these findings and be able to match their efforts against these standards. In order for self-improvement to occur, we must be motivated to improve our teaching, we must be able to recognize good teaching, and we must be able to recognize our own shortcomings and bright spots as we work with our students.

As we continually examine our teaching and pinpoint areas for improvement, several variables in the teaching/learning process have been shown to have significant bearing on how well our students perform. A brief summary of these variables is listed below for your study and use in analyzing your own teaching.

1. ***Relevance*** - Students are eager to acquire knowledge and skills that they believe can be used now or in the near future. Two options exist for ensuring relevance in our teaching: basing what we teach upon current student activities in agriculture, and doing our best to provide supplemental activities for students that connect to what we teach. With today's diverse student population in agriculture, we need to enact both options. This means providing application experiences at school, using both indoor and outdoor laboratories.

2. ***Student Readiness and Motivation*** - Contrary to views held by some teachers, student motivation levels can be altered by teachers; what you do does impact student motivation. Motivation cannot be assumed; teachers must use interest approaches and other means to raise motivation levels of students. Motivation increases as students become interested in the subject area and hold more positive perceptions of themselves and their teachers. This finding highlights the importance of teachers consciously working to build students' self-concept. Readiness is a function of ability, previous experience, maturity, and motivation.

3. ***Structure*** — This variable incorporates several important dimensions of effective teaching. Foremost among these is organization of the lesson and preparedness of the teacher. Transitions from one part of the lesson or activity to another must be clear. Teachers should be task-oriented and convey the feeling that "we have important things to do, so let's get to it." Of course, teachers can be task-oriented and still make teaching and learning enjoyable. Clarity in teaching requires giving many examples, asking clear questions, giving directions, providing models of performance, etc.

4. ***Active Learning*** - The student role/activity in learning should be constantly monitored. Passive learning involves sitting at a desk or standing in a lab and listening to a lecture or watching a demonstration with little or no interaction. On the other hand, active learning involves students in reading, questioning, answering, performing, experimenting, and similar activities. The more active students are as learners, the higher their motivation and performance levels. A variety of teaching techniques and materials should be used in a given class period to maximize learning.

5. ***Teacher Enthusiasm*** - How would your students and your peers describe your level of enthusiasm when teaching - low, medium, or high? Enthusiasm is a combination of the following teacher traits: voice fluctuation and volume, facial expression, eye movements and contacts, gestures, use of highly descriptive words, acceptance of students' ideas, and overall energy level.

As reported in Cruickshank (1990), Walberg synthesized nearly 3,000 research studies to identify teaching practices that have the most influence on student learning. Several variables were found to enhance learning as much as one to two grade-level equivalents — a powerful impact! These included reinforcement, providing advanced work for advanced students, teaching students how to read and scan resources, giving cues and feedback, mastery learning, cooperative learning, and use of questions that require students to apply, analyze, synthesize, and evaluate. Graded homework and high class morale were also found to have a high, positive effect on student performance. Finally, teacher visits to the homes of students to meet parents,

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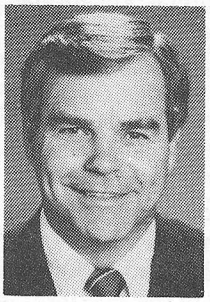
TEACHING TIPS

Motivating With An Electronic Game



By David Linvill, Derrell McLendon, and Maynard J. Iverson

(Mr. Linvill is Student, Agricultural Education, Dr. McLendon is Associate Professor, Department of Agricultural Engineering, and Dr. Iverson is Associate Professor and Head, Agricultural Education, University of Georgia.)

Motivation of students has always been a major problem in education. Today's students seem to have difficulty enjoying the simpler things in life. In earlier times, children played outside and used their imagination to invent all sorts of games. Now, if it doesn't ring, flash, or move, it probably won't be used. Parents complain that it takes a "crow bar and a lot of leverage" to move their children away from the Nintendo game.

Last fall, the University of Georgia Collegiate FFA was asked to develop a game that would be enjoyed by college students at the Southeastern Collegiate FFA Conclave. Conclave is a three-day educational and social meeting of collegiate FFA organizations from universities in the Southern region. A primary restriction was that the game should not cost a lot of money to produce. The Chapter further decided that the game must be designed so that it was educational, adaptable to fit the needs of any classroom, and fun to play.

With assistance from faculty and staff in Agricultural Education and in Agricultural Engineering at the University of Georgia, an electronic game apparatus was developed. The electronic game can be made for approximately $100 in materials with the help of someone familiar with electronics. This may seem expensive at first, but when one considers the fun students will have over the life of the apparatus, it is very inexpensive. By making a game out of a unit or lesson, the learning process is accelerated.

The electronic hardware for the system consists of two major components: 1) the control box, which contains all the

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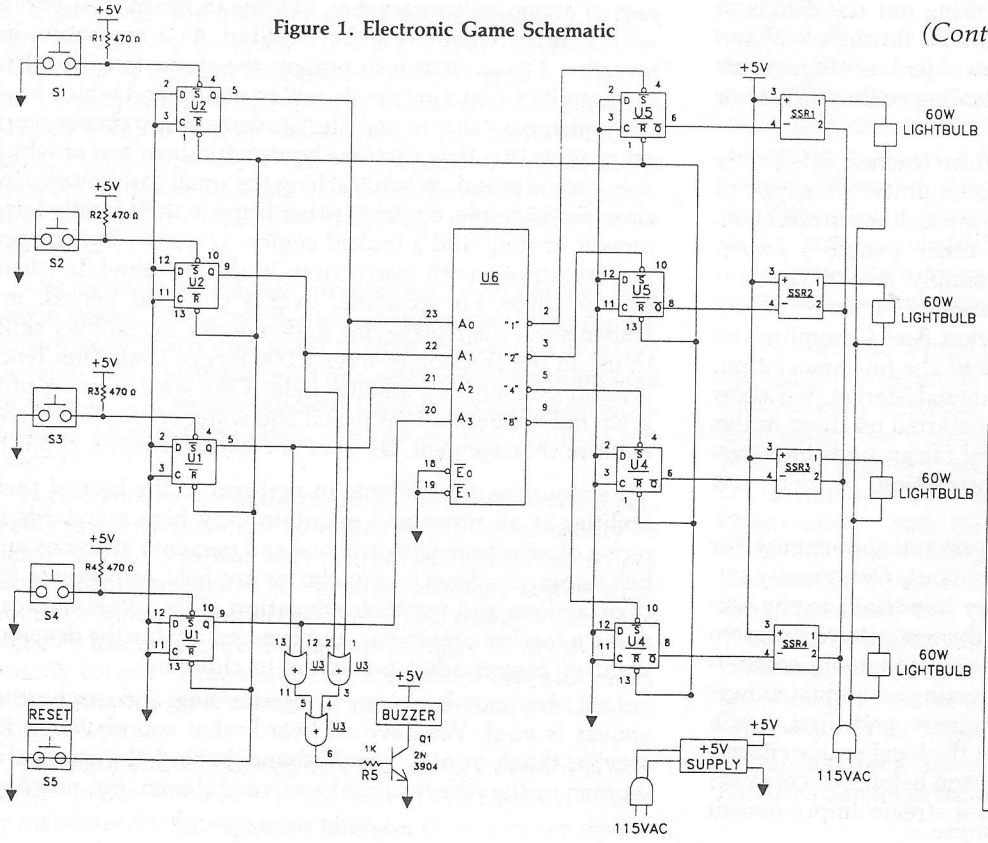
Figure 1. Electronic Game Schematic

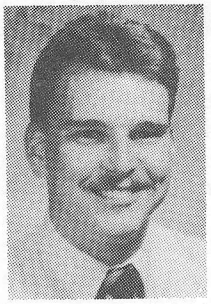


COMPONENTS	
SSR1–SSR4	Potter+Brumfield #EOM1DA74
S1–S5	SPST–N.O. Pushbutton
Buzzer	5Volt
Q1	2N3904
R1–R4	470
R5	1K
U1	7474
U2	7474
U3	7432
U4	7474
U5	7474
U6	74154

* I.C. Power connections

	pin number	
	+5V	ground
U1–U5	14	7
U6	24	12

Become A Successful Teacher



By Carey D. Kalupson

(Mr. Kalupson is 1990 Region VI NVATA Outstanding Young Member, Solanco High School, Quarryville, PA.)

I consider myself very fortunate to have been selected as Pennsylvania Vocational Agriculture Teachers Association and Region VI National Vocational Agriculture Teachers Association Outstanding Young Member. It is an achievement that I will relish for a long time to come. However, I don't think that I achieved this award completely on my own. I am very fortunate to be teaching in a district and under circumstances which, I feel, have contributed greatly to my success as a teacher.

Our agriculture department has been in existence for 53 years. Currently, three teachers staff the department. In the past, our program has leaned heavily towards the production agriculture end of the agricultural education curriculum spectrum. However, in September 1990 an updated curriculum focusing on some of the changing needs of our students was implemented. This change was the result of over two years of research and development which established the needs and desires of the agricultural community in our area. We took that information and wrote curriculum for the areas of instruction that were deemed most important by our community. Keeping informed and being responsive to the needs of the community is vital to the success of the individual teacher and the program as a whole.

Being a member in my local, state, and national professional organizations has been highly beneficial also. At each of the three levels, ideas and information are generated and passed on by people who have a lifetime of experience to those like myself who are still working out the details of their careers as an agricultural educator through trial and error. Some friendly advice from an elder has often gotten me through a difficult situation dealing with students or tackling a tough subject.

To be a successful young agriculture teacher, it is highly important to get involved in the community. This type of activity has always been somewhat difficult for me as I tend to be less outgoing than many other people I know. However, the successful teacher simply has to take the plunge and get involved. For example, I serve as co-chairman of the FFA and 4-H Market Beef Committee on our local fair board. As a member of the fair association, I help to organize and conduct the annual Market Beef show and have been doing so since I first started teaching in this area. I have also helped with several fairgrounds improvement projects including the construction of two new buildings.

Additionally, the FFA is an important opportunity for teacher success, as well as for the students. Community service activities in particular are very important to the success of the FFA, the teacher, and the agriculture program as a whole. Our FFA members are active in many community service activities, such as conducting an annual pumpkin growing contest for kindergarten and first grade students; operating a petting zoo at the local senior citizens home, nursery school, and the fair; and helping to construct an experimental cattle crossing as a stream improvement project.

FFA members help the local conservation district sell tree seedlings each year and have initiated and conducted a private well water testing service for residents of our community for the past three years. No teacher encourages his or her students to do these kinds of things so that the teacher can gain recognition, but a fact is a fact. When a youth club is involved in the community, community members realize that there is an adult advisor behind them. They know that someone is helping to organize these things and are very willing to recognize the effort required to accomplish such tasks. If a strong relationship between the FFA, the advisor, and the entire program exists, when it comes time to support the advisor or the program the community that has been well served by the FFA will respond.

Instructional technique certainly plays a role in the success of an agriculture teacher. "Doing to Learn" is a phrase with which we should all be familiar. As a mechanics instructor, I have striven to present the students with learning activities that are "hands-on" in nature and which have demonstrable value in real life. Students in my classes work on projects that they can take home with them and of which they can be proud. When teaching the small gasoline engines class, for example, students either bring in their family lawn mower or they find a junked engine to repair. Tying community service with instructioin is also worthwhile whenever possible. For example, over a two-year period, my students put their surveying and concrete technology skills to use in the erection of over 1,000 feet of chain link fence around our school's athletic field. Our water testing program has its foundations in soil and water conservation and manure management, as does the cattle crossing project.

I encourage my students to perform to the best of their abilities at all times and maintain very high standards in terms of academic performance and personal attitudes and behaviors. Students in my classes are held responsible for their actions and for their education. This sometimes can make a teacher unpopular, but is necessary for the development of proper adult behaviors in children.

Last, but not least, an understanding and supportive spouse is vital, We have all heard what sounds like a lip service thank-you to the husband behind the successful woman or the wife behind the successful man, but nowhere

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THEME

Teacher Influence

By Odon Russell

(Mr. Russell is 1990 Region V NVATA Outstanding Agriculture Teacher, Paxton High School, Paxton, FL.)

In my opinion, the agriculture or agribusiness teacher has the opportunity to influence more lives than any other teacher in a school. As our society continues to change, we find more and more responsibilities placed on our educational system. We can look at this, as we do many other aspects of our system, as a problem or as a challenge.

As an agriculture teacher of twenty-five (25) years, I have always tried to look at changes as a challenge. Many times this additional responsibility provides us the opportunity to guide our students toward not only academic excellence, but also emotional stability. In our modern, fast-paced society, we are finding many times that the traditional family's basic guidance and encouragement to their child is weaker. Teachers, in general, find themselves teaching such basic things as respect to others, self-discipline, striving to succeed and yes, even the difference between right and wrong.

As the only agriculture teacher in a very small rural school, Pre-K to Grade 12, in the Panhandle of Florida, I have the opportunity to mold a child from the 8th grade through graduation from high school. Most academic teachers teach a given child a course or maybe two and then the child moves on.

As a teacher of the Animal Production Program, as outlined here in Florida, I have tremendous opportunities to build self-confidence and self-worth through all aspects of the agriculture and FFA Program. If I can get students to believe in themselves, the majority of the battle is won. I believe any agriculture program allows for such development, whether it be through the classroom, the laboratory, the FFA or a combination of all of these. Personally, I find that as students improve their self-esteem, their performance in other classes also improves. We have more opportunities to work with our students than does the academic teacher, thus allowing the student to know beyond a doubt that we really do care.

The agriculture teacher, like myself, who teaches in a single teacher department also has the unique opportunity to not only teach and mold a child, but watch him/her develop into a well-educated and well-adjusted young man or woman. We see our students learn to set goals and work hard to achieve these goals. We can see the "fruits of our labor."

In reference to seeing the result of our efforts as a teacher, I was not only fortunate to return to my home county to teach, but in 1985 was able to transfer to the high school from which I graduated and even replaced my former agriculture teacher upon his retirement. This was and continues to be an asset, because the parents of many of my students are my former schoolmates. As a result of this and many other factors, I get tremendous community support for my program.

The agriculture program at Paxton High School is also unique in that we have our land lab right on campus. It surely makes teaching much more effective when you can discuss a facet of livestock management and then walk out and apply it to the livestock.

I try to uphold the FFA motto of "Learning to Do" and then "Doing to Learn." Sometimes I feel that we get too caught up in meeting each performance standard using worksheets, tests and other written documents that the student sees only pieces of the picture instead of the whole picture. Sure, providing "hands on" experiences in indoor lab, on the land lab, in the FFA and even in the classroom, requires a great amount of planning, finance and just plain hard work, but that is our job. Keeping the agriculture program and the FFA productive and up-to-date requires the teacher to learn new technology or get "left by the side of the road." Computers, for example, are here to stay and we must learn their operation and application, especially as it relates to the field of agriculture and agribusiness.

In small rural schools and counties where the technical training is limited, I find the agriculture program meets the needs of students who do not enter the field of agriculture upon graduation. Having a strong livestock and agricultural mechanics program, a student at Paxton has the best of both worlds. Many of the mechanical skills learned, such as welding, electricity and carpentry, are essential to survive in the farming and ranching business. However, I try to provide up-to-date equipment that allows a student to take those skills and become gainfully employed.

For example, several years ago Paxton School was the first agriculture program in Florida to purchase a MIG welder. I just recently purchase a TIG welder with FFA funds to further match the training with the workplace. Another innovative, high-tech piece of equipment recently purchased is a satellite system. A new agriculture complex is now under construction, and the satellite system will be installed in this new building. We can watch the National FFA Convention the week it airs. Several local ranchers are also using it, as well as a video mailout to market their cattle. The cost of such marketing techniques saves the rancher thousands of dollars any single year. We can receive daily commodity prices for all agricultural goods, as well as complete weather coverage.

Our livestock program consists of ten (10) head of purebred Santa Gertrudic brood cows with a Limousin bull.

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Teaching the Basics — Long Term Dividends

By Earl D. Reeves

(Mr. Reeves is 1990 Region VI NVATA Outstanding Agriculture Teacher, Buffalo Gap High School, Swoope, VA.)

The changing image of agricultural education over the years has offered many challenges for those who are responsible for conducting effective, community-oriented programs. Agriculture instructors not only have the responsibility, but they also have to adapt local programs to the school and community in which they teach. We do not have an ideal model that we can rely upon for developing a local program. Most situations are different.

When the Smith-Hughes Act of 1917 put vocational agriculture in the public secondary schools, it had a major purpose: to educate the rural agricultural sector of our population in order to improve the standard of living of those citizens and in return, improve the overall economy. It was the responsibility of the local agriculture teacher to develop a program to meet the needs of these citizens. Even though technology and methods have changed, the basic concept of adapting a program to help the local community is still the same.

In developing a successful program, we need to set long range goals that are realistic and that will provide a positive image in the community. Short term accomplishments, such as having a winning judging team, or a state FFA Degree winner, are all good program building blocks, but the long term dividends will be determined by what we teach and how we prepare our graduates for successful careers.

During the past thirty years, I have had the opportunity to teach agriculture in a rural high school in the Shenandoah Valley of Virginia. Our average yearly enrollment in the program has been about eighty-five students. We have a diversified type of agriculture with about forty percent of our students living on farms. We have a lot of families who are sincere and supportive of the school and the agriculture program. Our FFA Chapter, Young Farmers, and Alumni have all worked hard to develop our present program.

Goals and highlights of our program could be classified in the following areas:

A Strong Instructional Program

The agriculture program has the flexibility of adapting basic learning concepts to a wide range of activities. Agricultural mechanics laboratories, greenhouses, land laboratories, and on-the-job training make our program unique and interesting. Teaching students basic skills that they can use later in life can be considered as long term accomplishments. I have always tried to teach practical concepts with hands-on experiences when possible. Some of my most rewarding experiences have come from former students who said that they learned more in the agriculture class than in any other class in school. Graduates tend to tell the true story of the program.

Stay Current and Up-To-Date

It is important that the teaching materials and equipment include the latest technology available. Many programs have come up short because they failed to change. Students like new and innovative equipment, such as computers, videos, mechanical equipment, and experimental projects, to name a few.

Good Organization and Housekeeping

Students, administration, faculty, Young Farmers, and visitors often associate the quality of the program by the cleanliness and organization of the department. When people walk into your department, the first impression means a lot. Often agriculture departments have the reputation of being disorganized. If you set organization as a goal, it is quite easy to achieve and is a plus factor for any department.

A Strong, Competitive FFA Program

The challenges offered to students through the FFA organization have played a key role in our total program. Students have the opportunity to excel and develop leadership skills. We have been able to attract many of the top students in the school even though they may not have an agricultural background. Our students that have been competitive in both state and national contests.

We have maintained a strong Young Farmer program and have a good Alumni Association. We use these people to serve as judges for our contests, to interview and select our chapter officer team, to assist in training our judging teams, and to provide facilities for instructional tours.

Another highlight of our chapter activities has been the "Food for America" program which came out in the early seventies. It was designed to bring agriculture concepts to the fourth grade classroom in the elementary schools. We divided our FFA officer team into small groups. Each group conducted two classes in each of our feeder schools. We set up an Agricultural Exhibit Day at the high school and invited all fourth grade students to attend. Our FFA members brought in a variety of small farm animals, educational displays, and farm machinery. This proved to be very ex-

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Writing and Learning Skills — A Good Combination In Agricultural Education

By Jim Flowers and Rita Reaves

(Dr. Flowers is Assistant Professor, Agricultural Education, North Carolina State University.)
(Ms. Reaves is Instructor, School of Industry and Technology, East Carolina University.)

Agriculture teachers have always emphasized developing thinking skills among students and using information through a problem solving approach to teaching and learning instead of memorization of agricultural subject matter. The challenge has been to develop learning activities that promote this basic philosophy. Wouldn't it be great if we consistently used learning activities that caused students to think about what they had been taught and to solve problems, instead of regurgitating information?

I recently observed a class taught by a student teacher in agricultural education. She was teaching a unit in poultry production. Near the end of the class something amazing happened. She asked the students to WRITE about what they felt was the most important concept they had studied that day and to explain why they thought that concept was important to the poultry industry. Much to my amazement, every student immediately began writing. After the class ended the student teacher shared the essays with me. It was obvious that, despite the grammatical errors and misspelled words, these students clearly understood the concepts taught and saw practical applications to the production of poultry.

Teachers of agriculture have heard many calls for increased emphasis on higher order thinking and better basic communications skills for secondary agriculture students. Indeed, seven years ago, Congress included in the Carl D. Perkins Act a mandate that vocational educators find ways to reinforce and enhance basic skills in their classrooms. While some attention has been given to improving scientific and mathematical skills in vocational education, less emphasis seems to have been placed on thinking and communication skills in agriculture. The Panel on Secondary School Education for the Changing Workplace (1984) echoed the same call, identifying written and spoken English as "the most basic skill" of all. Lotto (1983) concluded that vocational teachers do not provide their students with ample opportunities to practice basic skills.

It's important to recognize that teachers in the field agree with these calls for increased emphases on clear thinking and clear writing. They are most concerned about their students' abilities to process and transmit information. The frustration teachers experience comes in not knowing where to begin, how to begin, and how to find time to begin to reinforce basic skills.

What is Writing-to-Learn?

A wide body of literature exists defining, describing, and extolling the value of writing-to-learn. The strategy is straightforward: teachers use short writing activities at various points throughout a class period to help students clarify what they know or do not know about the particular subject, to help students understand what they have just done or been shown, and to help students realize how what they have learned can be applied in real life.

Teachers often report that their students do not like to write. When one considered the nature of most writing assignments (taking notes or copying information) and the feedback given to students (spelling and grammatical errors), we should not be surprised. Students' experiences have reinforced the idea that writing is a boring activity and one that they cannot do very well. A critical point in writing-to-learn activities is that the focus is entirely on **what** the students write, **not on how they spell or punctuate** what they write. It is essential, especially for some who have had limited success in "writing assignments," that vocational students understand that no one is going to grade the mechanics of their writing. What is important, they must understand, is what they think, and that they think.

Before our colleagues in the English department become up in arms over our total disregard for rules of grammar and our lack of concern for proper spelling, we should emphasize that agriculture teachers do value grammar, spelling, and sentence structure. Certainly, agriculture teachers should feel responsible to reinforce these basic skills also. However, the focus of writing-to-learn activities is on the thinking processes, and writing is a tangible means of insuring that the students are thinking reflectively about what they are learning. Perhaps other activities such as research papers or discussion items on tests could be used to emphasize these skills.

Teacher warmth and active student learning have been shown to have a strong positive relationship with student achievement and satisfaction. (Photo courtesy of Ed Osborne, University of Illinois).

Writing to learn is just that — writing used as a tool for learning subject matter content. Emig (1977) described writing-to-learn as developing a mode of thinking. When students write, they process information in a physical form; this is one reason writing works as a learning tool. Meaningful writing activities involve the hand, the eyes, and the brain in both simultaneous and recurring processes. It's as though students have three ways to absorb information. As they write, look at what they write, and think about what they write, they discover relationships, they interpret meaning for themselves, they apply what they have experienced, they sequence, they synthesize — they learn.

Types of Writing-to-Learn Activities

Writing-to-learn activities work well to begin a lesson, to reinforce what has been accomplished midway through a lesson, or to synthesize and extend knowledge gained from the lesson. The activities shift the focus of learning to the student; that is, it is the student's job to learn and these activities can help in that task. The activities call first for students to think, then to find words to express what they think — all without fear of evaluation.

At the beginning of a lesson, writing-to-learn activities are helpful in focusing students' attention and preparing them to receive new information. For example, when developing problems and concerns, ask students to spend three minutes writing their responses to an open ended question: "What do you know . . .?" or "What would you like to know about . . .?" Students respond to these questions because they draw on relevant knowledge, they remind them of what they already know or have been curious about, and they stimulate interest about what you plan to say. Most importantly, they give ALL students the opportunity to become active in the lesson from the very beginning.

A more structure writing-to-learn activity is also quite effective as a review. Ask students to list three words they thought were important from an assignment or from the previous day's work. For example, students who are studying a unit in agribusiness management might list words like "inventory, depreciation, and net worth." Then, have students select one of the words they listed and write for five minutes about what they remembered and what they think about the concept. Following the writing activity, students might spend five to ten minutes in groups of three talking about what they wrote, why they thought it was important, and coming up with questions to ask in class. Used separately or in combination, these activities take only a small part of the class period. Yet, they bring students into the learning process and help them be more receptive to additional guidance from their teachers.

Writing-to-learn activities are effective as intermediate summaries midway through the lesson. Instead of lecturing and going through notes on transparencies on plant propagation for twenty or thirty minutes, stop after ten minutes. Ask students to close their notebooks and write what they understand (or do not understand) about plant propagation. Students can do this on their own paper, or on a handout you design with perhaps some "hints" such as key words or illustrations provided to get them started. Remember, they are writing to learn, not to report what they "should have" learned.

Other mid-class writing activities keep students involved in the learning process. After performing a specific skill in agricultural mechanics, ask students to describe in their words the purpose and the results of the activity. After viewing a video or film on livestock management practices, students could write an explanation of how that practice could be used in their community. When students are given lists of information such as causes or effects of crop diseases, ask them to write a few sentences about the one item on the list that most surprised them. These writing activities form a record of students' thinking activities; you are providing guidance for students to focus, develop, and clarify their thoughts as they retain knowledge.

Learning logs are commonly used as end of class writing-to-learn activities. In these notebooks, students pull together in their own words what they have learned that day. Usually, students respond to questions such as (1) What was done? (2) What was learned? (3) What was interesting? (4) What questions remain? Students quickly become accustomed to keeping these notebooks, and often begin to jot down quick notes about what they want to say in the day's entry. So again, the writing activity helps them stay focused on the subject matter. As a side note, perhaps this activity will help agriculture students think of an appropriate response when their parents ask the age-old question, "What did you learn in school today?"

Teachers generally collect the learning logs once a month and give credit for the completeness of the entries without regard to the quality of writing. Often, teachers are surprised by the connections students make in their learning logs between what was covered on particular days with what had been learned previously in the course.

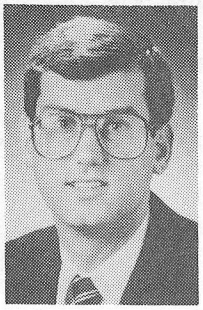
Does Writing to Learn Work?

Experimental studies support the theory that writing fosters learning at every educational level. Studies by Dyer (1988), Sharp (1987), and Willey (1988) found that students taught by writing-to-learn techniques had higher achievement and retained more course content than those who were taught the same content using traditional strategies. In agricultural education, Reaves (1991) found that ninth grade students retained more information from a unit on ground-

(Continued on page 16)

THEME

Effective Laboratory Teaching



By Donald M. Johnson

(Dr. Johnson is Assistant Professor, Department of Agricultural and Extension Education, Mississippi State University.)

Agricultural educators are committed to providing students with active, hands-on learning experiences. Many of these experiences take place in school laboratories. According to Shinn (1987), as much as two-thirds of the total instructional time in many agriculture courses may be devoted to laboratory instruction.

Phipps and Osborne (1988, p. 409) define laboratory instruction as "organized teaching that occurs in laboratory settings such as greenhouses, land laboratories and agricultural mechanics laboratories." High quality laboratory experiences provide students with an opportunity to apply and practice what they have learned. These experiences add meaning to classroom instruction, make learning more permanent and allow for the development of necessary psychomotor (manipulative) skills (Henderson, 1984; Newcomb, McCracken and Warmbrod, 1986; Oomens and Jurshak, 1978).

Purpose

The purpose of this article is to discuss instructional practices that increase student laboratory learning. These practices are applicable in all areas of laboratory instruction in agriculture.

Instructional Practices

The use of sound instructional practice is just as important in the laboratory as in the classroom. Effective laboratory teaching includes pre-laboratory instruction, demonstration, safety testing, supervising student practice and providing feedback to students on their performance.

Pre-Laboratory Instruction

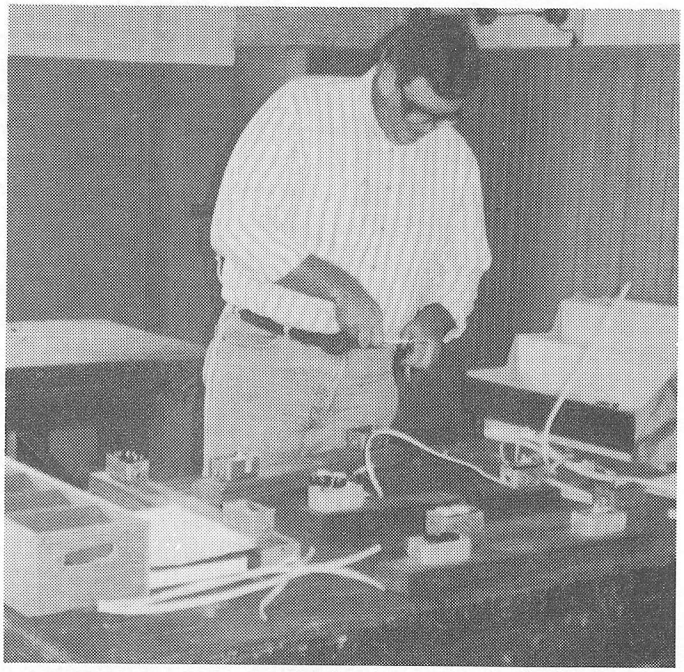
Effective teachers prepare their students for laboratory activities by delivering basic classroom instruction **before** taking the students to the laboratory. This pre-laboratory instruction emphasizes basic principles, related content and safety.

Systematic pre-laboratory instruction provides students with the knowledge necessary for safe, intelligent performance of laboratory activities. Pre-laboratory instruction emphasizes the "why" as well as the "how" (Bear and Hoerner, 1986). Such instruction makes laboratory experiences more complete and meaningful to students.

Demonstrations

Demonstrations are widely used in teaching psychomotor skills. New skills should be demonstrated prior to student laboratory practice. Such a demonstration provides students with a performance model which they attempt to imitate as they practice the new skill (Magill, 1989).

Since students attempt to imitate what they observed during the demonstration, it is vitally important that the skill is demonstrated correctly and safely. If the teacher is unable to perform the skill in an expert manner, a proficient student or resource person should be used to demonstrate the skill.



Teacher rehearsal of lab demonstrations ensures that demonstrations will proceed smoothly. (Photo courtesy of Dr. Don Johnson, Mississippi State University).

To deliver an effective demonstration, a teacher must accomplish two distinct but related objectives. First, the teacher must perform the demonstration in a manner that allows the actions necessary for successful skill performance to be observed by the students. Second, the teacher must focus the students' attention on those essential actions as they are demonstrated (Magill, 1989). Failure to accomplish either objective will reduce (or eliminate) the effectiveness of the demonstration.

Safety Testing

Safety is an essential component of effective laboratory instruction (Johnson and Schumacher, 1989). According to Storm (1979, p. 136), "Students who are just learning to use equipment which is potentially dangerous present special problems. The responsibility for the physical welfare of the students rests with the instructor."

One way for a teacher to fulfill this responsibility for student safety is to provide an effective safety instructional program. An important part of this program is safety testing (Bear and Hoerner, 1986).

There are two major types of safety tests: paper and pencil tests and performance tests (Erickson and Wentling, 1976). The paper and pencil test measures the student's knowledge of safety and proper machine operation. The performance test measures the student's ability to actually operate the machine in a safe and proper manner.

Both paper and pencil and performance tests should be used in safety testing. Students should be required to score 100% correct on first the paper and pencil test and then the performance test before being "authorized" to use a particular machine or piece of equipment. Completed safety tests should be kept on file. (Paper and pencil and performance safety tests are commercially available from a variety of vendors).

Supervising Student Practice

Practice is essential for the development of psychomotor skills (Oomens and Jurshak, 1978). However, incorrect practice leads to incorrect skill development, just as surely as correct practice leads to correct skill development (Binkley and Tullock, 1981). Therefore, the primary role of the instructor during laboratory practice is to supervise the students and ensure correct skill performance.

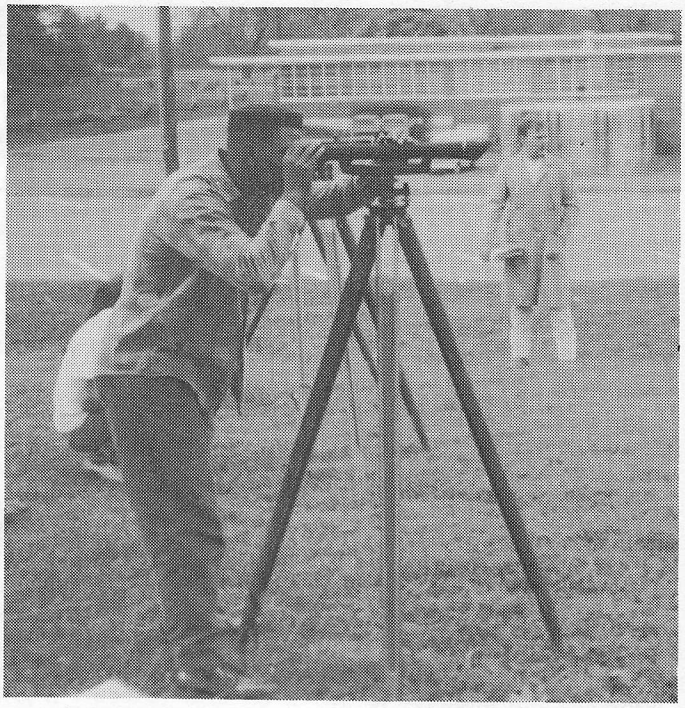
In the typical agriculture laboratory, approximately 20 students are simultaneously engaged in a variety of individual and/or small group activities. This situation makes supervising student practice and providing supplemental instruction extremely difficult. Effective laboratory teachers use the following practices to overcome these difficulties.

Maintain High Mobility. Effective teachers are highly mobile in the laboratory. Research (Ponder and Hinely, 1982) indicates that effective teachers individually interact with more than half of all class members within the first four minutes of each class period. Furthermore, the teachers continue this pace until at least 90% of the students are at work on designated activities.

Once all students have begun work, effective teachers continue to circulate and provide each student with supervision, feedback and supplemental instruction. Effective teachers typically interact with at least 85% of the students on an individual basis on three to five separate occasions each class period (Ponder and Hinely, 1982). Each student should receive individual teacher supervision at least once during each class period.

Provide Task Instruction Sheets. Effective laboratory instructors provide students with written task instruction sheets (or require students to develop their own). These instruction sheets provide structure to the laboratory experience and provide information necessary for performance of laboratory activities. The use of task sheets has been shown to increase laboratory learning (Scanlon and Newcomb, 1983).

Utilize Accountability Measures. Teachers should hold students accountable for both the quality and quantity of work completed in the laboratory. When teachers insist on high quality work and set firm but reasonable time schedules, student time-on-task and learning increase (Ponder and Hinely, 1989; United States Department of Education, 1986).



A variety of outdoor laboratory activities can be incorporated into teaching. (Photo courtesy of Dr. Don Johnson, Mississippi State University).

Providing Feedback

Students need feedback on the quality of their performance as they attempt to develop a new skill. According to Magill (1989), there are two distinct types of feedback: sensory feedback and knowledge of results. Sensory feedback comes from within the individual. Sensory feedback relies on information collected by the student through visual, auditory and tactile channels (Magill, 1989). Knowledge of results (KR) is feedback that comes from an external source, usually the teacher. A common method of providing KR in laboratory instruction is to verbally critique a student's performance and suggest specific steps for improvement.

Knowledge of results facilitates learning by being a source of error correction information, motivation, and reinforcement to the learner (Magill, 1989). Teachers must provide students with adequate and specific feedback if optimum learning is to occur.

Summary

Laboratory instruction is an important component of agricultural education. Structured laboratory activities give meaning to classroom instruction, make learning more permanent and allow for the development of necessary psychomotor skills.

The use of sound instructional practices enhances student learning in the laboratory. Effective laboratory teachers deliver quality pre-laboratory instruction, present well-planned demonstrations and require completion of meaningful safety tests prior to student laboratory activities. Effective teachers also provide close supervision of student practice and timely feedback to students as they learn in the laboratory.

(Continued on page 15)

Surviving the First Year of Teaching*

"I spend twice as much time preparing as I do actual teaching."

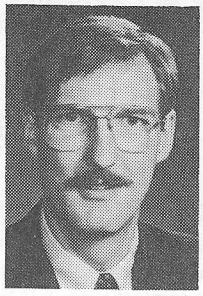
"The students were just wild today. We didn't get anything done in class."

"It's very difficult to watch twenty students without anyone to help you."

"I feel like I've just been thrown out to sink or swim and I'm really getting frustrated with the situation."

"It made me feel so good and I guess I realize that I had an impact on at least one student that was making a difference."

"I'm doing better. I'm getting more control. I'm learning more. I feel very positive about teaching!"



By B. Allen Talbert, William G. Camp, and Betty Heath-Camp

(Mr. Talbert is Regent's Fellow, Department of Agricultural Education, Texas A&M University.)

(Dr. Camp is Associate Professor, Agricultural Education, Dr. Heath-Camp is Associate Professor, Marketing Education, Virginia Tech, Blacksburg.)

All of these comments were made by first year agriculture teachers participating in a recent study conducted by a research team from the Virginia Tech site of the National Center for Research in Vocational Education (Talbert, 1990). You probably had some of the same thoughts during your first few weeks of being a teacher.

What is Induction?

The broad process by which novices become integrated into teaching is called induction. The induction process begins when the teacher signs the work contract and it ends sometime in the future when the teacher becomes established in the profession. The time of induction is a transitional period when the beginning teacher moves from being a student or worker to being a teacher (Camp & Heath, 1988).

Ryan (1986) described four stages in a teacher's career-fantasy, survival, task, and impact. The fantasy stage begins while the person is still a student and ends shortly after the person becomes a full-time teacher. During this stage, the prospective teacher visualizes what teaching will be like and how he or she will teach. An example of this is the person who has just signed a teaching contract and dreams of students who will be eager to learn and to participate. The new teacher carries these fantasies with him or her into the first few weeks of the new school year.

The next stage, called survival, occurs when reality interrups the fantasies. Time pressures, discipline problems, and curriculum decisions are some of the things that cause this change in thinking. The survival stage is just that, a fight for personal and professional existence. During this stage, most teachers report that they feel stress, anxiety, and inadequacy (Joyce & Clift, 1984). The survival stage could be the most important in determining the eventual success or failure of the new teacher.

Finally, the beginning teacher enters the mastery stage. It is during this stage that the new teacher starts to feel secure in his or her role of being a teacher. The new teacher begins to learn systematic classroom management and teaching techniques. Some teachers enter the mastery stage by the end of their first year, however each situation is unique.

Teachers in the induction period do not experience Ryan's fourth stage. In the impact stage, the teaching focus changes to influencing individual student learning. Teachers who reach the impact stage have mastered the mechanics of teaching, therefore they are no longer considered as beginners.

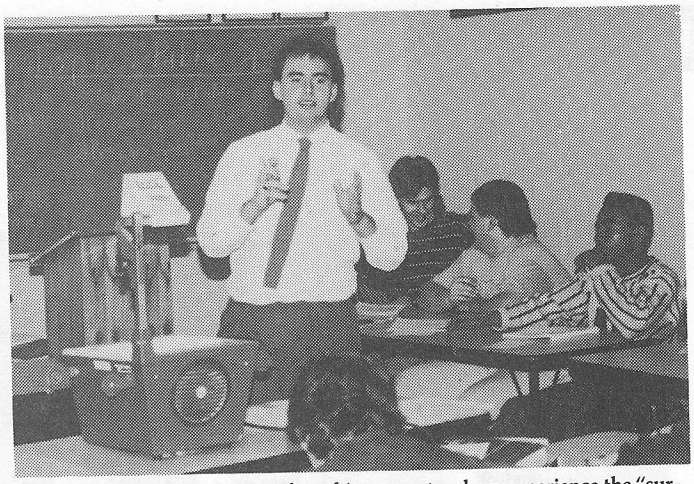
What Can Beginning Teachers Do To Survive the First Year?

There are several things that beginning teachers can do to help themselves through the induction period. Simply understanding that they are going through a fairly predictable process may help. The happy fantasies were not real, the survival stage does end, and the mastery stage does occur. If they are reminded of those things the process may be smoother and easier.

Further, they can aid themselves by not being afraid to ask for help. In many schools a mentor, peer, or buddy teacher is assigned to each new teacher. This is usually an experienced, respected teacher who is available for advice and assistance. If there is no assigned mentor, the beginner should seek out an experienced agriculture teacher or some other teacher who would be willing to spend time helping — just listening is important, suggestions are not always needed. Also, beginning teachers should remember that the principal or other administrators are available to assist them. Principals should offer to help, but they have other commitments too, and often do not pay as much attention to new teachers as is needed. So if no offer is made, the beginner should ask them for help.

Agricultural teacher educators are another valuable source of assistance. They are experienced at helping beginning teachers and may be able to provide assistance. In many cases, a teacher educator can visit the local school to observe and offer suggestions.

Beginning teachers can also assist themselves in the areas of time, classroom, and instructional management.



During the first year or more of teaching, new teachers experience the "survival" stage of teaching in which they search for a comfort zone in their personal and professional roles as a teacher. This stage is often filled with feelings of stress, anxiety and inadequacy.

Agriculture teachers spend many hours involved in out-of-class experiences such as FFA events and professional activities. Consequently, time management is extremely important. Planning ahead, setting priorities, and working efficiently are all important for new teachers.

Finally, beginning teachers should think critically about what they teach and how they teach it. Many teachers find it helpful to keep a daily log on their teaching and their thoughts and feelings about the day. This can help to relieve tension and also serve as a chronicle of the first year. They can use the log to help correct problem areas and to anticipate future events. The following exercise is also helpful to beginning teachers. At the end of each day, the teacher may want to take a few minutes and ask the following questions:

1) Is what I taught today relevant and necessary for my students?

2) What was one good thing and one bad thing that happened to me today and what were the events surrounding each?

3) What would I do differently if I could start the day all over again?

What Can Others Do to Assist the Beginner?

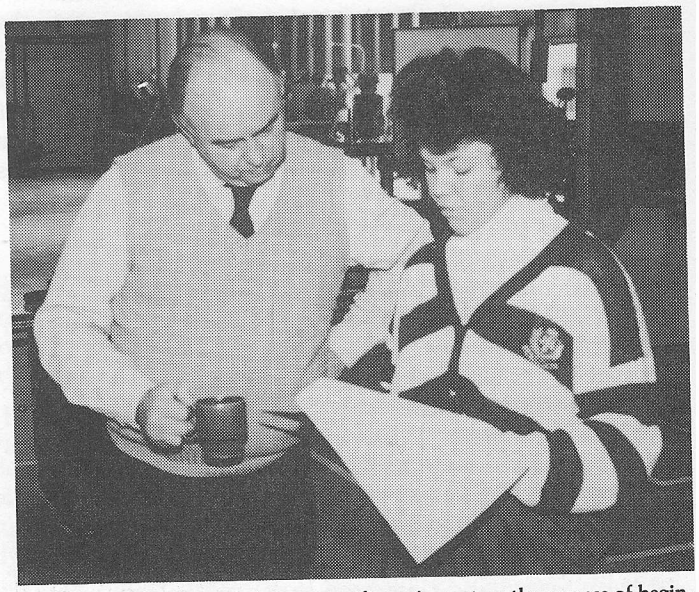
Administrators have a direct and immediate impact upon first-year teachers. Because of this, there are several things that administrators can do to provide assistance to beginners to help them cope with their job demands. First, regardless of what form of assistance program is provided, it should be available early in the school year. In our research, we found that the most stressful time for the average beginning teacher is about October. Many first year teachers develop problems after just a few days or weeks of teaching, so early assistance is needed to correct the problems before they become worse. Administrators should be sure to schedule non-evaluative observations early in the year to provide advice on teaching techniques, classroom management, and lesson content.

First year teachers should be provided opportunities to observe other teachers teaching. The observation of and interaction with experienced teachers are valuable in that they give beginners new ideas on classroom and instructional management. This activity also helps beginning agriculture teachers feel less isolated.

Due to many factors, first year agriculture teachers feel isolated from other adults and from the rest of the school (Talbert, 1990). Administrators should plan regular social activities either before or after school and provide opportunities for teachers to interact during the school day. Some experienced teacher should make a special effort to spend at least a few minutes every day with each new teacher. This will foster an open relationship in which the beginner will feel free to discuss concerns and to talk through difficulties.

Teacher educators and state staff personnel can also assist first year teachers. Student teaching experiences should be designed to be as realistic as possible and to provide as many experiences as possible. Teacher preparation programs should include student discipline and classroom management components, because these areas seem to cause first year teachers many problems. Help with curriculum planning should be provided through workshops or inservice activities. Teacher educators and state staffs should sponsor beginning teacher assistance programs separate from evaluation programs and perhaps offered for graduate credit.

Finally, the Agricultural Education Division of the American Vocational Association (AVA) and the National Vocational Agriculture Teachers Association (NVATA) could organize activities and assistance for the newest members of the profession. Workshops organized during late summer or early fall to help in planning for the school year, would be most helpful. Mentors or buddy teachers assigned within a school are helpful, but remember that first year agriculture teachers in single teacher departments have no one to go to for help with agriculture or FFA questions. Experienced agriculture teachers should seek out first year agriculture teachers in neighboring schools and nearby communities and offer help and encouragement. First year teachers may be hesitant to call on agriculture teachers outside their own schools.



Experienced teachers can have a significant impact on the success of beginning teachers during the induction process. (Pictures provided by William G. Camp, Virginia Tech.)

Conclusion

For new teachers, the induction period is both exciting and frustrating. The beginning teacher is involved in a fight for professioal survival. Experienced teachers, school administrators, state staff personnel, and teacher educators all have the responsibility of providing assistance to ensure that survival. If all of the suggestions we have made were implemented, new teachers would have more help than they could use, but that is very unlikely to happen. In our research, we have found that too little rather than too much help is the norm.

Beginning teachers enter the profession with bright futures in front of them — with great expectations. The agricultural education profession owes them every opportunity to realize that future.

* The Project reported herein was performed for the National Center for Research in Vocational Education, University of California, Berkeley, pursuant to a grant from the Office of Vocational and Adult Education, United States Department of Education. The opinions expressed herein do not necessarily reflect the position or policy of the U.S. Department of Education and no official endorsement by the U.S. Department of Education should be inferred.

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Creative Leadership!

(Continued from page 3)

the National FFA Convention would have been a demonstration of both formats, either live or via video, with a discussion of the qualities of each. Finally, if the National Organization wants to be progressive and futuristic, it is essential that they stop practicing "creative leader' in either form and appoint individuals to committees who are knowledgeable of the subject and futuristic in perspective and then accept the resulting recommendations in good faith.

Effective Laboratory Teaching

(Continued from page 12)

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Teacher Influence

(Continued from page 7)

We use approximately 20 acres on the school campus plus a rented 56 acres of pasture land. By moving the cattle to the rented pasture, we can cut, rake and roll hay from the school fields. This provides hay for our herd and a sizeable amount to sell as a cash crop. We are also trying to get an additional 10 acres of rented land sprigged in an improved bermuda grass. This will also be used for haymaking. We are fortunate to have almost any equipment we need to operate the school farm.

Another part of our livestock program is the hog operation. We normally run five (5) brood sows with a purebred boar. In November of 1990, we lost our farrowing-to-finishing barn to fire. I am presently working with the extension agent and a local hog producer to design a new facility. Hopefully, it will be completed in the near future. The

(Continued on page 19)

Becoming A Successful Teacher

(Continued from page 6)

is it more true than to the spouse of an agriculture teacher. You know it as well as I, if you have been teaching more than two years and are married.

When asked to write this article, I had great difficulty in deciding how to go about it. As I mentioned before, there are certainly people more outgoing than I, and I don't mind quietly doing my job as best I can and staying out of the spotlight. The last thing I like to do is blow my own horn. I think that if any person performing any job, whether it be teaching agriculture or milking cows, gives it his or her all, only good things can happen. I know that there have been many, many late nights at meetings or working on school projects or working with the kids. I also know that there have been many frustrating and discouraging moments: students who have let you down after a big time and effort investment on behalf of yourself and others, occasional failures of your administration to see your point of view, and just plain old bad days can really test an agriculture teacher's patience and will to go on. However, sitting down and taking stock of your accomplishments over the past few years by filling out the NVATA Outstanding Young Member Award Application is one of the best things any young teacher can do to preserve their mental health and well being.

Success comes only to those who work for it. It can be had despite setbacks and trying moments. I urge all eligible young teachers to join the NVATA, receive an O.Y.M. application, and sit down and take stock. You'll be pleasantly surprised with what you find.

A Good Combination In Agricultural Education

(Continued from page 10)

water protection than students who had been taught using traditional strategies. In addition, students reported increased levels of confidence in their ability to write after exposure to writing-to-learn techniques.

Summary and Implications

With the possible exceptions of the learning logs, all of the writing-to-learn activities discussed in this article are routine learning activities for agriculture teachers. The difference is that teachers often use these as oral activities, involving one selected student at a time. The act of writing, not only reinforces learning of the subject matter, but it also reinforces the expectation that all students are to think about each question that is posed by their teachers. Another benefit of writing-to-learn activities is that they provide concrete ways that teachers can implement problem solving activities in each lesson. These activities are just another way teachers can use problem solving activities in their classrooms.

While agriculture teachers often use a problem solving format for planning lessons, they sometimes do not actually provide relevant problem solving activities during the problem solution phase of the lesson. It is relatively easy to develop writing activities that involve real problems to be solved by students. Also, by collecting writing-to-learn assignments from students, teachers can quickly determine the level of understanding of the subject matter taught for all students in their classes, not just the students who answered their questions.

With increased emphasis placed upon effective teaching, it is important that teaching methods used in agricultural courses are shown to be effective in terms of commonly accepted measures of teaching effectiveness — student achievement, retention of information, and attitudes toward learning. The early research shows that this is an effective technique to achieve all of these purposes. Perhaps it s time to sharpen the pencils of our agriculture students and work on one of the essential basic skills valued by the agricultural industry, thinking and communicating thoughts to others

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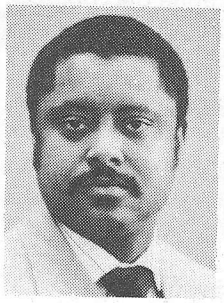
THEME

Motivating Students for Maximum Learning



By Larry Powers

(Dr. Powers is Assistant Professor, Department of Agricultural Education and Extension, North Carolina A&T State University, Greensboro.)

Do your students come to class eager to learn and ready to start work on learning objectives you have identified for the day? Have they conducted external research, reading, preparation, and study in an attempt to maximize their learning experiences in your class? The writer believes that many teachers would respond negatively to both questions. The two previous questions address an ongoing and continuous problem in many classrooms throughout the United States. This problem concerns motivating students for maximum academic achievement. The following narrative provides the reader with a discussion on how to motivate students and is divided into two parts. Part one discusses motivation concepts and principles. Part two discusses the practical application of these principles in the classroom. However, the author would like to make two basic points at the outset: (1) it is highly unlikely that an unmotivated teacher will be able to motivate students and (2) motivation strategies and techniques separated from school goals will lose their utility.

Principles of Motivation

Many writers and researchers have addressed the subject of motivation. The writer will select a few of the noted concepts and theories that have application to the school and classroom setting.

A discussion of motivation should first begin with a definition. Holloran and Benton (1987) defined motivation as "an internal need that is satisfied through an external expression." According to Holloran and Benton, we usually see the outcome or results of ones' action, but we are not able to see the drive or reasons beneath ones' action.

Understanding the reasons for ones' actions provide a basic premise for identifying and utilizing acceptable motivation techniques and strategies. Weiner (1974) indicated that motivation has two basic components-internal and external, each of which has subcomponents. According to Weiner, these subcomponents are the cause of an individual's success or failure. The subcomponents of external motivation are perceived difficulty of the task and luck. The subcomponents of internal motivation are perceived ability and effort. Individuals that perceive their ability as low tend to exert little effort on perceived difficult tasks. Individuals that perceive their ability as high tend to exert effort commensurate with the perceived difficulty of the task.

Many writers discuss motivation from a perspective of needs and the individual's interaction with the environment. Maslow (1954) proposed a hierarchy of needs that guide individual behavior. Maslow maintained that individuals prioritize their needs from physiological to psychological. Physiological refers to biological needs, such as food, clothing, and shelter. Psychological needs address one's feelings about self, life and surroundings, i.e., ego and self-esteem. Maslow suggested that the individual attends to biological needs first and then becomes concerned with the psychological. Expectancy theory is often used to explain individual behavior with respect to the individual and his/her interaction with the environment. Getzels and Guba (1957) proposed a model that explains individual behavior in terms of needs disposition of individuals and their interaction with normative expectation.

The model proposed by Getzels and Guba is referred to as the **Nomothetic and Idiographic Dimensions of Social Behavior.** The Nomothetic dimension of the model includes institution, role and role expectation. The Idiographic dimension of the model includes the individual, personality, and needs disposition. According to Getzels and Guba the interaction of the two dimensions yields observed behavior.

Halloran and Benton (1987) suggested that all motivation ultimately comes from within (internal). They also indicated that there are three motivating sets: (1) fear motivation, (2) incentive motivation, and (3) attitude motivation. Fear motivation involves behaviors or inappropriate action. Incentive motivation involves behaviors that are perpetuated by the desire for rewards. Halloran and Benton indicated that rewards can be classified by the four P's: praise, prestige, promotion, and paycheck. Attitude motivation refers to a personal set of goals.

Given that the study of individual behavior is not an exact science, and that behavior of individuals is often influenced by many unpredictable variables — motivation concepts and principles provide us with some basic parameters and philosophy that contribute to understanding observed behavior. They also provide us with some fundamental ideas with respect to soliciting desired behavior from individuals.

Utilization of Motivation Principles

In his research on effective schools, Lawrence Lezotte (1989) identified two basic issues surrounding the development and implementation of effective educational programs for young Americans. Quality and equity serve as the point of departure with respect to the teacher's role in motivating students for learning. It is important to establish that the role of the teacher encumbers motivation of students, and that the most successful teachers are ones that are sincere, caring, knowledgeable and professionally competent. Underneath what appears to be a perfectly normal, healthy and emotionally stable child may lie social, emotional, and psychological problem scars that prevent or interfere with

learning. That different stimuli raises a basic question. Should we wait for the student to become motivated before we teach? The experts suggest that we should not wait for the student to become motivated before teaching. Teachers should provide the unmotivated student with successful learning experiences, and learning success will become the motivator for continued learning. Based upon the concepts and principles presented in this paper, the writer proposes the following ten (10) tips for motivating students.

1. Establish a personable and professional relationship with each student. This relationship should be based upon trust and mutual respect.
2. Help students to build self-confidence in their ability. Acknowledge learning success and plan activities to achieve the same.
3. Teach learning activities and tasks in such a way that they can be grasped by the lower students and yet challenge students with high ability. Many writers refer to this as remediation and enrichment. This is facilitated by the teacher developing an in-depth understanding of the subject matter.
4. Encourage students to ask questions. Give adequate wait time before responding.
5. Let students know that you are familiar with their circumstances and environment. Explain to students how they may benefit from learning, and demonstrate to them that you are alert and aware of happenings in their surroundings. Professional educators refer to this as with-it-ness. Make substantive efforts to meet and greet the parents of your students.
6. Develop an atmosphere in class and among students that establishes a certain level of academic expectation of all students. If students feel that the teacher perceives them as low achievers, they will respond in kind. The teacher has to take the leadership for including all students in the learning process. Once the teacher has given up on students, they know it.
7. Depend more on incentive development and implementation and not on fear and intimidation as a motivation technique. When the teacher has to use punishment, it should be used as the last resort. The teacher should take the responsibility for re-establishing rapport with students after punishment has been administered. Punishment should be administered equitably, consistently, and commensurate with student behavior.
8. All students do not find the same things rewarding or punishing. Hence, the teacher should know his/her students individually and collectively and establish a variety of strategies appropriate for the student and situation.
9. Assist all students with setting goals. This should be an evolving process. When goals are accomplished students should be taught to set other higher goals. If teachers are not successful with this phase of motivation, then their students will likely experience intermittent success and/or give up.
10. Probably the most important of all — serve as a role model for students. An unmotivated teacher will hardly be a good motivator for students. A teacher who is a pessimist instead of an optimist is unlikely to motivate students. Teachers that set low standards and rely on fear and intimidation will not likely motivate students. If students perceive their teacher as NOT being a goal setter — the teacher will not be able to have students set goals.

Summary

There is no magical solution for motivating students. However, there are well established techniques and strategies grounded in accepted theoretical constructs. Motivating students is NOT done in a vacuum. Motivation must be done in the context of achieving school goals or objectives and be consistent with established classroom procedures and practices. Motivating students is an integral part of the educational or instructional process and in this spirit, it must be operationalized. The most successful motivators are caring, competent, enthusiastic, knowledgeable, and professional.

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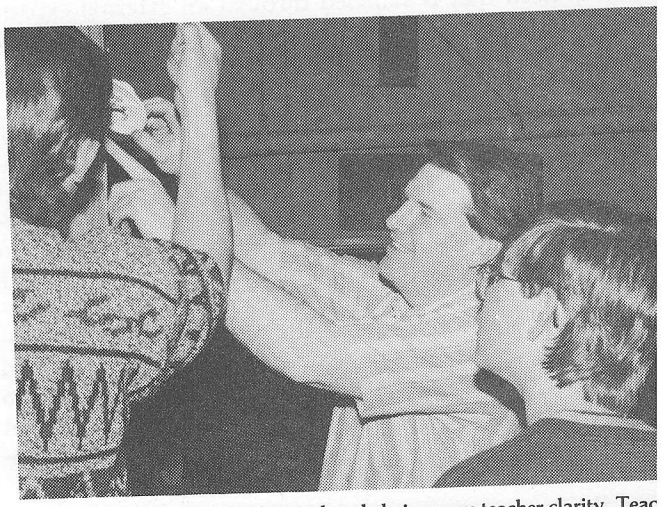


Demonstrations presented by teachers help improve teacher clarity. Teac who are enthusiastic and have high levels of interaction with students more effective teachers. (Photo courtesy of Ed Osborne, Universit Illinois.)

About The Cover

From Phipps, L.J. & Osborne, E.W. (1988). Hand book on Agricultural Education in Public Schools Danville, IL: Interstate Publishers, Inc.

THEME

Effective Teaching — Being Professional and Motivated

By John R. Whaley

(Mr. Whaley is 1990 Region V NVATA Outstanding Young Member, Jacksonville High School, Jacksonville, AL.)

The agribusiness teacher assumes the responsibility of providing pleasant surroundings for the learning process and motivating students through purposeful, reasonable, and flexible learning experiences. Teachers should promote self-development by encouraging students to think critically, by providing opportunities for practical application of concepts, and by stimulating further studies. Every teacher should act as a counselor to assist students in solving their individual problems and in making wise choices. These choices should help students become useful citizens in our complex society of today.

Providing laboratory experiences (hands-on experience) for students should be an integral part of our teaching today. Providing students with hands-on experiences will spark elements of curiosity and creativity from the students. My concept of the ideal school has the student attaining something that can be used immediately for his/her vocation or leisure time.

Teachers should serve as guides, instructors, and students for the skills necessary to pursue the various subjects; but more importantly, teachers should serve as role models. I believe this is one reason for my success as a teacher. I try to serve my students as a good moral young man — one in whom they can trust and pattern themselves after.

The biggest problem today in education is selling the public on education. The people have something of value to contribute to our educational goals and practices. Informing the public will probably aid in solving many of the problems confronting agribusiness today, because people will feel closer to our programs and will vote for those additional taxes that are so vital in helping a school system achieve excellence.

The press, however, is not the only vehicle for telling the public what is going on in the schools. Every agribusiness student should receive home visits to monitor SAEP's, and to spell out to their parents what is going on in the agribusiness and FFA programs, and to elicit parents' views. This will provide some evidence that the agribusiness program is trying to represent all of the people and not a clique, as is sometimes charged.

I have strived to incorporate innovative instructional techniques in my classroom activities. One new technique which I have employed is the development of a laboratory garden plot for our chapter in order to participate in a vegetable garden project. My students raise tomato and pepper plants in our greenhouse to plant in this garden spot and to give students to take home to use in their home projects. The vegetables from this project are given to the elderly and shut-ins, which helps in promoting good public relations. As a result of this project, each member has the opportunity to cultivate, prepare seedbeds and rows; become familiar with fertilizers, pesticides, insecticides; and harvesting vegetables.

Really professional teachers are persons of quality — persons with a sense of high commitment and a great faith in the value of what they are doing. When master teachers work with young minds, there is never a dull moment. Their influence is great. Through their students, they can contribute to the shaping of the community. The exemplary teacher glories in being able to say, "I am a teacher."

Many of our FFA activities are designed to help the needy within our community. As a result of these activities, students gain good wholesome qualities that will help them to be good, productive citizens in the society within which we are so fortunate to live. Through leadership activities in FFA, students learn leadership skills that will produce leaders of the future for our county, state, and nation who will continue to make our country a wonderful place in which to live.

Teacher Influence

(Continued from page 15)

old facility was equipped with slotted floors for animal waste. We pumped the waste into a machine and then spread it on our pastures.

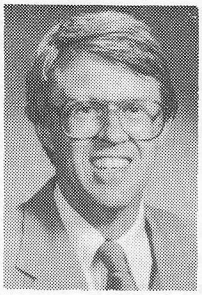
Last, but for sure not the least important item in motivating students to excel, is the FFA Organization. Most students enjoy competition of any kind and the FFA provides that opportunity. Although Paxton is a very small school, it has won its share of contests and awards in recent years. For example, we won the State Agricultural Mechanics Contest two consecutive years and competed in the National Finals. A member of the chapter was named Star State Agribusinessman of Florida in 1990.

In summary, agricultural education will remain strong and vital only if the people in this profession continue to accept certain changes and strive to keep up with current technology in agriculture and agribusiness.

FEATURE COLUMN

HISTORICAL REVIEW

September 1941 & 1966



By John Hillison, Special Editor

(Dr. Hillison is Professor and Programs Area Leader, Agricultural Education, Virginia Polytechnic Institute and State University.)

September, 1941

"Age should not be a controlling consideration, or even a major consideration in determining who should have the advantages of education. Considerations such as need, desire, and ability to profit from it are much more significant." These words were written by H.M. Hamlin (teacher education, University of Illinois). He was discussing the theme topic on adult instruction in part-time and evening classes.

Hamlin noted that some agricultural educators were discouraged about teaching adults as money for school support was in short supply and not sufficient to provide needed instruction for elementary and secondary students. He further wrote that there is no constant amount of money set aside for adult instruction that detracts from support for either elementary or secondary education.

Hamlin further observed that adult instruction in agriculture was not just a fad. In 1938-39, a total of 231,111 people enrolled in reimbursed part-time and evening classes. This figure equalled 75% of the enrollment of vocational agriculture students at the high school level. The article concluded with the point that "Adult education is necessary because many of the problems are disease and pest control, soil conservation, tenancy and land tenure, and governmental policies towards agriculture."

Another article on the theme topic of adult education was written by C.F. Rogers (Assistant Director National Farm Youth Foundation. The Foundation was established in 1940 with support from the Ferguson Sherman Manufacturing Corporation and the Ford Motor Company with a target of 18 to 25 year olds. During its first year, 10,000 young farmers participated. The courses were taught by Foundation support companies employees and covered such topics as (1) the business of farming, (2) managing the farm plant and equipment, (3) soil and crop management, (4) profitable management of farm operations, (5) handling labor on the farm, and (6) profitable use of modern farm machinery.

Harriet Carr (Michigan State Board of Control for Vocational Education) reported on an apprenticeship program for agriculture. The eligibility requirements included a minimum age of 16, be physically fit, and socially adapted to high school. The apprentices could be high school students or not. The apprentices were placed on farms and provided 100 hours of related instruction by an agricultural instructor. The instructor's load was figured at the rate of 10 apprentices being the equivalent of a half-load. Each apprentice was presented with a record book in which the kinds of work, by month, were indicated.

September, 1966

Editor Cayce Scarborough wrote an editorial entitled "Supervised Practice or Occupational Experience." In the editorial he reviewed the importance of supervised experience from the Smith-Hughes Act to the Vocational Education Act of 1963. He observed that the Smith-Hughes Act required supervised practice in agriculture which was to be conducted on a school farm or on the student's home farm. Editor Scarborough noted that the procedure had worked well.

However, the term supervised practice had become synonymous with farm experience. He suggested that a new term - occupational experience be coined. "The . . . is a more descriptive term of the basic idea of concept that we want to continue than is the old term Supervised Practice. Furthermore the old term is tied so closely to the earlier implementation in the form of Supervised Farming Programs, until it makes it difficult to stretch the term to include the many modern ways of securing occupational experience."

"IN an article entitled "Providing Work Experience for Non-Farm Vo-Ag Students" by George S. Williams (Vo-Ag teacher Andalusin, Al) ideas were shared about working with the growing number of urban students and the decreasing number of urban students and the decreasing number of farm students. One idea shared for work experience was to provide facilities at school. Such school-based experiences included a show calf project which utilized a vacant dairy barn. A greenhouse was placed into operation. The greenhouse provided experiences in ornamental horticulture including woody ornamental plants. Third year students were placed in commercial employment that included work at a greenhouse, garden center, nursery, flower shop, and feed, seed, fertilizer, pesticide, livestock marketing, and food processing. The students worked after school hours, weekends, holidays, and vacation times.

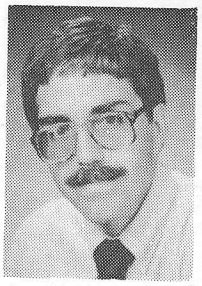
John L. O'Brian (Teacher Education, Rutgers University) wrote an article on working with youth who have special needs. He wrote that 10 percent of the sums appropriated in the 1963 Vocational Education Act were to be used in assisting special needs youth. However, he concluded that such needs were not being met. O'Brian suggested that the skill development program "should provide the student with numerous saleable skills in several job families."

(Continued on page 23)

FEATURE COLUMN

COMPUTER TECHNOLOGY RESOURCES

A Newsletter Makes A Big Impact



By Nathaniel D. Jaeggli,
Special Editor

(Mr. Jaeggli is Instructor, Department of Agricultural Education, University of Arizona.)

In this article I'll share with you some of the computer tricks I've used over the past several years to develop a newsletter that is an effective tool. You may be thinking — "There isn't time to publish a newsletter, I'm not that good of a writer or there's not that much going on." By using your computer as you would a power tool you can increase your efficiency and quality of the finished product.

A newsletter must become a priority if you intend to maintain community, administration and state support for activities in your program. Good communication is a vital link to maintaining that support. Don't confuse a "program newsletter" with the local "FFA newsletter". The students should be responsible for reporting officer elections, swim parties and upcoming youth events. A "program newsletter" should describe conferences you've attended, curriculum you are changing, or professional activities you and other staff members are involved in.

The newsletter should be sent to those individuals who are making decisions that affect your program — administrators, other teachers, advisory committee members, members of the school board, key community leaders, teacher educators, state staff for agricultural and vocational education and state and federal representatives. Try to keep the list down to between 50-100 individuals.

Keep it short, just one page. Most of your readers won't spend the time to read long articles so they skim looking for the facts. Do the skimming for them. Give them the facts; encourage them to call you if they want more information. Keep individual articles to one paragraph and use bullets/titles.

Now for the computer tricks. Build a template that you can use from month to month; this will help establish a uniform format. Don't wait to throw it all together at the end of the month for next month's issue; add little pieces as you and others think of them, then edit all of the parts into a useable "newsletter." Describe two or three activities you have just completed, and describe one or two activities planned for the coming month. Spell check and proof the letters carefully (I always get a second opinion) before making the necessary copies.

If you don't have a copy machine or it's not convenient, set your printer to print the number of copies you will need. Be sure to have a new ribbon or print cartridge so that you get good print quality on all of the copies. This method might take longer, but you can set it to print and then leave it.

Use a database or mailing list manager to maintain and print individual addresses. You might print the names on self-stick mailing labels, on the envelopes directly or save yourself some trouble and print them on the back of the letter. You can then tri-fold and staple the letter and skip the hassle of stuffing, sticking and licking. (I'm always afraid I'll cut off the end of my tongue on those sharp-edged envelopes.) I try to send my newsletters out on a Thursday or Friday so they arrive early the following week.

Using newsletters to maintain open lines of communication can be an effective tool for leveraging support for your program. When it comes time for key individuals to make major decisions, they will often look more favorably on those programs they feel they know something about.

Teaching The Basics — Long Term Dividends

(Continued from page 8)

citing and educational for our students and the elementary students. A number of pre-school groups learned of the exhibit day and wanted to attend. This year over one thousand students enjoyed this activity. We get newspaper and television coverage, plus a good response among parents throughout the area. As students become involved and excel in the FFA program, parents become interested and supportive of the program.

Public Relations Program

We have always tried to be consistent in publicizing FFA and departmental activities. Cooperating with the local news media and using the opportunities available in the school are necessary for a successful program. Working with civic groups through the BOAC program improves the image of the department.

Attitude and Dedication of Instructors

Agriculture instructors tend to be the vital link in the chain of events in any department. The attitude and enthusiasm of the instructor carries through to the students. We are required to teach, organize, advise, repair, and assume a variety of other responsibilities. We need to be careful that we

(Continued on page 23)

Motivating With An Electronic Game

(Continued from page 5)

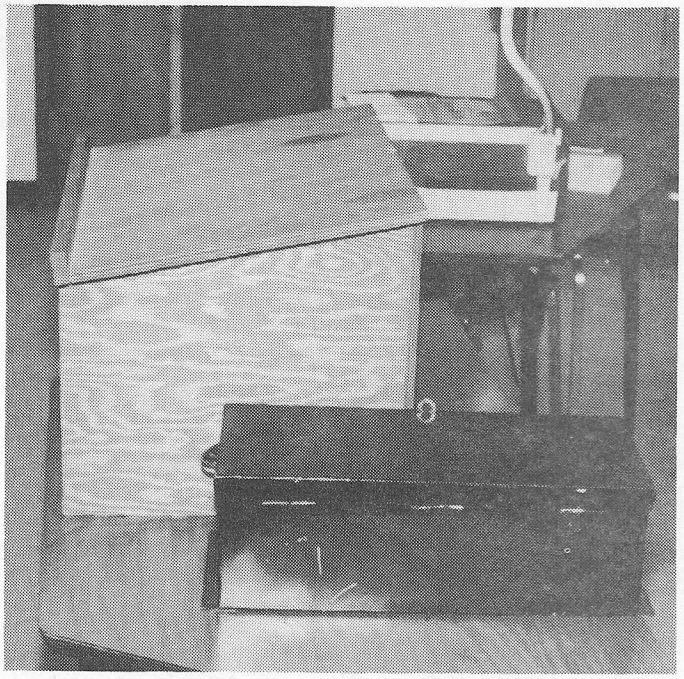
electronic circuits for controlling the lights and buzzer; 2) the "slap" boxes, each of which have a switch mounted in the top that students push when they have an answer. A light bulb on each box indicates who pushed their button first. The components are connected with two strands of inexpensive, two-wire (type SP) lamp cord.

The schematics in Figure 1 show four slap boxes. Each slap box can be operated by one to four players. The hardware is set up that when any of the slap box switches are activated (by depressing or slapping the switch on top of the box) a light bulb will turn on, a buzzer will sound, and all the other slap switches will be deactivated. The teacher than can turn off the buzzer and light, and reactivate all the slap boxes by pushing a reset button located on the outside of the control box.

This concept and the device are versatile. Since students of all ages seem to enjoy competition, teachers can make the game as easy or challenging as desired. Easy questions may be used to stimulate curiosity and to build up confidence in the students. As the students gain knowledge and confidence, more difficult questions can be chosen. Penalty points can also be assigned for wrong answers, causing the students to reflect on their answers before responding. Furthermore, the penalty and reward points can be adjusted to challenge the students for the desired learning experience.

With high penalty points and low reward points, students can be motivated to excellence, yet still have fun. Also, teachers can design questions which emphasize various skills other than cognitive. Teamwork, comprehension, motor skills, verbal skills, listening skills, problem solving skills, and other related skills can be taught by the way the teacher structures the game. Perhaps the best part is that these skills are being taught without the students being aware of it. Rewards or awards can be given which reinforce learned activities. The more valuable the reward, the higher the enthusiasm for studying in order to do well in the game. The teacher can also emphasize teamwork by allowing discussion, or encourage individualism by disallowing discussion, before a question is answered.

This group from the University of Georgia was the first to activate the switch on the "Slap Box," as indicated by the light.



The control box sits beside the podium where the teacher can easily reset the lights from the switch that is mounted on the outside of the box.

The slap box can be made out of scrap lumber which should be at least ½ inch or thicker for durability. The UGA model is made from pieces of ½" plywood. The top of the box measures approximately 12 inches by 12 inches. The larger the slap box, the heavier it will be and the less likely that it will accidently be knocked off the table. The sides are also ½ inch plywood and are about 4 inches tall. No bottom board is needed but felt glued around the bottom of the sides will make the slap box less likely to slide around the table. The actual size of the slap box is not critical; however, the larger and heavier it is, the better it will stand up to enthusiastic use. Stain and a coat of polyurethane improve the appearance and help protect the wood.

The control box used at UGA was a metal tool chest; but it could also have been made out of scrap wood. The box must be at least 5" x 8" x 12" to hold the electronic hardware; however, it would be easier to install all the circuits if the box were larger. The power supply for the UGA game

Bill of Materials

Quantity	Type	Newark* Number	Price
3	7432	SN7432N	$ .49 each
4	7474	SN7474N	$ .64 each
1	74154	SN74154N	$ 1.80 each
1	2N3904	2N3904	$ .34 each
1	SPST, no switch	89F5543	$ 2.18 each
4	SSR1-55R4	89F953	$15.75 each
1	Alarm	87F2448	$ 6.00 each
1	Power Supply	81F9372	$32.00 each
5	Resistors**		$ .25 each

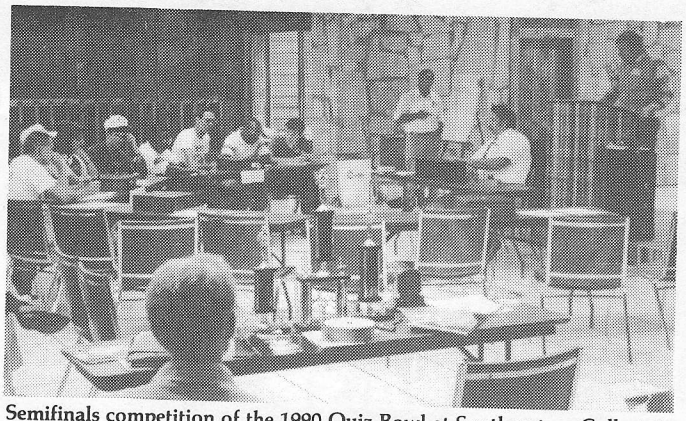
* Note: Brand names do not constitute a recommendation and are given for identification purposes only.

** From any consumer electronics outlet.

was salvaged from a personal computer; but, for the reader's benefit, a commercially available power supply is listed with the bill of materials.

Table one contains the bill of materials for the primary electronic parts needed for the game. The prices listed were from Newark Electronics, a major national retailer. All of the electronic parts listed can be purchased from any reputable electronics dealer or catalogue. The table is provided as a guide to facilitate comparing prices.

A student can be lead to the classroom but cannot be forced to learn. The teacher's function is to make the learning experience so enjoyable that the student will want to learn. This electronic game is a means to help make the learning process more fun for students and teachers alike.



Semifinals competition of the 1990 Quiz Bowl at Southeastern Collegiate FFA Conclave held at the State FFA/FHA Camp near Covington, Georgia.

Refocus on the Fundamentals Of Good Teaching

(Continued from page 4)

discuss student progress, and enlist parental support and involvement in student learning were found to have very positive impact on student learning.

The articles in this theme address both the research basis for excellent teaching, as well as words of wisdom and advice from those who have already achieved success. This issue contains short articles from four of the 1990 NVATA Outstanding Young Teacher and Outstanding Agriculture Teacher Award winners. These teachers have agreed to share their views on what it takes to be successful in teaching agriculture. In addition, five theme articles are included on specific dimensions of effective teaching. These articles draw from the research and present some practical suggestions for teachers to consider as they pursue the never-ending challenges of becoming a better teacher. I hope you find these ideas helpful as you take time to refocus on the fundamentals of good teaching.

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Historical Review - Sept., 1941 & 1966

(Continued from page 20)

O'Brian also suggested that guidance was a key to the success of any program dealing with special needs students. He advocated the position that every teacher is a guidance counselor. It was further stated that the teacher "must work with youth who are insecure, pessimistic, dejected, angry, undereducated, non-motivated, ill, delinquent, resentful toward authority, potential drop outs, have limited mental ability, are beset with physical disabilities, have little regard for the value of education; and yet they may realize that such a program could represent a last hope for them as far as the public schools are concerned.

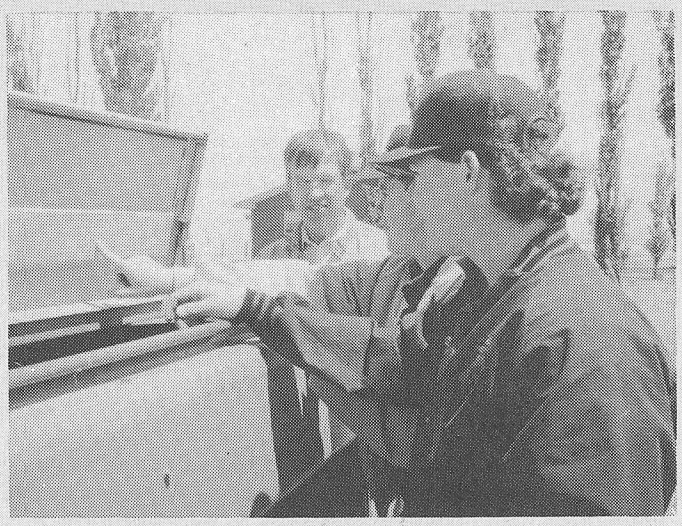
Teaching The Basics — Long Term Dividends

(Continued from page 21)

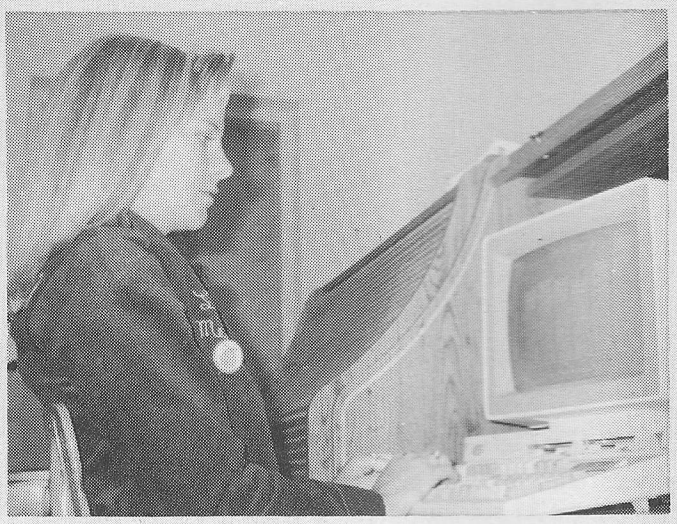
don't become so involved that by the time we should be the best teachers, we feel that we are burned out. We must be professional, honest, and fair. We must budget our time and energy to that we can conduct a well rounded, effective program. We must teach the basics, organize, plan, and use the best teaching materials and techniques available.

The rewards for successful agriculture programs are as great as ever. The challenge is still present. Being a career teacher can provide experiences and rewards that will last a lifetime.

Stories in Pictures

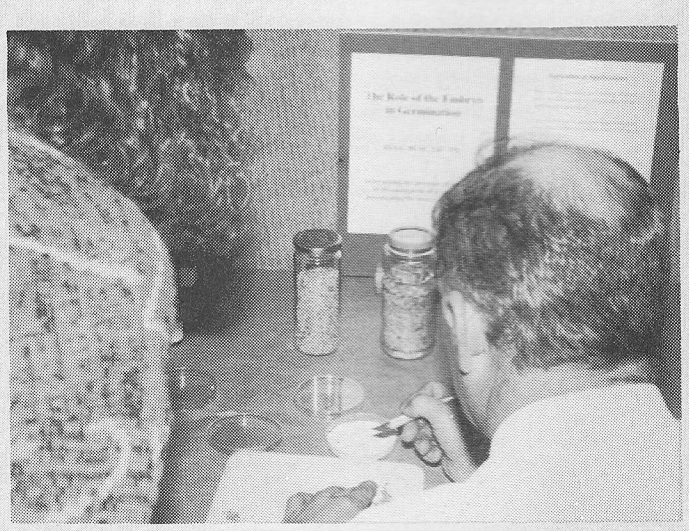


Teacher Kit Pettigrew and his students calibrating a grain drill in Dora, New Mexico. (Photo courtesy of Tom Dormody, New Mexico State University).



Libby Medlin from Tatum High School in New Mexico, determining enterprise expenses using Lotus 1-2-3. (Photo courtesy of Tom Dormody, New Mexico State University).

Laboratory activites offer many advantages in teaching, as long as they are well organized and student participation is good. Student performance in the lab is improved when students receive timely and precise feedback on their performance. (Photo courtesy of Ed Osborne, University of Illinois).



Technical expertise is an important dimension of effective teaching. Building one's expertise in the content taught requires continual commitment and participation in inservice opportunities. (Photo courtesy of Ed Osborne, University of Illinois).