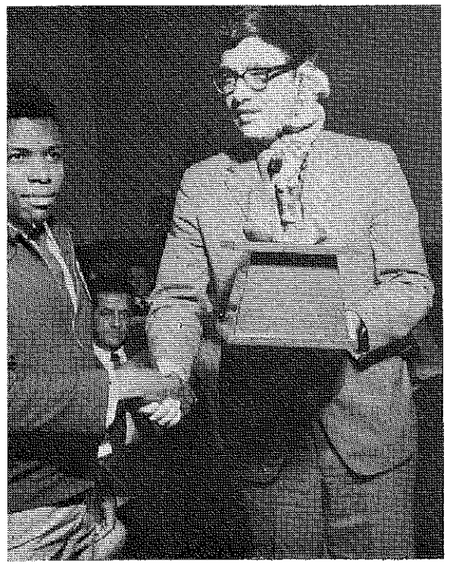
Stories in Pictures

by Richard Douglass

Shown above is part of the group of Vo-Ag teachers in Region V NVATA who attended the leadership training school held in Athens, Georgia. This photo was taken at Engineering Center of the (AAVIM) American Association for Vocational Instructional Materials after the leaders of Alabama, Georgia, Florida, Mississippi, North Carolina, South Carolina and Tennessee had learned how their teaching materials are assembled. (Photo courtesy of D.P. Whitten, Region V Vice-President).

1971-72 NVATA EXECUTIVE COMMITTEE, (Back Row — Left to Right — Vice Presidents) Luther Lalum, Region I — Kalispell, Montana; Bill Harrison, Region II — Leedey, Oklahoma; Francis Murphy, Region III — Madison, South Dakota; Odell Miller, Region IV — Raymond, Ohio; D. P. Whitten, Region V — Centre, Alabama; James Shadle, Region VI — Hegins, Pennsylvania. (Front Row — Left to Right) Sam Stanzel, Treasurer, Colby, Kansas; Glen McDowell, Past President, Pikeville, Kentucky; Howard Teal, President, Boonville, New York; James Wall, Executive Secretary, Lincoln, Nebraska. (Photo by Peter Corvallis, Portland, Oregon)



Antonia Garcia, Student of the Vocational Agricultural School of La Union-Narino, receiving the trophy he won in the speech contest at the Third National Convention, Future Farmers of Colombia. (Photo from Mr. Lennie H. Gamage, Manager, International Programs, Future Farmers Association).

General Assembly of the Japanese Future Farmer National Convention. Their association will be 22 years old in 1972. (Photo supplied by Hajime Kenjyo, Principal, Tokyo Horticultural High School, Tokyo, Japan.)

Agricultural Education

Volume 45 August, 1972 Number 2

WHO DO YOU INVOLVE IN EVALUATING AND UPDATING YOUR PROGRAM?

Theme— EVALUATION

The
Agricultural Education
Magazine

EDPRESS Vol. 45 August 1972 No. 2

TABLE OF CONTENTS

This publication is the monthly professional journal of agricultural education. The journal is published by THE AGRICULTURAL EDUCATION MAGAZINE, INC., and is printed at the Lawhead Press, Inc., 900 East State Street, Athens, Ohio 45701.

SUBSCRIPTION PRICE: $3 per year. Foreign subscriptions $4. Student subscriptions in groups (one address), $1 for October-May. Single copies and back issues 50 cents. In submitting subscriptions, designate **new** or **renewal** and address including ZIP code. Send all subscriptions and requests for back issues to Harlan E. Ridenour, Business Manager, AGRICULTURAL EDUCATION MAGAZINE, Box 3843, Columbus, Ohio 43214.

Second-class postage paid at Athens, Ohio.

Send articles and pictures to the Editor or to the appropriate Special Editor.

COVER PHOTO

Paul Lynch, Vo-Ag Instructor at Presque Isle Regional High School, uses an Agricultural Advisory Committee to evaluate and update the agriculture Program.

This committee has been making an extensive study into what should be taught in Vo-Ag in the Presque Isle area.

Members of the Advisory Committee are: (standing l. to r.) Neale Buck, Director of the school; Paul R. Lynch, Vo-Ag Instructor; Owen Smith, grower and shipper of Maine potatoes; (seated) Arnold Davis, Farm Manager of Potato Service, Inc.; Larry Thibodeau, President of Maine Farmers Exchange; Willard Doyen, grower and shipper of foundation seed, peas, and grain; and Herschel Smith, grower and shipper of Maine potatoes. (Photo by David Estabrook, Graphic Arts Department, Presque Isle Regional Technical Vocational Center.)

From Your Editor . . .

DO YOU NEED TO: TIGHTEN UP YOUR EVALUATION PROCEDURES?

Roy D. Dillon

When school begins and classes get underway, daily lessons are planned and conducted, activities are added and completed, and the everyday pace of the vocational teacher quickens. The teacher has many daily reactions to events in the classroom, laboratory, in on-job instruction, and at supporting activities. The school administration, other teachers, and students develop opinions of the vocational teacher and of his program as they see and hear of the educational and supportive activities being conducted.

Decisions which directly affect the local vocational program are made throughout the year. For example:

1. **Will the teacher be rehired?**
2. **Will students enroll in courses?**
3. **Which courses will be offered?**
4. **Should special instructional and extra-curricular activities be authorized?**
5. **Should budget requests be approved?**
6. **Should I join the FFA?**

These and additional decisions are made by school policy makers and program participants. These judgments are based on the individual and/or collective opinion of the person(s) making the judgment. Opinions are being formed anyhow; let's structure the opinions toward the true picture of our program.

The vocational teacher deserves a fair evaluation of his program so that he may make improvements as needed. His effectiveness in conducting a vocational education program in a local community will improve the longer he is in the system and can influence program participants.

My challenge in the introduction to this issue, which includes several excellent articles on evaluation, is for the vocational teacher. You are on the "inside looking out" of the local program and is in the best position to provide leadership in structuring the gathering, summarization, and interpretation of information used to make evaluative judgments. The best that you can do is to provide truthful and accurate information to the local educational policy makers.

If local people are judging you and your program by a "hit and miss" technique, you should plan ways of obtaining data and feedback as you go along. It is much more accurate to accumulate information in several forms throughout a year than to "try to remember" or accept someone else's recollection months later.

Look at the articles this month to obtain ideas on "What Can I Do To Tighten Up My Program Evaluation?
—RDD

Guest Editorial . . .

EVALUATION: INFORMAL AND CONTINUAL

Don Priebe
Professor and Chairman, Agricultural Education Department
North Dakota State University, Fargo, N.D.

Don Priebe

Evaluation is one of the "in" words today. This is as it should be. Much effort has been expended in establishing the need for evaluation and in devising, testing and improving systems of evaluation. Many helpful documents and articles concerning evaluation have been written and disseminated. Most of this important and timely work has been directed toward formal, planned and designed systems or methods of evaluation.

FORMAL EVALUATION

These formal methods and systems of evaluation have provided a means for improved instruction and more rational resource allocation. Much needed development and change has resulted from this recent and continuing evaluation thrust. Even though formal evaluation systems are important and needed, another component of the evaluation process often eludes our attention. This component will be referred to here as informal evaluation.

INFORMAL EVALUATION

The primary purpose of this article is to examine the nature of informal evaluation and to explore effective and appropriate uses of this educational tool. Such evaluation occurs continuously and is carried out by many individals and groups. The recognition and use of the continuous and informal forms of evaluation provide the prudent educator

(Continued on next page)

Informal evaluations can become very useful to the teacher only if he is first aware that such assessment is continuous, is made by many people, and is operating whether or not the teacher is aware of the process.

(Priebe — from page 27)

with the opportunity to utilize events which are already in process. The use of such naturally occurring events may be compared to harnessing and using the winds or the power of water instead of fighting them. Formal evaluation systems contain some elements of informal evaluation. There is no clear and definitive line delineating these two forms of assessment.

WHO EVALUATES INFORMALLY?

Many individuals and groups are continually assessing and forming impressions of our teaching, programs, facilities, and activities. These include the teacher, the students, fellow teachers, administrators, parents, other school personnel and various community groups.

As a teacher you have likely felt at at the end of some class that this was the best class you had taught. At other times you may have wished you could have started over. You are constantly evaluating your own work.

Students quickly form impressions of the value of a class, activity, assignment or meeting. They assess various teacher merits in their own terms very rapidly.

Through contacts in the school, administrators, other teachers and custodians quickly form some mental images or assessment of our students, programs and activities as well as our teaching and personalities.

Parents, through their students, form opinions concerning our teaching. Other groups and individuals, through personal contact, adult classes, publicity or informal communication are forming impressions of the worth of our teaching programs.

A large assorted group is watching, listening, and assessing — evaluating informally.

WHEN DOES THIS EVALUATION OCCUR?

Evaluation by ourselves, our students and the others illustrated starts early in the life of a teacher or prospective teacher. This evaluation, in various forms and intensity, is a **continuous process.**

WHAT EFFECT DOES THIS HAVE?

The continuous and informal evaluation affects the attitudes of people, the levels of influence generated, and hence the levels of interest and support acquired.

The assessment made by the teacher himself will influence his enthusiasm and his performance. If his assessments are perceptively made, they will influence his teaching by providing direction for adjustment and improvement.

Student attitudes and interests, including the desire to enroll or continue enrollment, will be strongly and immediately affected by the evaluation made by that student. Parental assessments will partically determine student enrollment as well as financial and other forms of support.

Levels of cooperation with other teachers and school personnel will be directly influenced by the manner in which they perceive and value our programs. The strength of enthusiasm, cooperation and support of school administrators is affected by the informal evaluative process.

Community groups, including the larger group entitled taxpayers, also make decisions concerning school and program support. The decisions of these and the others will be more favorable if their informal evaluations have left a favorable impression.

HOW CAN WE USE INFORMAL EVALUATION?

Effective evaluation is essential for improvement of instruction, instructional planning and resource allocation. Much of this evaluation will be planned or designed as a formal system.

Informal evaluations can become very useful to the teacher only if he is first aware that such assessment is continuous, is made by many people and is operating whether or not the teacher is aware of the process. The teacher must also realize the strong influence such evaluations may have on enthusiasm, enrollment, cooperation, and support.

An instructor who is aware of this process will be in a better position to meet felt needs as he will be more sensitive to the reaction of those whom he serves. He will become much more aware of the need for an effective, two-way public relations program.

SUMMARY

Informal evaluation is a continuous process involving many people who participate in or influence our programs. The results of such assessments can be a strong positive influence in instructional improvement and program development. Will we effectively utilize this powerful and continuous process to better serve those whom we teach? ◆◆

Themes For Future Issues

November — Agricultural Education in Transition
December — Post-Secondary Education
January — Career Education: Elementary Programs
February — Career Education: Junior High Programs
March — Career Education: Secondary Program Vision
April — Career Education: Youth Organizations as an Instructional Tool
May — Career Education: Supervised Agricultural Experience Programs
June — Career Education: The School's Responsibility For Placement and Followup

EVALUATION: A Step Toward Developing A Successful Vocational Agriculture Department

Jay McCracken
Vocational Agriculture Instructor
Prairie High School
New Raymer, Colorado

Jay McCracken

Evaluation should be accomplished on three levels; (1) continuous throughout the year, (2) annually at the local level, and (3) a three year comprehensive evaluation.

"Educational Accountability" seems to be the prevailing term in most public schools today. Students, educators, community citizens, taxpayers, and legislators are questioning the present education system. Vocational agriculture has not escaped criticism, but it is as secure as any instructional program in the public school. For years vocational educators have been held accountable for what they teach and how it is taught. One major method of keeping a vocational agriculture program accountable is through the use of self-requested periodic evaluation of the local department. After experiencing such an evaluation this past year, I firmly believe this is one of the best methods of improving the local vocational agriculture program.

Evaluation of a vocational agriculture program may be accomplished on three levels. First, is the process of evaluation and program planning on a continuous basis that is carried out during the school year. This involves the instructor or instructors planning and developing an improved vocational agriculture program with the department advisory council. Specific goals and objectives are identified for the immediate school year along with a five year long-range projection of the program.

A second level of evaluation is conducted yearly on the local level. This annual evaluation should involve the school administration, vocational agriculture advisory council and the vocational agriculture instructor or instructors. Others may be included in certain instances. This evaluation might be conducted during a scheduled advisory meeting.

The third level of evaluation, called a comprehensive evaluation in Colorado, should be conducted periodically at approximately three-year intervals. This is a complete vocational agriculture program evaluation that utilizes personnel from the office of the state supervisor, the state land grant colleges or universities, a competent vocational agriculture teacher from another school, the school administration and vocational agriculture advisory council, and other qualified lay persons. A comprehensive evaluation will require at least one day. The evaluation committee should obtain objective evidence of accomplishment of certain criteria for evaluation. A format followed in Colorado is called, **"An Instrument for Evaluating Departments of Vocational Agriculture"** developed by the State Board for Community Colleges and Occupational Education and the Department of Vocational Education at Colorado State University. Most states should have such an evaluation procedure available to vocational agriculture departments in that state.

As the primary purpose of evaluation is to identify strong and weak points as basis for planning and upgrading the local vocational agriculture program, it is important that the evaluation be requested by the local school district. Prior to the arrival of the evaluation committee the local instructor or instructors should review the evaluation materials and collect whatever supporting evidence of accomplishment as needed. It should be understood that department evaluation should not be used as a basis for hiring, firing, or determining salary. Everyone involved must approach evaluation with a positive attitude and with the purpose to help upgrade the local program.

The Colorado evaluating instrument includes eight sections. These sections are outlined below. Perhaps if you do not have access to such an evaluation instrument, this will list the different items you may want to consider.

SECTION I: THE PROGRAM
- A. Determination of Community Needs
- B. Occupational Program
- C. Student Selection and Guidance
- D. Student Guidance
- E. Student Placement
- F. Establishment in Agriculture and Follow-up Activities
- G. Summer Program of Work
- H. Advisory Council
- I. Evaluation of the Department and its Program

SECTION II: ADMINISTRATION
- A. Department Policy
- B. Department Budget
- C. Records, Reports and Inventories
- D. Salary and Travel
- E. Utilization of Time
  - 1. Student Time
  - 2. Teacher Time

SECTION III: FACILITIES AND EQUIPMENT
- A. Classroom and Office
- B. Agriculture Mechanics Shop
- C. School Land Laboratory and/or Greenhouse Activities, Administration and Facilities (if applicable)

SECTION IV: CURRICULUM AND METHODS OF INSTRUCTION
- A. Organization and Content of Instruction in the Course of Study
- B. Teaching Methods and Procedures
- C. Instructional Materials
- D. Handling of Student Discipline
- E. Handling of Housekeeping Details

SECTION V: SUPERVISED OCCUPATIONAL EXPERIENCE PROGRAM
- A. Administration of the Supervised Occupational Experience Program
- B. Description of Students' Supervised Occupational Experience Programs
  - Indicators to be Used: Production Agriculture
  - Indicators to be Used: Non-Production Agriculture

(Concluded on page 40)

A PROCESS FOR EVALUATING VOCATIONAL EDUCATION PROGRAMS IN AGRICULTURE

Harold R. Matteson
Department of Agricultural and Extension Education
University of Wisconsin


H. R. Matteson

During the present era of accountability, vocational educational instructors in agriculture at the secondary and post-secondary school levels are feeling an ever increasing need to develop a systematic approach to the evaluation of their program offerings.

One of the major problems a vocational instructor encounters when he attempts to evaluate his program is the difficulty he has in synthesizing the enormous quantity of information found in literature into a model or process which he could follow. The purpose of this article is to present a "process" which an instructor might use in evaluating his vocational educational program and to identify some questions which the instructor needs to answer as he moves through this process.

Before entering this discussion, however, the writer deems it necessary to set forth a definition of "evaluation" which will guide the subsequent discussion of this topic.

Evaluation will be viewed as a systematic process of judging the worth, desirability, effectiveness, or adequacy of something according to definite criteria and purposes. The judgment is based upon a careful comparison of observation data with standards.[1]

It is important to note that the three major elements of his definition are evidence, criteria, and judgment which are essential for most types of evaluations.

Evaluation Model or Process

1. Purpose of Evaluation

Why am I conducting an evaluation? Am I trying to determine if I have reached my program objectives; or am I hoping to prove the value and importance of my program to my administrator, my colleagues, or my community? These are the types of questions a vocational educator must answer as he attempts to determine the reasons for conducting an evaluation. The importance of this step should not be taken lightly for it directly influences the subsequent steps in the evaluation process.

2. Program Characteristics to be Evaluated

Program characteristics which might be evaluated are effectiveness, efficiency, suitability, and importance. How well did my program or component of my program achieve its objectives is the question an evaluator must answer when evaluating the *effectiveness* of a program. This would involve a comparison of program output with criteria for program success. How expensive (input) was it to acquire a given set of results (output) is the question which must be answered whan evaluating the *efficiency* of a program. When a given program is compared to a standard (criteria) or another program, not only the outputs but also the inputs must be compared. Is the present vocational agricultural offering the most appropriate program in a particular community? Is a given teaching method the most suitable method for a given group of students? These are some of the questions one must answer when evaluating the *suitability* of a program or program component.

How important is my vocational agricultural program, FFA, or occupational experience programs for preparing students for a vocation in agriculture? Vocation in any field? Preparation for life? These are some of the questions that need to be answered when evaluating the *importance* of a vocational agricultural program.

3. Program Level or Component to be evaluated

Will the entire program be evaluated or just one aspect of the program? For example, do you wish to evaluate your FFA program, your occupational experience program, or possibly an in-class method of instruction. This decision must be made before evidence can be collected or criteria established.

4. Program Stage to be Evaluated

Some of the program stages identified in the literature are program determination, program preparation, program implementation, and program evaluation. Which one(s) of these will you be including in your evaluation?

5. Criteria Selection

A criterion is a measure against which something can be judged. It may be a rule, a standard, a norm, an object, or a condition or behavior which is considered to be "good" or ideal. It is a description or image of what a valuable (suitable, high quality, effective, important, and/or efficient) program is like.[2]

The criteria an evaluator needs to develop will depend directly on the type of decisions he has made regarding the first four steps in this process. For example, if a vocational agricultural instructor decides to determine how *effectively*

(Continued on next page)

he has achieved his program objectives, he would need to establish criteria regarding program output. Generally, program output for educational programs is behavioral changes which have taken place in students as a result of their participation in an educational program. If a vocational agricultural instructor has previously developed a clear set of program and unit objectives, he probably has already developed an adequate set of criteria for this type of evaluation. If program and unit objectives have not been developed and/or do not include adequate criteria, then a clear set of criteria must be developed before moving forward to the next step in the evaluation process.

6. Collecting Evidence for Evaluation

Although the type of evidence a vocational agricultural instructor needs to collect will be determined by the decisions he has made previously in this process, four additional questions must be answered before he begins to collect information for evaluation. These are:

a. What will be the source of evidence for evaluation? Some of the sources of evidence that are available in most rural communities are students presently enrolled in the program, graduates of the program, employers, parents, advisory committees, guidance counselors, State Employment Service, local vocational coordinator, and other key members of the community. The appropriateness of each of these sources of evidence will depend on the purpose of your evaluation, the program characteristic(s), component and/or program stage you intend to evaluate, the availability of the evidence you are seeking, and the amount of time you have available for evaluation.
b. What evidence, collecting methods, or instruments should be employed? Quizzes, examinations, student oral and written reports, term papers, performance tests, check lists, questionnaires, observation and personal interviews are examples of methods or instruments which can be used to collect evidence for evaluation.
c. When should evidence be collected — at the end of a lesson, a unit, a course, a program, or maybe five years after students have graduated? Generally when evaluating a total program, you would probably be gathering information at each of these time intervals. Once again, decisions made regarding the previous steps in this process will determine when evaluation information should be collected.
d. Who should be involved in collecting evidence? Individuals and groups who might be involved in the data collecting process are advisory groups, guidance counselors, local vocational coordinators, students enrolled in daily classes, employers, other vocational agricultural instructors, other vocational and non-vocational teachers, and adult farmers.

7. Analyzing and Interpreting Evaluation Data

Data analyses and interpretation include three major functions or operations.

a. Organizing and classifying evaluation data. Since evaluation data are often collected from more than one source and by more than one instrument or method, it is often difficult, if not impossible, to devise a classification system which would include all of these data. Generally, this problem can be avoided if the individual in charge of the evaluation develops a means of classifying data before they are collected; and consequently, influence the design of the instruments and/or methods used for collecting these data.
b. Comparing evaluation data or evidence with criteria determined previously in this process. As previously stated, criteria are standards; therefore, you are at the stage in the evaluation process where you are trying to determine if your program has reached the goals or standards you developed by implementing the program.
c. Making judgments regarding how effective, suitable, or efficient a program or program component really was and why.

8. Reporting and Using Evaluation Information

Some of the factors an instructor should consider as he prepares an evaluation report are:

a. Clearly identify the audience. A report which might be suitable for guidance counselors, administrators, teachers, and other professional staff would generally not be appropriate for parents, farmers, and employers. The type of language and manner in which data are presented will have to be adjusted depending on the audience selected.
b. Determine how the report will be used. If a report is mainly used in group discussion, it could be more brief and contain less details than a report which is being prepared for general distribution without any planned meetings to discuss it.
c. Develop a simple and clear report format. An example of such a format might be: (1) Purpose of evaluation. (2) What was evaluated. (3) How was the evaluation conducted. (4) Major findings of the study. (5) Conclusions, implications, recommendations. To what extent each of these should be discussed in a given report will depend largely on the audience and the intended use of this report.

Concluding Remarks

Because many vocational agricultural instructors view evaluation as a very complex process, they have failed to evaluate their programs or have evaluated them in a very superficial manner. Teachers, educators, and other individuals responsible for pre-service and in-service training programs have probably contributed to this problem by not providing enough and/or appropriate instruction for the vocational agricultural instructors regarding the "process of evaluation." Often instructional programs include "evaluation theories" but fail to assist the students in operationalizing these theories into practice.

The writer has attempted to bridge at least some of the gap between theory and practice by presenting and discussing a step-by-step process which a vocational agricultural instructor can use with appropriate adaptation for evaluating his vocational agricultural program. ◆◆◆

1. Wilbur Harris, "The Nature and Function of Educational Evaluations," *Peabody Journal of Education* (September, 1968).
2. Sara Steele, "A Multiple Dimension Concept of Evaluation" (Mimeographed Material, Department of Agricultural and Extension Education, 1970).

IMPROVING TEACHING METHODS THROUGH STUDENT EVALUATION

Hollie Thomas
Agricultural Education Division
University of Illinois


Hollie Thomas

The teacher of agriculture does many things other than teach in the classroom. Field trips, shop activities, FFA work, supervision of experience programs, supervision of placement experience, and adult classes take an enormous amount of the teacher's time. These activities outside of the classroom are very important aspects of the total program. It might be assumed that the teacher who is able to perform the activities outside of the classroom well need not be able to teach with any degree of excellence. This assumption, however, is not supported by observations of the total program. A teacher who has a good program usually does a good job of teaching in the classroom. Perhaps this is due to the selection process that occurs during the teacher's early years as a teacher. A teacher of agriculture must do an adequate job of teaching in the classroom if he is to stay in the school system long enough to develop his reputation as being an outstanding FFA adviser or adult instructor.

The opportunity to stay in the community is not the only reason for doing an excellent job of teaching. Students enroll in classes in agriculture with the expectation of learning something about agriculture. In addition, the number of students who enroll will decrease if the teacher does a poor job of teaching. It is the teacher's responsibility to do a respectable job of teaching and make efforts to improve his instructional procedures both for the benefit of the students as well as his own satisfaction.

How can teaching be improved?

Teaching can be improved by a variety of means, e.g., in-service workshops, self-directed study, experience, and feedback information from observers. An important prerequisite to the improvement of teaching is a favorable attitude toward improving one's teaching. If the teacher does not bring with him an open mind regarding his teaching expertise, little improvement can be expected, regardless of the stimulus supplied.

This article is concerned primarily with the improvement of teaching methods through systematic feedback of student evaluations to the teacher. Research showing the reliability and validity of student ratings and the effect of feedback of student ratings on teaching behavior are explored. In addition, an instrument designed to obtain student feedback regarding the teacher's performance of the problem-solving approach along with procedures for administering and scoring the instrument are presented.

Are student ratings valid?

The question of validity relates to whether or not the responses of students on an instrument that purports to measure aspects of teaching performance really does measure these aspects. In other words, if a scale on an instrument is supposed to yield a score that indicates the teacher's performance in developing objectives with the students for the unit or problem area to be studied, does the score obtained reflect the actual performance of the teacher? Although students tend to rate a teacher as being all good or all bad depending on their feelings about the teacher, student ratings appear to be a good measure of the actual performance of the teacher. Supervisor or colleague appraisals are made on a particular day and a particular period during which the teacher may have had an exceptionally good or exceptionally bad day. In addition, students may be on their best or worst behavior when someone is visiting the class.

Teachers and administrators differ greatly on what they feel constitutes good teaching performance. Some researchers (e.g., McKeachie, 1969) suggest that the consumers of the course, the students, are in the best position to provide subjective data regarding the way the course was conducted.

Are student ratings reliable?

The reliability of an instrument refers to the reproducibility of similar results on (1) another form of the instrument (equivalence), (2) the same test at a later date (stability), or (3) one-half of the items on an instrument or scale as related to the other half (consistency). The degree to which an instrument is reliable is measured by a correlation coefficient.

Student ratings have been shown to be highly reliable by these means of establishing reliability. Thomas (1969) found student ratings to be very reliable on an instrument containing six different scales; the scales were both highly consistent and very stable.

The effect of feedback of student evaluations on teaching behavior

If improvements are to be made as a result of feedback of student evaluations of the teaching performance, the teacher must be willing to accept student ratings as reflecting his teaching and be willing to make adjustments in his teaching practices. In addition, there must be room to improve. This is to say the ratings he receives from the students must be less than the best possible. If a teacher receives the best possible ratings from his students, these ratings amount to a pat on the back rather than a source of information that can be used to assist the teacher in improving his teaching performance. Most teachers, however, do not receive the best possible ratings from their students and thus may find such ratings beneficial in identifying areas in which improvements may be made.

Using student evaluations to improve teaching performance

Some important factors that should be considered when feedback of student opinions is to be used as the change

(Continued on next page)

agent for improving teaching performance are:

1. Student evaluations should be obtained systematically each year or preferably twice per year.
2. Student perceptions of the teacher may not change as rapidly as the teacher's actual improvement of his teaching performance.
3. The teacher may wish to obtain assistance from a source outside the school in helping interpret the scores of student evaluations of their teaching performance.
4. The teacher may wish to obtain assistance in planning strategies for the improvement of his teaching from an outside source such as a teacher educator.

The rationale for obtaining student evaluations systematically once or twice each year is that a single evaluation of teaching performance and the subsequent analysis of the information by the teacher have not proven to be highly successful in changing student opinion about the teacher's performance. Whereas, where student evaluations have been obtained on a systematic schedule over a period of at least two years, greater improvement has been observed. This is probably due to two factors. First, teachers by observing the results of a single evaluation of his teaching performance may attempt to improve his instruction for a while and then tend to forget what changes the evaluations showed as being needed. Thus the strength of a single student evaluation as a change agent is relatively weak. In addition to the weakness of the change agent, students are stubbornly persistent about what they think of a teacher. This causes a slow recognition by the students that the teacher has actually changed his teaching performance. Thus if a teacher obtains student evaluations at the end of the semester and makes very earnest attempts to improve his teaching, he may observe a very slight improvement in the student evaluations. Teachers who have had problems with students respecting them as teachers will find this slight change very significant while other teachers may feel that such a change is very insignificant. Considering that the improvement of the teaching process is cumulative, these slight changes over a period of two or three years can make the difference between a mediocre teacher and an exceptional teacher.

The teacher may also wish to obtain help from persons outside his school to assist him in interpreting the results of student evaluations. A teacher educator working in an in-service capacity can assist the teacher in determining the meaning of the student evaluations and planning strategies that the teacher can use in improving his teaching. The advice given to the teacher may take the form of tips on teaching techniques or ways that the teacher can improve his total agricultural program. The teacher may identify areas of weakness in which an in-service graduate course would be beneficial.

An instrument for obtaining student evaluation

The author has developed and tested an instrument designed to be used to obtain student evaluations of the teacher's performance. This instrument was field tested using the responses of students about their student teacher as the data on which to base the evaluation and grouping of items.

Administering the instrument. Students were informed that:

This opinionnaire provides you an opportunity to express your opinions about your teacher and his teaching. There are no right or wrong answers, so do not hesitate to respond to each statement exactly the way you feel. In no instance will your responses be made known to your teacher.

In addition, they were instructed to respond to items on a five-point scale ranging from "very true" to "very untrue." Definitions of the response words were also given.

Scales included on the instrument. Scales included on the instrument were written to describe both the problem-solving approach to teaching and the micro-teaching model. The data obtained from the field test of the instrument were subjected to both item analysis and factor analysis. The factor analysis procedure allowed the author to test the grouping of items for the scales originally written based on a statistical analysis of the data as well as to revise the instrument reducing it from the original 75 items to 50 items. The seven revised scales are as follows:

Scale	Item number	Item
I. Establishing Set	1	Asks questions that make us think about things in a different way than we had before.
	4	Gets our attention before starting class.
	7	Explains how we can improve our work.
	22	Makes me feel eager to learn what he is teaching.
	23	Has us establish goals.
II. Reinforcement	28	Summarizes at the end of each lesson.
	30	Has us give reasons why we should study a topic.
	32	Relates our classwork to our needs and interests.
	33	Makes us recall what we have just learned.
	37	Uses a lot of things to illustrate what is being studied.
	39	Calls on us when we are not paying attention.
	44	Gets me interested in what he is talking about.
	48	Can tell when we do **not** understand what is being talked about.
	49	Uses objects to demonstrate what he is trying to teach us.
	50	Explains how issues can be looked at from more than one point of view.
III. Recognition of Behavior	8	Gets our attention when we start to daydream.
	9	Gets us to listen to what he is saying.
	10	Shows disapproval when we misbehave.
	14	Makes sure my attention is on what is going on in this class.
	18	Scolds us for our behavior.
	20	Lets us know when we are **not** listening.
	21	Makes sure that we are paying attention.
	24	Is aware when someone gets sleepy.
	31	Gets me to listen to what he is saying.
	34	Lets us know when we are misbehaving.
IV. Questioning Technique	3	Discusses all sides of an issue.
	5	Asks questions that begin with the word "why."
	6	Asks questions that lead to other questions.
	12	Uses our experiences to illustrate topics being discussed.
	13	Asks additional questions when we cannot answer one.

(Concluded on page 43)

EVALUATION

Frank Wimer
Director, Program Planning
Coordinating Council for Occupational Education
Olympia, Washington

Frank Wimer

Vocational agriculture educators, indeed all educators are entering a new era in which the terms "evaluation" and "accountability" will take on greater meaning. This new emphasis is accompanied by an increased utilization of measures of accomplishments in educational planning and in the allocation of resources.

Robert Norton, Research and Development Specialist, The Center for Vocational and Technical Education, Ohio State University, makes a distinction between the terms evaluation and accountability:

> While evaluation focuses on providing useful information for the purpose of making more rational decisions about programs, accountability focuses on documentation of what happened and why. What decisions were made and why were they made?[1]

This article will deal with evaluation, emphasizing two basic ideas:

1. Evaluation must first be concerned with measuring results in terms of goals and objectives (that is, it is primarily output rather than process oriented).
2. Evaluation must consider not only the output of the educational program but also must consider the impact of that output in terms of serving the needs which the program is designed to meet.

Since the primary purpose of vocational agriculture education is to provide programs, services and activities to assist persons to become employed or self-employed in agriculture related fields, then the programs should provide for the development of competencies which the market place will need,[2] and the first level of evaluation should measure accomplishment of the goal of employment.

There are many aspects of agriculture education which can be evaluated: teacher competencies, facilities and equipment, curriculum content, etc. While each of these is a contributor to the accomplishment of the primary goal of employment, they are not measures of the "end result" expected to be achieved, that of employment.

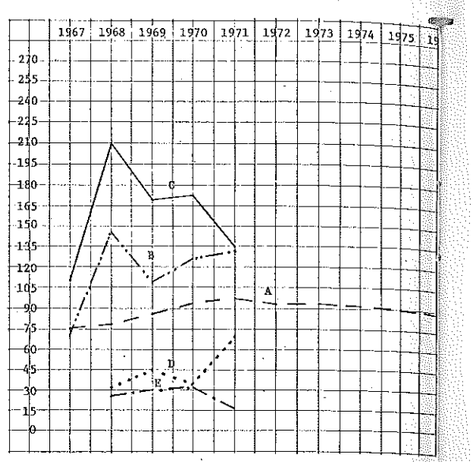
We may evaluate by comparing various "process" components (teacher competencies, facilities, etc.) with agreed-upon standards, make an analysis, and conclude that the program is "good." And yet, it may be "good" at doing the wrong thing.

The first phase (level) of evaluation should determine to what extent the primary objective is being met; that is, how many of a group of entering enrollees are employed at the end of the normal training time. It is not enough for a high percentage of graduates to become employed. The rate of employment of all those who were enrolled is significant. A system which "weeds out" during the process to assure a "high quality" of a reduced output is not efficient.

Evaluation is concerned with the "what happened," a concept which attempts to "collect useful information for the purposes of making sound decisions about programs"[1] as the program output relates to "meeting manpower needs." To determine "why" requires a further look at the process components (teachers, facilities, curriculum, etc.). Remember also that forecasting is an integral part of any system involved with evaluation.

Many of the present forecast and evaluation systems make what I believe to be false assumptions when comparing "output" and "demand." The first assumption is that it is possible to measure the output of all the various training systems. The second assumption is that "output" from training has an impact on the "demand." No state to my knowledge has been able to measure the total "output;" and unless the "output" is employed in the "field or directly related field," there has been *no* impact on the demand.

In view of this and in order to structure some meaning into forecasting and evaluation, let me begin with a basic assumption: in a comprehensive school system[3] the skills taught should in general mirror or reflect the kinds of skills required or which will be required in the world. This means that the potential total vocational education enrollment in a statewide, comprehensive school system and the potential enrollment in selected occupations should be based upon projections of the work force composition[4] (see chart, item A).



Line A — Represents the potential enrollment in an occupational field based on the basic assumption (see footnote 4).
Line B — Represents the actual first year enrollment in the occupational field.
Line C — Represents the actual total enrollment in the occupational field.
Line D — Represents the number of last year's normal completing group who actually completed or graduated.
Line E — Represents the number of last year's normal completing group who actually were employed in the field or a related field.

We must first determine the occupational field to be considered and calculate the percent of average employment in the field for years that data is available. By multiplying this percent times the actual and projected total enrollments in a "comprehensive system" for these same years, a line can be plotted on a graph to show what the "potential" enrollment should be, based on the basic assumption (see chart, item A).

From official reports, trend lines can then be plotted for the occupational field, showing the actual past and present first year (see chart, item B) and total enrollments (see chart, item C), actual "completions"[5] (see chart, item

(Concluded on page 47)

The
Agricultural Education
Magazine

EDPRESS

AGRICULTURAL EDUCATION

INDEX TO VOLUME 44
(July 1971 - June 1972)

SUBJECT INDEX

(Continued on page 36)

Index to Volume 44 (July 1971—June 1972)

(Continued from page 35)

Index to Volume 44 (July 1971—June 1972)

AUTHOR INDEX

EVALUATION OF THE VOCATIONAL AGRICULTURE STUDENT IN THE FARM MECHANICS PROGRAM

Dan Acheson
Vo-Ag Instructor
Kimball County High School
Kimball, Nebraska

Dan Acheson

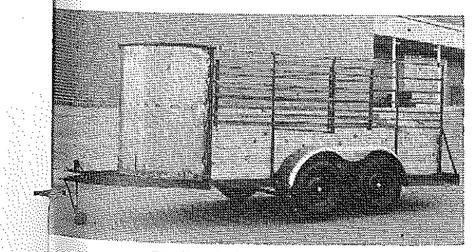
One of the most important portions of the Vocational Agriculture program is the farm mechanics area. This area, while essential for a well-rounded program, is probably the most difficult to evaluate.

The difficulty in the evaluation lies in what should be evaluated and how it should be evaluated. Grading or evaluation of farm mechanics students differs, from the instructor who carefully grades each weld, each nail, and each detail.

There is probably no basic way that is best as an evaluation of students in farm mechanics; however, at Kimball County High School we find a grade each day provides the best overall picture of a student's progress.

Breaking the general grading into class areas the following is the system used at Kimball:

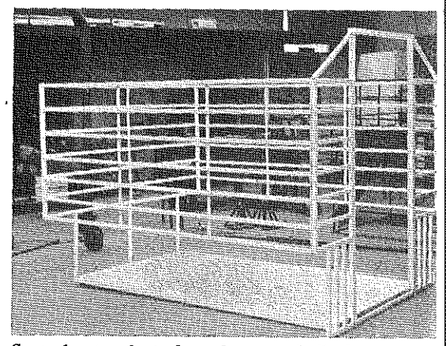
The freshman or Ag I level is basically an introduction or orientation level. At this level students are required to make step-by-step progress in each of the following areas: arc welding, oxy-acetylene welding, farm carpentry, hand tool care and use, and tool sharpening. Each student is allowed to move at his own pace to the first step in each area, and is then graded on his progress from that point. An example of this would be that a student learning welding could receive 10's for each day if he kept busy and progressed on to the flat weld; however, after being passed on the flat weld, he would only have three days to complete the T-weld before his grades were docked at the rate of one point per day. After the students in Vo-Ag I have completed all items in all of the above listed areas, they are then allowed to start on their first projects; these projects may be either wood, metal or a combination.



Trailer built by Agr. III students

We realize that each student must progress and mature at his own rate; and, therefore, the Vo-Ag II students are given a quick review of the skills which were learned at the Vo-Ag I level. This review is covered rapidly, although thoroughly; and again, students are graded on how busy they keep and on their progress. After the basic review, Vo-Ag II students will be introduced to the small gasoline engine and will have classroom and shop experience in this area. Also, masonry will be covered and evaluation is handled in much the same way.

The next step of the farm mechanics program for Vo-Ag II is that of larger, more complete projects. Students are given time and instructions to get a project for the farm mechanics shop. Those students failing to do this are docked on their grades daily and are assigned specific projects by the instructor. At the Vo-Ag II level the students are graded on: 1) whether they have a project, 2) if they stay busy for the full class period, 3) the progress on their projects, and 4) the finished project. Students are docked daily for any language not suitable for high school students, any "horse play", and any errors on their projects due to carelessness.



Several sets of stock racks were built by Agr. III-IV students, with profits to the FFA Chapter.

The last level of farm mechanics is that of Vo-Ag III-IV. This Vo-Ag class, while perhaps not typical, is a combination of the two levels. The main emphasis is aimed towards large projects such as stock trailers, stock racks, feed wagons and also various projects for the school system. The students at this level also become fairly competent at hardsurfacing. The evaluation here is again a daily grade and based much as previously mentioned. The students either build a large project of their own or are assigned one in which a project for some local farmer is built and sold with the profits going to the FFA Chapter. The evaluation at this level is more technical, and the students are nearly ready to go into the working world. The students are evaluated very strongly on accuracy, work habits, and mature attitudes.

The program of farm mechanics at Kimball County High School is basically evaluated on work. We feel that students who do not come to our shop to work are wasting both their time and the instructor's, and generally these students do not remain in the program. ◆ ◆ ◆

A WAY TO EVALUATE YOUNG FARMER CLASSES

David Bothwell
Vocational Agriculture Instructor
Mankato, Kansas


David Bothwell

The author developed a questionnaire which contained 20 criteria he thought necessary for successful Young Farmer classes. The questionnaire was sent to all vocational agriculture teachers in Kansas who conducted Young Farmer classes, their superintendents, and one Young Farmer from each class. The Young Farmer selected was usually an officer. The respondents were asked to indicate the degree of importance in Young Farmer classes of each of the 20 criteria.

From the 145 questionnaires sent, 127 were returned. The results were compiled and each degree of importance was given a weighted value as follows:

2 very significant
1 significant
0 undecided or no response
−1 limited significance
−2 no significance

The following 14 criteria had a positive weighted value as indicated by the responses of the teachers, administrators and Young Farmers:

Members should recommend course content. (+1.48)

Instructor and Young Farmer committee should plan and schedule classes. (+1.45)

Young Farmers should attend 75 percent or more of the classes. (+1.29)

Members should be given an opportunity to evaluate classes by indicating those that had helped them the most. (+1.28)

Objectives for the Young Farmer classes should be established and carried out. (+.89)

One social event should be held each year for Young Farmers and wives. (+.89)

Young Farmer classes should be provided with adequate physical facilities by the school at no charge. (+.85)

At least two Young Farmers should attend the state tour and convenion. (+.82)

Administration and school board should be informed of all Young Farmer activities. (+.78)

A Young Farmer organization should be chartered. (+.65)

Eleven or more classes should be taught by resource specialists. (+.52)

At least 15 classes should be held each year. (+.44)

A Young Farmer Wives organization should be chartered. (+.27)

Advisory council should assist in setting up classes. (+.03)

Instructor should visit each member's farm at least twice a year. (+.10)

Farm mechanics should be taught in two or more classes. (+.03)

The following items had a negative rating:

The Young Farmers and FFA should conduct one activity together each year. (−.10)

Young Farmers should conduct one or more fund raising projects each year. (−.10)

Young Farmers should receive more than one-half their income from farming. (−.22)

A minimum of four classes should be presented by the instructor. (−.92)

From the above information the author developed a score card for evaluating a Young Farmer program in Kansas. Criteria with a negative rating were eliminated when the score card was developed. The criteria with positive values were given one point on the score card for each .25 value of average weighted importance. ◆◆

(McCracken — from page 29)

SECTION VI: INSTRUCTION FOR ADULT AND YOUNG FARMER GROUPS
- A. Organization and Content of the Course
- B. Farming Program and Community Status

SECTION VII: FUTURE FARMERS OF AMERICA ACTIVITIES
- A. Organization and Planning of the Chapter Program
- B. Conducting Chapter Activities

SECTION VIII: THE TEACHER
- A. Qualifications
- B. Working Relationships

Several benefits, resulting from a comprehensive evaluation which I have identified in my department are:

1. **Improved community relations and communications.** Probably the most important item resulting from evaluation is a greater understanding of the vocational agriculture program by various community citizens.
2. **The opportunity for the administration, school board, and advisory council to discuss vocational agriculture.** For some of these individuals, this may be the first time to observe the vocational agriculture program.
3. **The opportunity for the vocational agriculture instructor to analyze his own program.** Each summer I had planned to make a comprehensive study of the local program, but never seemed to be able to schedule the time. A sound evaluation requires a study of all phases of the vocational agriculture program in an objective manner. As a result, the vocational agriculture course outline was revised considerably this year.
4. **Improvement of facilities, equipment, and teaching materials.** Due to evaluation, several changes were made in the local facility, and extra money has been channeled to the vocational agriculture department for the purchase of tools and equipment.
5. **Increased support for the vocational agriculture program.** The improved understanding and communication brought about by evaluation leads to added community support for vocational agriculture.

Possibly you can identify with some of these benefits listed and take this opportunity to look into an evaluation of your vocational agriculture program.

In conclusion, evaluation is beneficial to the vocational agriculture instructor or instructors, and vocational agriculture nationwide. Consider evaluation. It may provide the opportunity you have been wanting. ◆◆◆

SO YOU'RE A COOPERATING TEACHER!

Gary Kuhns
Student Teacher
University of Illinois


Gary Kuhns

★ Did you know that a student teacher sees the teaching profession through your eyes?

★ Did you know that many practices you use in your department will appear one or two years later in the student teacher's department?

★ Did you know that if you "don't need" advisory groups or adult education programs your student teacher may not "need" them in his new program?

★ Did you know that you influence a student teachers' continuation in education more than anyone else?

The foregoing statements were very real to me as I completed my student teaching experience at Unity High School, Tolono, Illinois, with an excellent cooperating teacher, Mr. G. Kyle Wittler.

What determines the success of student teaching? How can you help the student teacher "get the right picture" of the teaching profession? In my opinion the following list of suggestions should help you become a more effective cooperating teacher.

★ Try to meet with the student teacher as far in advance as possible. Get to know him. You may find that you have a personality conflict and need to have the student teacher reassigned.

★ Make it possible for your student teacher to visit your center during the summer. At my university, a summer experience program is offered. This gave me a preview of existing conditions and a head start on student teaching.

★ Assign in advance of student teaching, the classes to be taught. The student teacher can then prepare for them in his methods class.

★ When the student teacher arrives let him get started. Assign him his classes and then leave for a period or two. He will have enough problems getting started without worrying about you. You will not be able to help him until he finds himself.

★ It is usually good to start a student teacher with a freshman class. Because of the broad subject matter and their usual submissivness, freshman and usually easier to teach.

★ Give him some spur-of-the-moment teaching assignments. You can do this by arranging to have a phone call fifteen minutes after the class starts. Your student teacher will gain confidence in his teaching ability.

★ Give constructive criticism, but remember, it may look different from your observation point.

★ Before criticizing his discipline in the class room, consider that two types of students make noise; those students not involved and those who are very excited and enthusiastic.

★ Identify the student teacher's weaknesses and mistakes, but don't pick at small points.

★ For the student teachers sake, don't be afraid to hurt his feelings. Just be honest. He expects it and deserves it.

★ Keep your student teacher informed on his progress. A few pats on the back are usually in order.

★ Be the first to admit your mistakes. Did you know that teachers are human?

★ Ask your student teacher for ideas to use in your department. He may have picked up good points at the university or other high schools.

★ You can also make use of your student teacher as a resource person. He has a different background and has had experiences in areas you haven't.

★ Try to keep the student teacher busy, but forget busy work. He doesn't have time to get bored. There are too many other things that must be observed and absorbed.

★ Get the student teacher involved in all phases of teaching. He needs experience with advisory groups, FFA, classroom teaching, adult programs, placement, . . .

★ If possible allow the student teacher to help plan and teach an adult education class. Most student teachers are pessimistic about teaching adults. A rewarding experience with an adult program will benefit him in the future.

★ Divide the work load with the student teacher, but don't take advantage of him.

★ Consider using team teaching where possible. It will be an enjoyable experience for both of you to work together.

★ Most of all, treat your student teacher as another teacher.

So, you're a cooperating teacher. It must be encouraging to know that you have helped to make Agri-business Occupations and National Resources Education what it is today. Keep up the good work, and thank you for a job well done. ◆◆◆

BOOK REVIEW

IDENTIFYING THE CUTABILITY OF LIVE BEEF CATTLE, by Dr. Robert A. Long and Dr. Jack C. Everly. Danville, Illinois: The Interstate Printers & Publishers, Inc., 1971, $40.00.

This mini-course consists of carefully developed audiovisual materials (45 color slides, 21 minutes of instruction on a tape cassette, and the instructor guide) designed to provide the learner with an insight into the appraisal of live beef cattle for cuatability. The author, Dr. Robert A. Long, is the coach helping the learner develop an appreciation of the skill in picking high cutability cattle. Because the coach is always present on the tape, the learner can replay the tape and review the slides until the lesson is learned.

The Audiovisual material making up the course is highly adaptable to various instructional or presentation methods and may be used for individual or group instruction. A Kodak Carousel or similar projector and a tape cassette player is the equipment needed to conduct the course. Vocational Agriculture instructors who conduct adult evening classes in Beef Production will find this mini-course to be idcal in teaching cutability of cattle.

The cost of the mini-course is $40.00, additional copies can be purchased at $30.00 and one instructor's guide for preview only can be obtained without charge.

Frank Stover
Colombia, S. Carolina

A LAYMAN AND SCHOOL ADMINISTRATOR VIEW EVALUATION OF VOCATIONAL AGRICULTURE PROGRAMS

John Balthrop

John Balthrop, Farmer
Peabody, Kansas

When asked to write this article about evaluating our Vocational Ag. program, I wondered if I could really do a good job, but I agreed to put down my thoughts as a "some what" outsider. Even though I am a farmer, I did not take Ag. in school. I attended a very large city high school where Ag. was not offered. My knowledge of our Ag. program has been as a substitute teacher and an advisory council member.

Our program like so many others has a big problem with adequate financing and finding ways to keep the program as modern and able to change with agriculture. One of the biggest assets of our program is that we have several boys who are able to carry on rather good experience programs even though they do not live on farms. They are able to do this by using the FFA farm and participating in our Agri-Business program. With the big expansion for openings in Agri-business we should try to enroll more of these boys who would like to work in Ag. and help them gain a better background.

As a farmer learning about better bookkeeping methods, cash flow sheets, intended expansion and proper use of credit in today's business world, I feel that even more emphasis should be put on record keeping — actual keeping track of where the money goes for a project and whether it made a profit for labor and management, and not just whether there was a profit after the bills were paid. I think, if possible, students should go into tax forms and other record keeping programs. I believe one of the most valuable courses I took in college was a Farm Accounting course.

NO LONGER CAN THE CURRICULUM FORMAT BE GEARED SPECIFICALLY FOR BOYS WHO EXPECT TO FARM AS A VOCATION.

One of the biggest problems I believe in our program or any other general type program is its generality. I think that every teacher must be careful or a course of this kind can become specialized in the field or fields that the teacher enjoys most or finds easiest to teach. I know that it is easier said than done, but if a teacher, through a broad program approach, can arouse the interests in a boy and help him pusue them, he will feel most rewarded.

A problem in our school as I suppose is in others, are those boys who are registered in Ag. class and are not attentive in class. It is bad that these are the ones that distract the class for everyone. I think that in a vocational class it should not be so important how many pupils are in the classroom but the level of achievement of those in the program.

I think one of the most rewarding parts of the program for the students must be some of the extra activities that can be so important. It seems to me that camps, speech festivals, judging contests and conventions must be kept in the program as some of these are so important in helping a student grow up and become a complete person. This may often be the boys' first trip outside their own community. It may seem that I have rambled a bit, but I believe these are a few of the things that are best in our program and a few that could be improved upon. ◆◆◆

Clinton Hill

Clinton Hill
Principal, USD 398 High School
Peabody, Kansas

As an administrator of a small high school, my view and evaluation of vocational agriculture in our high schools of today has changed in the past six years. Before becoming principal of a high school, I was a teacher in the classroom for fifteen years. After being a student in high school and college and then as a teacher, I had developed the opinion that vocational agriculture in high schools would go out of existence as the number of farmers were decreasing and the number of farm students in vocational agriculture would probably decrease, which would make it financially unwise for schools to continue the program. As a social science teacher and an athletic coach, it was my opinion that vocational agriculture was just for farm boys who wanted to become farmers.

Since becoming a principal in a high school which has vocational agriculture in it's curriculum, I have to view the value of this course differently than I did six years ago. I am convinced that a vocational agriculture course in high school still has a definite value if the philosophy and objectives of the teacher has kept up with the change in society. No longer can the curriculum format be geared specifically for boys who expect to farm as a vocation. If this is the situation, then the course cannot be justified financially.

If the instructor of vocational agriculture has set up his curriculum to include agri-business and agri-industry than I feel we can financially justify the course in our high schools today.

Most everyone is aware that the field of agriculture has not only broadened in scope but has also become highly

(Clinton Hill — Continued from page 42)

specialized. Consequently, the teacher of vocational agriculture must be willing and able to provide a wide range of information and knowledge to any student who might have an interest in some area of agriculture.

Hunger, which is our greatest threat to peace and stable government, is a primary problem. Decreasing and stabilizing the birthrate while increasing food production, conserving water and soil, taking pollutants from the air, water and soil will be a tremendous task that will require a lot of talent by a lot of young people now in high school. The vocational agriculture departments can play a vital role in helping to solve these problems if the instructor has kept abreast with all of the changes and new demands in this area.

The communities, school boards and administration need to also be aware of these changes and demands in the agriculture world because new and different facilities are necessary if the teacher is to be able to carry out the program that is necessary and one that will be effective.

Like vocational agriculture teachers and the administration, the school boards and communities need to realize that vocational agriculture is no longer just for the farm boy who wants to become a farmer. The vocational agriculture program should be made available for both boys and girls and for the students from the city as well as the rural areas. It is just as likely that a student that lives in town could have an interest in an agri-related vocation as a student who lives on a farm. This is why the instructor has to design his program so that it is attractive to girls as well as boys and to city students as well as farm students. ◆◆◆

(Improving Teaching Methods Through Student Evaluation — From page 33)

	16	Asks additional questions to get more information.
	25	Shows us that we do **not** know everything.
V. Autocratic Behavior		
	2	Gets mad when we do **not** do our assignments correctly.
	19	Explains things from only one point of view.
	29	Does **not** recognize that there are different ways to look at things.
	40	Most of the questions this teacher asks can be answered either yes or no.
	43	Will **not** allow us to discuss both sides of an issue.
	26	Tells us the answer to questions rather than ask the questions in a different way.
VI. Motivational Behavior		
	11	Trys to get us to look at things in different ways.
	15	Encourages us to ask questions.
	17	Threatens us when we do **not** do our assignments. (Negative)
	27	Lets us know what we are going to be studying.
	35	Asks questions that make us think.
	36	Has us develop an objective for studying a topic.
	41	Has other students respond to what they think about answers that have been given to questions.
	42	Shows approval of good work.
VII. Acceptance Behavior		
	38	Changes the classroom activities during each class period.
	45	Encourages us to ask questions.
	46	Gets our interest by showing us that we do not know everything.
	47	Reviews what we have discussed often.

The teaching behaviors measured by responses to the items on the various scales are somewhat defined by reading the items included on each scale. Attention here will be devoted to the way in which each scale relates to problem solving. These explanations are:

I. Establishing set — This scale relates to the process of introducing a unit and problem area (lesson) including the establishment of goals and objectives.

II. Reinforcement — This scale encompasses the reinforcement of the learner as the basis for problem-solving teaching, especially those aspects that deal with recall and summarizing at the end of the problem area.

III. Recognition of behavior — This scale measures the awareness the teacher has of the mental and physical states of his students. While not directly related to problem solving, the recognition of the student's behavior and the subsequent correction of this behavior are important in any approach to teaching.

IV. Questioning technique — If the problem-solving approach to teaching is to work effectively, the teacher must develop his questioning abilities. Hence, this scale was developed to measure the degree to which the teacher has mastered these techniques.

V. Autocratic behavior — The democratic approach is stressed in the problem-solving approach to teaching. This scale measures the converse of democratic behavior. Thus a high score on this scale is not desirable.

VI. Motivational behavior — The primary advantage of the problem-solving approach to teaching is the factor of motivation. Hence this scale was designed to measure aspects of the teacher's ability to motivate the students.

VII. Acceptance behavior — This scale measures the degree to which the teacher accepts the thoughts and ideas of the students. An element of flexibility is also suggested.

Scoring the instrument. The scoring of the instrument is accomplished by summing the responses on each scale. The response words are normally assigned the following value: very true=5, true=4, undecided=3, untrue=2, and very untrue=1. A high score indicates that the students feel that the items included on the scales do in fact describe the teacher's behavior. The scale should be revised for a single item, item No. 17, before summing. The response scale for all items on the Autocratic Behavior Scale may be reversed before summing if the teacher wishes to obtain a score that represents democratic behavior.

Conclusions

The improvement of one's teaching skills is not an easy task. Many techniques can and should be employed by the teacher in his attempt to become a superior teacher. The use of student evaluation and subsequent feedback outlined in this article is one of these techniques. If the proper attitude is possessed by the teacher, the use of student evaluations will prove to be a viable method of improving the teaching process. ◆◆◆

McKeachie, W. J., "Student Ratings of Faculty," *AAUP Bulletin*, 439-44, 1969.
Thomas, Hollie B., Changing Teacher Behavior: An Experiment in Feedback from Students to Teachers. Unpublished Ph.D. dissertation, Purdue University, Lafayette, Indiana, 1969.

AGRICULTURAL EDUCATION IN NEPAL

Thomas R. Stitt

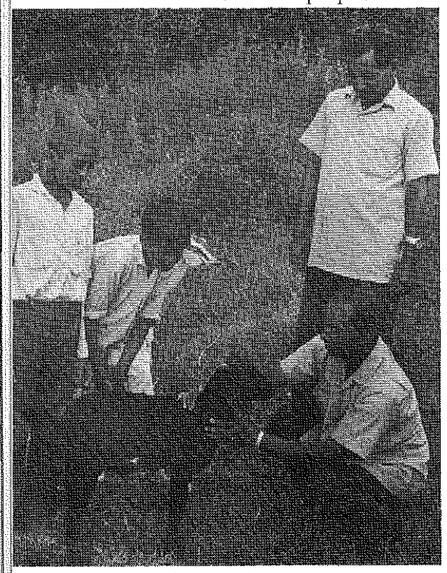
Thomas R. Stitt
Agriculture Education Specialist
International Services Division
Southern Illinois University,
Carbondale

Nepal "Nepal, a predominately mountainous rectangle, 90 to 150 miles wide (North to South) and 500 miles long, has a total area slightly over 54,000 square miles." This is approximately the same area as the state of Illinois. "Nepal is land locked and has three neighbors — India to the south, Communist Chinese — controlled Tibet to the North, and Sikkin to the east." All exported and imported items must move overland through Tibet or India or by air. The nearest seaport is Calcutta, India which is approximately 400 miles overland to the Southwest.

The last demographic data available reports 9.7 million people in 1961 with an annual growth rate of 2 percent. This would bring the current population to over 12 million people. Of this number it was reported there were over ¼ million urban dwellers which represents less than 3% of the total population. The remainder of the population was located in approximately 30,000 villages with an estimated average population of 335 inhabitants per village.

Hinduism is the predominate religion with approximately two-thirds of the population following this belief, and Buddism ranks second.

The country is ruled by a monarchy system headed by King Mahendra with the aid of the National Panchyat System which was established by the King. The capital is Kathmandu, which is centrally located and the largest city in the country.



The vocational agriculture teacher (Kneeling) discusses goat production with two of his grade 7 students while the Multi-purpose High School Headmaster looks on.

Agriculture in Nepal "Nepal presents a wider range of physical diversity than probably any other country of comparable size." On the Northern border are the Himalyan mountain range with six peaks in excess of 26,000 feet. "To the South, no more than 100 miles from the barren icy heights, the cultivated fields and steaming jungles of the northern rim of the Gangetic Plain are less than 600 feet above sea level." The annual rainfall is between 100 inches in the east to 40 inches in the west. The major portion of the rainfall comes during the monsoon season about 90 days in length, with the remainder of the year being mostly without rainfall. The concentrated rainfall and extreme drop in elevation combined with erosive soil types causes extreme problems of erosion. In the tarai, a fertile farm belt ranging from 5 to 55 miles wide running lengthwise along the southern edge of the country, there are climatic conditions which allow for year round cropping assuming that sufficient irrigation can be provided.

The soil type and vegetation fluxuate to the extremes in a short distrance due to the rapid change in elevation. Reports on land use estimates indicate that "one-third of the land lies under perpetual snow or alpine meadows . . . less than one-third is covered by forest . . . one-fourth of the land area is under cultivation, and reclaimable wasteland is limited." This would indicate that there is, compared to the total land mass, a relatively limited supply of land available for production agriculture. The demands for tillable land are extensive as it is estimated that from 85 to 93 percent of the economically active population is engaged in farming as farmers. There is, as would be expected in a developing country, considerable manual labor involved in the present production system. The animal population is estimated to be "seven million, of which 30 percent are cows and bulls, 26 percent oxen, 17 percent buffalo, 25 percent sheep and goats, and 2 percent hogs." The cattle are considered sacred and are not used for meat production. Some milk production is derived from the cattle and in limited geographical areas the castrated males are used as draft animals. The goat and buffalo are predominately used for draft, meat, milk, and hide production.

As in the case in most of Asia, Nepal has a rice culture and it is the major crop "occupying 55 percent of the land under cultivation . . . 20 percent in corn and millet . . . 10 percent in wheat . . . with potatoes, oilseed, tobacco, jute, sugercane, buckwheat, and vegetables" composing the remainder of the land in production for agricultural purposes. Marketing systems are plagued by storage, and transportation systems.

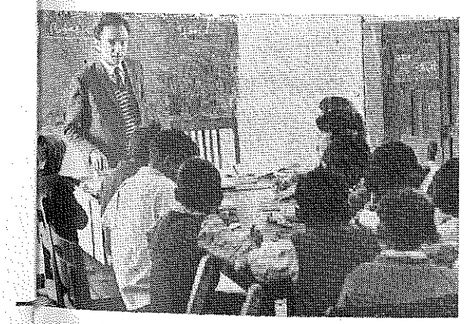
The low yield and large population relative to the tillable land mass limits exportation potential for agricultural crops. The major portion is used for consumption in Nepal, to feed the 90 percent of the population which lives and farms the land.

Education in Nepal When the present government system returned to power in 1951 the education level was extremely low. "Literacy among males was less than 10 percent, among females less than 1 percent, and only one child in 100 attended schools." By 1961 the primary schooling has been extended to 1 child in 7. This progress is primarily the result of the implementation of the 1954 National Education Planning Commission Report. The report proposed expansion of the primary, secondary schools and colleges and implementation of vocational schools and adult education programs over a 25-year period.

Vocational Education Vocational Education, commonly referred to as Multipurpose High School Programs (comparable to the Comprehensive High School concept in the United States) which were recommended by the National Educational Planning Commission was first introduced in the Pokhara School System in 1959.

The Multipurpose High School system was developed with three broad range objectives.

1. ". . . Youth who will continue their education in college . . ."
2. "Those who will become the professional and economic leaders . . . agriculturalist specialist, industrial executives, foremen and workers in business, agriculture, and industry . . ."
3. "The boys and girls who will terminate their formal education after secondary school in order to become the skilled mechanics, office workers, junior executives, foremen and workers in business, agriculture, and industry."



The vocational agriculture teacher from Nepalganj, Nepal discusses fertilizer and soils with grade 6 vocational students.

The Multipurpose High School programs have expanded to 29 geographically selected schools in Nepal. The existing course schedule, as it is found in most Multipurpose High Schools, would include English I, II, and Mathematics for one class period per day, six days a week, from grades six through ten. (Class periods range from 35 to 45 minutes in length.) Science, Nepali Language, Elementary San Skrit (Language), Geography and History three days per week. The Vocational Option would be taken ten periods per week, grades six through ten. Options include Home Science, Secretarial Science, Trade and Industrial Education and Vocational Agriculture. At the completion to the tenth year the student takes the SLC (Student Leaving Certificate) Examination. This is a Nationally administered examination placing 30 percent of the emphasis on the vocational specialty for students enrolled in that program and 70 percent on the academic program.

This procedure does tend to restrict the parameters of the Vocational Agriculture curriculum to conform with a nationally acceptable standard and reflect the social, economical, political, and cultural practices in Nepal. Progress is being made and some of the steps which have and are being supported by the Ministry of Education to improve Vocational Agriculture in Nepal include:

1. Each school is required to provide land for the department to develop livestock and crop enterprises as individual and class projects.

2. The Ministry of Education with the cooperation of the USAID program is establishing livestock, poultry and crop facilities with related equipment in each of the schools.

3. The Vocational Agriculture Teachers are currently encouraging student participation in practical field exercises which were adopted as part of the SLC Curriculum in 1969.

4. Vocational Agriculture Teachers are receiving Ministry supported in-service (summer or winter workshops) teacher training on improved techniques of agriculture production and teaching methods at the National Vocational Training Center.

The vocational agriculture teacher supervises students working on the school farm plots in Bhakapur.

5. The Young Farmers Program established in 1969 has been implemented in one-third of the schools with expansion to all schools planned. The demand for repeating the Young Farmer Program in the schools has exceeded the time and money available for the program.

6. The Future Farmers of Nepal organization which was established in 1969 is being expanded to new schools as teachers receive in-service training in the operation of the program.

7. Farm Shop and Mechanization has been identified as the major area for future consideration and expansion of the Vocational Agriculture Curriculum. This is in anticipation of the increased demand by farmers in mechanization of what is now an almost totally hand labor process.

In an accessment of Vocational Education's progress it is essential to realize that the total concept of Vocational Agriculture in any form has been in operation for less than 12 years in Nepal. The program is progressing rapidly and many of the Multipurpose High School graduates have entered farming or are continuing their education. In 1971 the Palace Task Force Report for Educational Development in Nepal placed the highest priority on Vocational Education and indicated the Agriculture Education should lead the field. The future development of Nepal has, is and will be influenced by the Vocational Agriculture program.

If you desire a list of the references used in preparing this article, please contact the author.

LET'S COMMUNICATE WITH THE SLOW LEARNER

N. K. Quarles
Teacher Education
East Texas State University
Commerce, Texas

Introduction

N. K. Quarles

Did you ever have a student who couldn't do a thing in the classroom, but when you went on a field trip or into the agricultural mechanics shop, he would sometimes actually be your leader? Most of you have experienced this, if you have taught vocational agriculture for any length of time. Although there may be many reasons for this, we usually find that these students are educationally deprived. They can be identified by the following characteristics: (1) short attention span, (2) narrow range of interest, (3) restricted vocabulary, (4) low academic potential, and/or (5) slow rate of progress.

These people are the doers of life. They are the ones who milk cows, harvest crops, build fences, drive tractors, bale hay and perform many other jobs around our communities. School children in this educationally deprived group usually make up 20 to 25 percent of our total school population. Yet, about 75 percent of our time is spent with these people later in life.

Action Needed

What can you do about the student who comes to your class, puts his head down on the table, and apparently pays no attention to anything that is said or done? Some teachers force him to sit up and look to the front, some ignore him completely and let him sleep, while some teachers give him a "busy job," like sweeping the shop. Are any of these the solution to the problem?

These people are the doers of life. 75 per cent of our time will be spent with these people later in life.

There is one thing for sure; the teacher and the slow learner are not communicating with each other. The child is not learning; therefore, the teacher is not teaching him. This type student is a potential dropout, if something is not done to prevent it. One educator recently said that most of these students become "pushouts" instead of "dropouts."

Conclusions and Recommendations

This is a difficult problem even for the experienced teacher, but something must be done before it is too late. Here are some recommendations:

1. Students must be taught on the level of which they are capable of learning. This may require the class to be split into two sections where possible.
2. Easier, simpler questions must be directed to less capable students during group discussions.
3. Slow learners must have extra help during supervised study periods. Some of them may not be able to read or write well, if at all.
4. More demonstrations, field trips and visual aids must be used.
5. Teacher conference periods, often referred to as "off" periods, must be used in counseling the slow student.
6. Stronger emphasis in agricultural mechanics can help. These students usually like to build or repair things.
7. The teacher must show understanding and patience when working with the student.
8. More home visits can help the teacher to understand the child and his environment, thereby enabling the teacher to do a more effective teaching job.
9. Remedial reading can do much to improve the academic ability of the child.
10. The teacher, by studying the permanent folder in the counselor's office, can gain information from various tests and past performances of each student. This can serve as a guide in directing the learning of the student.
11. The teacher must take courses, attend workshops, read books and periodicals, study results of re-research and keep informed on modern methods and techniques in teaching the educationally deprived youth.
12. If all conscientious efforts fail, then there is a possibility that the student should be assigned to Special Education for future instruction. Of course, many small schools do not have Special Education classes.

It is time that we rededicate ourselves to the task to be done. Vocational agriculture must accept their share of the slow students. Let's all join together in learning what to do and then go about doing it. This is a challenge we must not refuse to accept. Many of these students can become useful, tax-paying citizens of our society. The time for action is now. ◆

HENDERSON RECEIVES HONORS

G. E. Henderson

The American Society of Agricultural Engineers has just announced that G. E. Henderson has been recognized with two honors. One is the election to the grade of Fellow in the Society. The other is his election to receive the Massey-Ferguson Educational Award. Formal recognition of these honors were a part of a ceremony at the annual meeting of ASAE in Little Rock, Arkansas, June 30, 1972.

Henderson is known for his enthusiastic efforts in the development of simplified instructional material; the main emphasis being on completeness and accuracy such that a teacher or student may be able to develop understandings, make intelligent decisions, or do a job.

Henderson is Executive Director of the American Association for Vocational Instructional Materials (AAVIM) and Professor of Agricultural Engineering at the University of Georgia. The Association functions as part of the University. It is an organization which he helped to found and which he has led since 1949. As a result of his efforts, over one million copies of AAVIM instructional materials are serving teachers and individuals throughout the nation and over the world. ◆◆◆

DURKEE TO HEAD DEPARTMENT

James Durkee

James Durkee, NVATA President, 1965-66, has been named to head the Agricultural Education Department at the University of Wyoming at Laramie. Jim will replace Jack Ruch, long-time Head of the Department who is retiring July 1.

STENZEL NAMED TO NVATA POSITION

Sam Stenzel

Sam Stenzel, present NVATA Treasurer, has been named as Assistant To The NVATA Executive Secretary and began work in the newly created position on July 1, 1972. He will be working in the National Office located at Lincoln, Nebraska where he will continue as Treasurer of the organization but not as a member of the Executive Committee.

Mr. Stenzel has a long record of successful and dedicated service in professional organizations. He served as NVATA Vice President for Region II, 1963-1963; National President, 1964-1965; and as Treasurer from 1967 to date.

He is a graduate of Kansas State at Manhattan, taught vocational agriculture at McDonald, Kansas, 1950-52; at Alamena, Kansas, 1952-58; at Russell, Kansas, 1958-1970; and since 1970 has been head of the Agriculture Department, Colby Community College, Colby, Kansas.

Sam is recognized nationally as one of the most knowledgeable individuals in regard to the history, achievements, and goals of the NVATA and is thoroughly familiar with the Operating Procedures and Policies of the Organization.

(Wimer — from page 34)

D) and actual placements (see chart, itm E) of the previous year's total enrollees (including those completing and those not completing) in "field for which trained or in a related field" as reported in October each year.

The "potential enrollees" line gives an enrollment projection into the future, based on work force trends and projected total enrollment. The other four lines show actual happenings as a result of the school system.

By making comparisons between the trend lines for potential enrollees, first year enrollees, total enrollees and placements (employment), some assumptions can be made as to the balance and condition of the "school system."

The relationship of the trend lines for "first year enrollees" (see chart, item B) and "number employed in the field or related field" (see chart, item E) is significant. Movement toward each other is an indication that the school system is becoming more efficient.

Conversely, lines moving away from each other indicate that the enrollment is exceeding the demand for the system output, due to poor quality of output or to an actual low demand.

In addition to the charts, various analyses can be made. Examples are to compare the trend of "percentage of average employment" and the trend of "percentage of enrollees in the occupational field," or to determine the completion rate or percentage of those enrolling who become employed in the "field for which trained or a related field."

Since one of the major goals of vocational education is to "meet the demands of the labor market," another important relationship is that of comparing a continuation of the present level of "employed output" and the projected "demand" (growth plus replacements),[6] calculated by dividing the number projected to be "placed" during the forecast period by the projected demand for that same period. This comparison is one measure of the impact which the school system is projected to have in supplying the estimated demand.

Forecasting, evaluating and all the related components can become very complex. But if educators will develop a mental attitude which places first priority on comparing results (output) to goals and objectives, and expend energy on evaluating "process" only when the results are not as expected, the activity will take on greater meaning. ◆◆◆

1. "The Relationship Between Evaluation and Accountability," Robert E. Norton, AMERICAN VOCATIONAL JOURNAL, February, 1972, Vol. 47, No. 2.
2. Public Law 90-576, Section 101.
3. "Comprehensive school or system" is defined as a school or educational system in which: (1) a full range of program is offered, general academic and vocational; and (2) the enrollment in selected occupational fields can be measured.
4. "Potential enrollment" indicates what the enrollments probably should be when calculated by the methods described and when based on the assumptions indicated.
5. U.S. Office of Education report, O.E. form 3139, 5/71, Placement of Program Completions in Vocational Education Programs.
6. *Occupational Manpower and Training Needs, Bulletin No. 1701*, page 22, U.S. Department of Labor.
7. *Occupational Training Information System (OTIS)* Division of Research, Planning and Evaluation, Oklahoma State Department of Vocational and Technical Education.
8. *A Systems Approach to State-Local Program Planning*, Walter M. Arnold, Pennsylvania Department of Public Instruction, 1969.

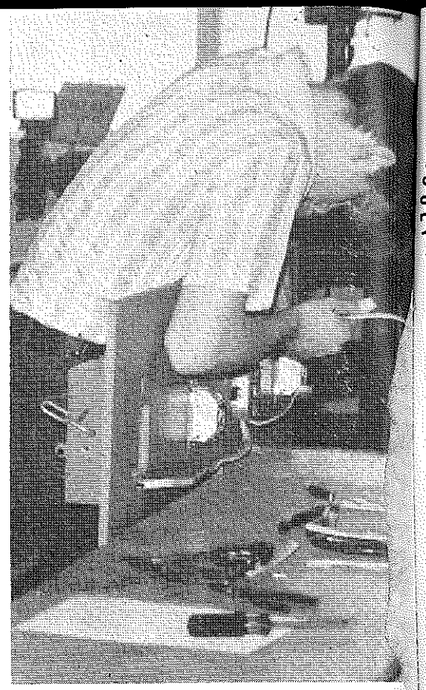
AGRICULTURAL EDUCATION

Agricultural Education

olume 45 September, 1972 Number 3

Stories in Pictures

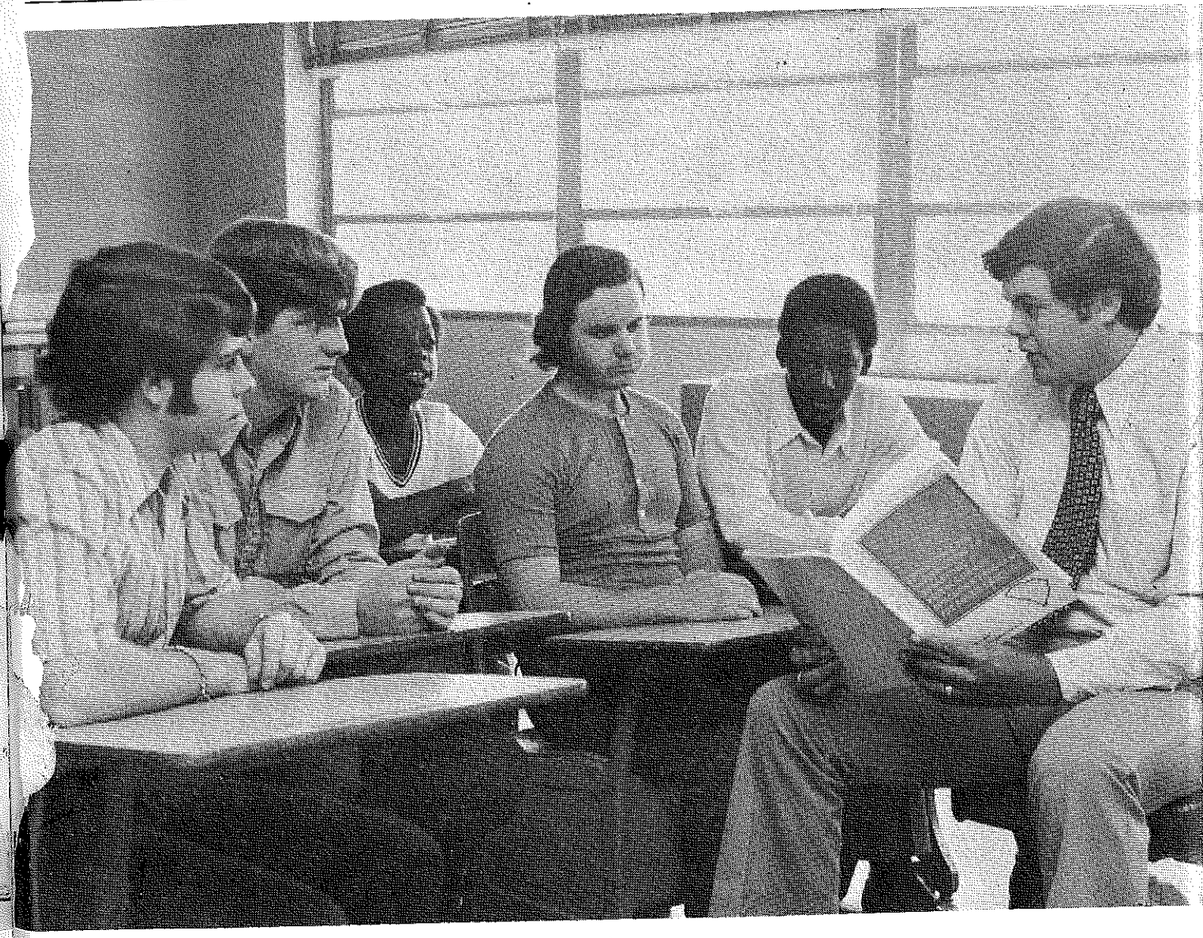
by Richard Douglass



Area III F.F.A. Members participate in Electrification Contest at the University of Southwestern in Lafayette, Louisiana. The contest is sponsored by Louisiana Investor Owned Electric Companies. (Photo by John Vallot, Supervisor-Executive Secretary Louisiana Association of FFA)

David Lewis, right, receives valuable instruction from Mrs. Charles Jeffries in cutting and packaging meats during his work experience program in his Senior year at Greenbrier Locker Plant. David, a school dropout, returned to graduate from Greenbrier East High School, Lewisburg, West Virginia, in 1970. He completed 1 year of Production Agriculture and 2 years of an Agricultural Sales Service course. He is now employed in the meats department of a supermarket. (Photo by Guy E. Cain, Program Specialist)

High school students observe anesthetized groundhog held by Dr. Thomas F. Albert of Greenbelt, assistant professor of veterinary science, during demonstration on North America's largest true hibernating animal at fourth annual Science in Action conference on the University of Maryland campus in College Park. One-day event was sponsored by College of Agriculture to give high school students and their teachers an insight into the application of science to modern agriculture. Attendance included 510 students and 95 teachers from 104 public and private or parochial schools representing 19 Maryland counties and the city of Baltimore. (Photo from Info. & Pub. Department, University of Maryland)



CAN WE SHOW A PERSONAL INTEREST IN EVERY STUDENT?

Theme— A GUIDANCE ROLE