STORIES IN PICTURES

by Joe Sabol

Ken Eagle (right), program student, works in packing plant, grocery store, or restaurant in the Swine meat packaging and marketing program at Texas State Technical Institute, Weiss, TX. (Photo courtesy Ken Eagle and Gene Erwin, TSTI, Weiss)

Ella Young Farmers Lindsey Feust and Jim Dury are shown demonstrating the handling qualities of various animals. The roof was quick frozen and then shattered against the side of the tank. (Photo courtesy Don Bruegg, Elida, OH)

YoTech students from the Natural Resources Technician Program at the State Dept. of Natural Resources in training 12-16 year olds in resource and safety operation and in the air safety program. (Photo courtesy David Wimmers, YoTech Insts., Belgrade, Minnesota — Related story on page 241)

Gale Hays of Indiana Hills Community College, Ottumwa, IA, describes a research paper presented jointly with Bob Stewart of the University of Missouri at the Fortieth Annual Agricultural Education Research Meeting held December, 1977, in Atlanta, GA. This is partnership in action. (Photo courtesy Bill Richardson, Parma)

Second year research student, Jessie Dierschke, ATL, places a sample on the mill's oven for evaluation. To her left, samples dip into the crude fiber separator. With her is Dr. Ronald Burton, Acting Chairman of the Animal Industries Program. (Photo courtesy Walter Beeman, Agricultural Education Service, Columbus, Ohio — Related story on page 260)

AGRICULTURAL EDUCATION

Volume 50 Number 12
June 1978

Theme—Cooperative Education in Agriculture—Learning on the Job—
## AGRICULTURAL EDUCATION

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### GUEST EDITORIAL

**LEARNING BY DESIGN OR BY ACCIDENT?**

**by Johnny M. Johnson**

**Teacher Education**

**Tulane State University**

**Stephenville, TX**

Many states are now involved in some type of cooperative education. The programs are conducted under various headings, but most involve a cooperative effort between agriculturists and educators for the purpose of providing educational experiences for students in an actual business establishment. The training received in school is usually aimed at complementing the on-the-job training. For example, if the teacher knows what the student will be doing at the training station next week, lessons at school will be aimed at preparing the student for that particular skill.

### BREAKDOWN IN PLANNING

This seems to be a logical approach to competence development, but the author has been concerned over the past few years with the need for additional concern in the planning of cooperative programs. This is not to say that all students are not being rotated from one skill to another in the business. Students are performing the same tasks each day. Other students are acquiring skills that may or may not be related to their training program. In order to consistently provide meaningful programs through on-the-job training, adequate planning must be done in advance of placing students in the business. Otherwise students are merely placed on the job and through the course of performing their duties they actually learn some of the skills needed in their chosen areas of work.

### THE TEXAS PROGRAM

The Texas programs have received considerable support from the agriculture and business communities and it appears that the program is sound footing and will be a part of the total agricultural program for some time in the future. In Texas the Cooperative Time Training Program. Students normally spend 15 hours per week on the job and five hours in the classroom. The rest of the school day is taken up with academic courses. The program is available to junior and senior level students. As in most states, guidelines and workshops have been developed for teachers as well as individual student guides for students in many occupations. Considerable work has been done on publicity for the program, training for teachers entering the program, and curriculum materials.

**THEORY AND PRACTICE**

It is suspected that at this point, cooperative teachers are beginning to think that this is fine in theory but will not work in practice. The author has been involved as a high school coordinator of one of the initial cooperative programs in Texas and is aware of the difficulties encountered in establishing sound training programs. Among these it is known that:

1. Employers have to receive something for the money they spend.
2. Employers have limited time to spend with students.
3. A certain number of students must be maintained for funding of the program.
4. Schools and students are employed by districts when school starts.
5. It is hard to get the businessmen to sit down and take time to plan.
6. The teacher has a lot of other duties he needs to be doing.

(Concluded on page 227)
A GOAL FOR THE NEXT DECADE—QUALITY PROGRAMS IN AGRICULTURAL EDUCATION

J. Robert Wambold, Professor
Vice President—Agriculture
American Vocational Association
Department of Vocational Education
The Ohio State University

Since the majority of those enrolled in agricultural education programs are high school students, the program growing most may not be the bright ones unless we can provide opportunities for agricultural education programs at higher proportions of high school and post-secondary students. As a result, develop relevant programs for a much higher proportion of the adult population. Continuing growth in agricultural education programs is in the number of persons enrolled.

IMPROVEMENT OF QUALITY AS A GOAL

As we deal with the reality that this period of growth in agricultural education will not be drawing to an end, I propose we launch a period of continuous development in agricultural education that emphasizes the complete or lack of agricultural education. As we pursue a goal of improving quality with the vigor and attention to the goal of quality growth during the past few years, I am not charging that we have paid no attention to quality during the past 15 years, but when the primary goals are growth and expansion, it is not unusual to give consideration to quality less attention than may be desirable. We are being less than candid if we do not admit that the twin goals of growth and quality are sometimes conflicting rather than complimentary.

COMING ISSUES

JULY — Careers in Agriculture — Summer Employment Opportunities
AUGUST — Teacher Education in Agriculture — Laying the Foundation for Good Teaching
SEPTEMBER — Student Competition — An Incentive Approach
OCTOBER — Supervisors and Consultants — Important Members of the Team
NOVEMBER — Effective Teaching — What's New
DECEMBER — Professionalism—That's the Name of the Game

ENROLLMENT IMPORTANT ALSO

In addition to a competent and committed corps of professionals, it is also important that the environment within which the professional operates is such that quality programs are encouraged, if not demanded. I propose that the following three major dimensions of the environment of agricultural education continue to encourage high quality programs: the philosophy of the school district; the organization and activities of the profession; and the personnel in whom the programs are carried on.

Quality programs in agricultural education do not operate in isolation from the remainder of the school system. They are only as strong as the overall quality of that school. But within most school systems, a large percentage of educational programs is sufficiently broad that some programs do not fit well or create a climate that may not be typical of all educational programs in the school.

High quality programs require, first and foremost, a corps of competent teachers; that is, teachers who are experts in the technology and skills in the specialized areas of agriculture and related sciences; teachers who have the ability and resourcefulness in the world of work generally and to occupations specifically; and teachers who have a philosophy of professional excellence and skill in planning, teaching, and evaluating educational programs.

A rank of quality is the level of professional and technical competence that together enter the profession and the extent to which they enter the profession maintain and continually develop a higher level of expertise in agriculture.

Teachers whose goals are high quality instructional programs aggressively create and seek out ways for improving their professional instructional competence. Their motivation for the maintenance and development of professional and technical competence goes far beyond the ordinary goals of professional development found in the requirements for the renewal of teaching certificates and the provisions of salary schedules that recognize continuing education efforts.

Competence alone is not sufficient to assure high quality agricultural education programs. A high level of competence must be accompanied by dedication and commitment to the profession. That dedication and commitment must be enthusiastic—not casual. It is reflected in teachers' activities and performances in the classroom and laboratory, in the school, in the community, and in the teachers' participation in the activities of the profession. Competent, committed, and dedicated professionals in agricultural education put dedicated priority on their employment as a teacher, teacher educator, or supervisor. Quality programs in agricultural education do not result when a high proportion of the professional personnel view their role as educators in secondary terms of time, energy, and commitment commitments to other employment or economic endeavors.

PROFESSIONAL ORGANIZATIONS

A second dimension of an environment that is conducive to the nurture and growth of quality agricultural education programs is the organization, structure, and activities of the profession. I refer to how those in the profession—teachers, teacher educators, and supervisors—are organized and structure ourselves to accomplish the tasks that contribute to and encourage quality programs.

Ohio State University Department of Vocational Education

This article is from a presentation made by the author at the Annual Conference of the National Agricultural Teachers Association, University of Illinois, June 1970.
CONTINUED A GOAL FOR THE NEXT DECADE...

SUPPORT SERVICES

A third dimension of an environment that contributes to quality programs pertains to the functions performed by teacher educators and supervisors. Supervisors and supervisory personnel provide vital role in the policy development process since state policies governing vocational educational programs are developed primarily in a state department of education. Agricultural education specialists in state departments of education help to shape state policies concerning agriculture in the policy development process. State level supervisors and consultants have a major role in guiding the overall progress of agricultural education in a state, for identifying problems and issues with which the professor must be concerned, and for consultation that encourages change and innovation in programs such that high quality programs result.

Experience

Experience may be defined as "learning by doing." The Standard College Dictionary defines experience as "the knowledge or skill derived from actual participation or direct contact rather than from reading and study." Experience provides the student with an opportunity to apply to participate and observe the principles and practices to be learned. The experiences students receive must be related to and contribute to their chosen occupational objectives. Students may choose to participate in any of the main areas of agricultural occupations recognized by vocational agriculture. These are:

- Produce Agriculture
- Animal Science
- Agribusiness
- Agricultural Mechanic
- Agrotechnology
- Environmental Science
- Horticulture
- Forestry
- Agriculture and Natural Resources
- Agricultural Education
- Agriculture, Other

A student may or may not be paid for the time they spend while gaining supervised occupational experience. The student may be either better off than regular students, or they may be better off than students who do not experience the work environment.

SUMMARY

The major factors that determine the degree of quality of agricultural education programs are the competence and commitment of those in the profession. Quality programs are characterized by those programs that cover all the major areas for the future. Quality programs in agricultural education do not automatically mean that we are building quality programs. It requires a constant vigilance to ensure that our agricultural education programs are effective.

S.O.E. PROGRAMS IN AGRICULTURE: WHAT AND WHY?

LEGISLATIVE BASIS

Each student enrolled in vocational agriculture education is required by law to have a supervised occupational experience program. The Smith-Hughes Act of 1917 provided for the training in vocational agriculture. The 1963 Vocational Education Act made it possible for agriculture teachers to teach all areas of agricultural occupations rather than just agricultural production. The Federal Register (Volume 35, Number 112, June 25, 1963) provided other regulations related to vocational education in agriculture. The regulations specify that instruction shall be developed and conducted in accord with the following standards to assure a quality program.

The program of instruction shall be based on a consideration of the skills, methods, and procedures that are required to achieve the occupational or other objective. The program must include a planned sequence of contents materials of instruction and/or experience (both) deemed necessary for the individual to meet the occupational objective.

The Bulletin of Federal Vocational Education Acts (page 18) specifies the requirements for content and the method of instruction.

The program of instruction will include educational experiences in the classroom, laboratory, and field. Laboratory experiences are appropriate for the vocational teacher, and field experiences are appropriate for vocational. Field experiences must be connected to the occupational environment or the field activity for which the student is being trained, and is utilized, directed, or coordinated by a person qualified to supervise.

COORDINATION

A supervised occupational program should be planned from year to year in accord that the student may gain the maximum experience possible.

And, of course, a trained individual program that will serve the best interest of the student is necessary. A training agreement, which is an understanding on the part of the student, parents, teacher, and employer relative to conditions of employment, is needed to secure a satisfactory situation in which to work.
Continued from page 276

**COOPERATING EMPLOYERS—PARTNERS IN EDUCATION**

by Donald E. Evans
Teacher Educator
The Pennsylvania State University

**AN EDUCATIONAL METHOD**

Cooperative education is an educational method whereby agriculture students are encouraged to work in a supervised occupational experience related to their career objective. It is a unique plan of education designed to integrate theoretical, practical, and vocational training and to plan a supervised occupational experience in selected educational employment assignments. This experience assists students to establish and achieve goals appropriate to their specific needs.

The Vocational Amendments of 1968 (P. L. 90-576) defines it as an occupational educational experience in which, through a cooperative arrangement between the school and employer, receive instruction including required academic courses and related vocational instruction by alternation of study in school with a job in any occupational field. This two-year experience must be planned by the school and employer so that the student is exposed to the student's education and to his employability. Work periods and school attendance may be alternated half-days, full days, weeks, or other periods of time. Now, through Vocational Act, cooperative education is a priority offering in vocational education.

**DOING TO LEARN**

Embodied in the FFA motto, the concept of cooperative education has well established roots in the vocational agriculture curriculum. Students receiving cooperative education experience in agriculture can take off their formal in-school vocational education with a related learning experience at a school approved work station. These agriculture students with unique or diversified career ambitions that cannot be taught in the existing agriculture education program can be matched with related supervised occupational experience to meet their educational needs.

*The key word is cooperative.* Cooperative education defines the atmosphere and arrangements that exist between the school and employer. It is a two-way cooperation. The school recognizes the employer's point of view—the profit motive, the need to get a job done, and the need for efficient, effective employees. Likewise, the employer recognizes the school's point of view; the need to train theory and to coordinate the development of both. The cooperative arrangement is mutually advantageous to both of these partners; hence, the agricultural student should be the chief beneficiary in this scheme. Through the cooperation of all three partners, an educational training agreement must be designed to assure that all parties understand their roles so that the supervised occupational experience is educational in nature. The cooperative and skillful effort of both the student to the school and to the employer, and the school.

*Concluded on page 278*
Agriculture Cooperative Training Program: "Learning by Doing"  

Notwacounty is located in the Southside Area of Virginia — a rural county whose main industry is agriculture in the form of dairy, broilers, small grains, and diversified grain-beef and forestry. Within the county are larger towns that serve as the business hub of the county — country meets town. Agriculture provides a very important role in the economy of the county as students at Notwacounty Senior High School are beginning to realize through the Agricultural Cooperative Training Program (ACT). The ACT program is designed to help students reach their educational goals by providing on-the-job training programs for agriculture and natural resource production. Students learn agricultural skills and knowledge at the school level and then apply these skills and knowledge in the real world through on-the-job training programs. The ACT program is designed to help students become independent and productive citizens through education and experience.

Job Site Selection  
Students who have been selected for the program are assigned to job sites prior to the end of the school year. Each student is given a written report that details the job site and the responsibilities of the job. Students are interviewed at the job site and given opportunities to ask questions about the job. Students are required to attend at least two orientations per year to keep up with the latest information on the job site.

ACT PROGRAM  
ACT Program objectives are to provide students with an understanding of the role of agriculture in our society, to develop their skills in the area of agriculture, and to provide them with the knowledge and skills necessary to be successful in agriculture.

ACT Guidelines  
The guidelines for students enrolled in ACT must be followed by the student and the parent. Several ideas can be found in the ACT Program Manual to help students succeed in the program.

ACT Requirements  
ACT programs must be developed in conjunction with the Virginia Cooperative Extension Service and must meet all requirements for acceptance into the ACT program. A list of acceptable programs can be found in the ACT Program Manual. Each student must complete the program requirements and meet the ACT Program Manual requirements to be accepted into the ACT program.

Some Merits of Cooperative Education  

The community benefits from the program because it provides a well-rounded education for students. High school students are involved in community work and are able to contribute to the community. The program also helps to maintain a strong community through the involvement of students.

The school district also benefits from the program because it helps to maintain a strong community through the involvement of students. The program also helps to maintain a strong community through the involvement of students.

The school district also benefits from the program because it helps to maintain a strong community through the involvement of students. The program also helps to maintain a strong community through the involvement of students.
A MULTI-PURPOSE VISUAL AIDS STAND

J. J. Peterson†
R. P. Welton‡

While serving on an international assignment at the Federal University of Santa Maria in Santa Maria, Brazil, the authors devised a multi-purpose stand for visual aids that would help teachers meet the multiple demands of their job. This portable stand is designed to accommodate projectors for movies, slides, or transparencies. The viewing screen can be adjusted for straight-ahead movies or slide use or above head height and sloping for the overhead projector. The screen can also be adjusted to be used as a blackboard or to hold charts. Use of the stand in these three positions can be seen in the accompanying graphic. One additional use of the stand is not shown here but it can be used without the screen to support roll-up charts. This stand can be adapted to functions in all of the situations where agriculture teachers work. Both the stand and plywood screen board can be made to fold small enough to transport in a car or station wagon. The construction is simple and can be made from common materials in a few hours by any school shop teacher.

Associate Professor Emeritus, Agricultural Mechanization, School of Agriculture, Southern Illinois University, Carbondale, Illinois.

Associate Professor, Department of Family and Consumer Education, College of Education, Kansas State University, Manhattan, Kansas.

Steps in Construction

1. Lay out center line with chalk on a level floor.
2. Draw two lines across this center line and 6 ½ feet apart.
3. Lay pieces of wood for legs on either side of this center line and spaced as in front view diagram.
4. Mark off positions of center pieces. Note that (1) two legs are different heights so that they will be exact when folded and (2) top of rear upper piece is 6” from the top rail grooved on inside to receive plywood screen.
5. Mark, cut and attach center pieces with screws.
6. Repeat steps 1-5 for second half of frame.
7. After each half frame is assembled, mark positions of the two hinges on legs. Make sure the hinge pins are parallel to the floor when stand is vertical, not at right angles to the legs or they will rest father apart. Folding legs are not necessary if stand is to remain in the classroom.
8. Carefully cut each leg at height shown and mount hinges on inside, and hook eye on outside of each leg. Hook and eye should be tight enough to stay closed when moving the frame. (Make these cuts parallel to floor also).
9. Attach hinges between the two halves of frame. Lay both halves on the floor with top ends together and cross pieces down and attach hinges to join the halves.

10. Attach hooks and chain, also special hook to support screen vertical when needed. (see position 1 in sketches).
11. Bore ½” holes, 4” apart in front legs only. These receive ½” dowels to support screen and chart.
12. Cut 2 dowel pins about 4” long and 4” apart and attach to legs with care. These pins may be inserted in all the holes. This ensures pins being available when needed.
13. Attach folding 10” extensions to ends of front top cross piece so that they fold towards screen board.

1. Cut ½” plywood in 58”x52”.
2. Drill or nail the two 40” wood pieces on back (across grain) and 3”-3” from top and bottom.
3. Cut down the center (with grain) and attach hinges between the wood pieces so that screen will fold.
4. Bore hole in center of 54” wood piece for bolt and mount in center and near end of one screen halves so that it holds screen flat when in use. (see diagram).
5. Attach screw eye near center of this piece to receive special hook when used in position 1.

6. While screen of sign cotton should be long enough to extend horizontally beyond sides of wood screen. Use ¾” wood pieces tacked and glued to ends of cotton to keep it aligned.
7. Attach hooks to the center of these two pieces and use a flexible string or surgical rubber tubing across back of board to keep cotton screen in tension while in use (while being transported screen is removed and rolled).
8. Paper charts, if used, may be mounted between two wooden strips across the top and displayed between improvised wire hooks made from wire coat hangers and hung from the wooden folding side extensions on the top rail.

The foregoing detailed description will cover the most common uses, but the user may devise other ways to use this portable and versatile display stand. The board may be sandblasted, painted with suitable paint and used as a blackboard. If blackboard and screen are used to be used interchangeably, two boards can be provided.

Some Uses of the Stand

Charts or blackboard

The Material List is included on the following page.

Screen

Top View

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The Agricultural Education Magazine

June 1958

Overhead Projector

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CONTINUOUS A MULTI-PURPOSE VISUAL AIDS STAND

Material List

Stand

1. 1 piece 3/4 x 3/4 x 18 1/2 - legs
2. 2 pieces 3/4 x 3/4 x 30 1/2 - lower
3. 2 pieces 3/4 x 3/4 x 20 - center
4. 2 pieces 3/4 x 3/4 x 20 - top

All horizontal pieces (rest are stuck on top to rest on overhead screen)

5. 2 pieces 3/4 x 3/4 x 10 - folding sides on top bar.

6. 1 pair strap hinges 3/4 x 2 1/2 steel, between leg frames at top

7. 2 pairs butt hinges, 3/4 x 2 1/2 steel, leg joints for folding legs

8. 1 pair butt hinges 3/4 x 2 1/2 steel for hinged side wings on top front bar.

CONTINUOUS COOPERATING EMPLOYER BENEFITS

Cooperating employers realize that the young agriculture students are usually new to "the world of work" and, as such, do not expect them to be as competitive as the experienced persons. Actually, this is a plus because the cooperating employer is the one who builds the local employer whom the student will be with in the future. The more that the employer is with the student from the beginning, the more likely it is that the student will be with the employer. There are many advantages for the cooperating employer. They are:

1. The agriculture student is under school discipline; therefore, the progress, the job, is punctual and effective. The employer is not removed from the work station.

2. The agriculture student has training in cooperative education classroom and shop and the knowledge of skills necessary to be competent on the job.

3. The agriculture student is matched to the job based on career interest and abilities. On the plus, the cooperating employer operates under the same selection privileges as any employer, but the chances of getting a good employee are even better through cooperative education.

4. A pool of potentially permanent employees who have demonstrated their interest and ability are established.

5. The opportunity is increased for and train highly motivated students.

6. They introduce fresh, new ideas.

EMPLOYERS...

7. There is an opportunity to use an efficient employee training program and recruitment procedure.

8. There is a chance to send goodwill ambassadors back to the school.

9. There is an opportunity to have better qualified agriculture students coordinating the offering and assisting to secure trained individuals to meet employment needs of the world and the world of work, and its experiences. Through cooperative education in agriculture, the student can gain the best of both worlds. While in school, the students normally carry regular course schedules and must keep attendance counseling from teachers. While on assignments, the work for cooperating employers and the students is not continuous counseling. Upon graduation, the agricultural student has both a diploma and a substantial amount of supervised occupational experience to offer a potential employer. The important point is the employer is still a potential employer. What he or she does with this information and the initial hiring will determine the future of the student.

THE KEY PURPOSE IS EXPERIENCE

It is important for the agriculture student of today to live in two worlds—the world of school with its experiences and the world of work, with its experiences. Through cooperative education in agriculture, the student can gain the best of both worlds. While in school, the students normally carry regular course schedules and must keep attendance counseling from teachers. While on assignments, the work for cooperating employers and the students is not continuous counseling. Upon graduation, the agricultural student has both a diploma and a substantial amount of supervised occupational experience to offer a potential employer. The important point is the employer is still a potential employer. What he or she does with this information and the initial hiring will determine the future of the student.

LOCATING TRAINING AGENCIES

Initially, suggesting that students attempt to locate their own training agencies provides them with an important experience in interviewing for a job. Carrying out this type of interviewing and job-interviewing skills will be of value to the students as they begin their search. Often those students who locate their own training agencies have a better working relationship with the supervisor and a more enthusiastic attitude toward their job than those students who have been placed on jobs by the instructor. It is important that the teacher investigate and approve of the training agencies located. These agencies should meet, as closely as possible, the criteria for the selection and approval of training agencies which have been set forth by the vocational teacher. It would therefore be wise to introduce the students to these criteria prior to their search for a position.

Students who at first are unable to locate a training agency on their own should be assisted further by the teacher. Following are proposed methods for locating available training agencies:

1) Speak with the department's local advisory committee concerning the need for suitable training agencies. This committee may prove to be a valuable communication link between the community and "advertising" the program to friends and associates, as well as suggesting potential individuals or businesses that might be interested in assisting with the on-job-training programs.

2) Make visits to potential agencies. Discuss the objectives and responsibilities of the training program with employers who have not previously taken part in such programs. Be sure that the value of the program is well understood. Good salesmanship may establish a new training agency for the program.

3) Work-enterprise offers to be a useful method for locating available training agencies. Inquire about possible positions from school, fellow students, faculty, members, friends, and neighbors.

4) If a job placement service is available to students, job placement personnel may be aware of local businesses that have vacancies.
WHAT DO STUDENTS THINK OF OCCUPATIONAL EXPERIENCE?

by David L. Williams
Teache Education Iowa State University Ames, IA

1. Appreciate the importance of honest work
2. Develop acceptable personal and work habits
3. Establish and maintain working relationships with others
4. Recognize and accept opportunities in agriculture
5. Use buildings and equipment in farm operations
6. Recognize my abilities, talents, and interests in making employment plans
7. Realize that everyone can make a contribution to their occupation, family, community, and nation
8. Explain the importance of agriculture to their occupation, family, community, and nation
9. Communicate effectively
10. Conserve soil, water, and other natural resources

NON-AGRICULTURE ORIENTED STUDENTS
The ten abilities with the highest mean ratings by students who planned to enter non-agricultural occupations were:
1. Appreciate the importance of honest work
2. Develop acceptable personal and work habits
3. Establish and maintain working relationships with others
4. Recognize my abilities, talents, and interests in making employment plans
5. Realize that everyone can make a contribution to their occupation, family, community, and nation
6. Recognize my abilities, talents, and interests in making employment plans
7. Follow your abilities and interests in making employment plans
8. Conserve soil, water, and other natural resources
9. Finance farm operations
10. Produce crop products
Cooperative Education Programs have exploded in number during the last decade. There are currently 12 "basic types of cooperative programs" for vocational education in Illinois. All of them owe their existence to federal and state legislation which provided the impetus and the importance of "learning by doing." The cooperative program for vocational agriculture is referred to as ACE (Agricultural Cooperative Education). In addition to ACE, secondary Vo-Ag programs in Illinois include SOEP (Supervised Occupational Experience Program). Vo-Ag teachers recognize both the potential and the limitations of these motivating and training aids in preparing students for vocational occupations in agriculture/horticulture. Can you distinguish between these programs? If a student asks, "Should I participate in ACE or SOEP?" what would you say? If you have similar programs in your school, and you believe they are duplicating each other, you may be in error. The following sections provide distinguishing characteristics of SOEP and ACE respectively.

DEVELOPMENT OF SOEP
The major legislation promoting the use of SOEP in secondary Vo-Ag programs was the Act of 1946. This legislation’s objective was to appropriate more money for improved vocational education. As a result of this act, SOEP became important as an opportunity for vocational experience to be integrated with youth groups in the curricula.

DISTINGUISHING SOEP
Students in SOEP may be involved with any practical agriculture activity which provides for valuable systematic instruction in and out of the classroom. Supervision is provided by teachers or parents.

SOEP is not an alternative part of any program area; rather, it is a necessary part of vocational agriculture that provides real experiences in learning.

Emphasis is placed on improvement projects or projects in any of the seven USEO defined program areas. Agriculture production activities are common. SOEP projects are performed after school and provide students who care to continue their work during the summer. SOEP projects are less time-consuming and more varied in nature than ACE projects.

SOEP AND INSTRUCTION
A unique relationship exists between classroom instruction and SOEP. Courses are based largely on their corresponding occupational experience programs. Concentration is placed on technical knowledge and skills required on the job or in whom public service. Supervision of SOEP may be characterized by instructors teaching curricula that is not carried to the doing. Supervision, learning becomes nonfunctional or ineffective. Formulating objectives is a complex process based on the needs of SOEP activities. Instruction is most effective when required projects and activities are carried on by students in order to reach long-term program goals.

A major advantage of SOEP is the lack of school credit. School credit is indirectly obtained as SOEP records their contribution to the total requirement for Vo-Ag courses.

SOEP ASSOCIATE RELATIONSHIP
As in any occupational experience program, in addition to the development and implementation of programs include local administrators, parents, teachers, and students. Unique to SOEP is the assistance offered by the parents, who are glad to assist with the instruction in their child’s education son or daughter. Further, supervised projects often contribute to the family’s well-being. However, the parents or parents should understand the educational inter- justices leading toward SOEP goals.

SOEP AND THE COMMUNITY
The school and the parents with great interest and acceptance by the community may directly benefit emotionally through the use of SOEP projects. Furthermore, SOEP motivates students to complete their Vo-Ag related objectives increasing their chances of finishing high school with a diploma and a successful entry into the "world of work."

DEVELOPMENT OF ACE
As agriculture became more complicated and off-farm occupations were developed and cooperative education programs were developed and cooperative education grew rapidly. Cooperative education in agriculture drew much of its recognition and growth to the national Vocational Education Act of 1967. ACE programs in 1969 encouraged new programs for vocational agriculture, including part-time employment in agriculture. As a result of USEO defines program areas, educating students with occupational goals outside of agriculture. However, some federal financial assistance is provided by federal legislation for cooperative education.

Lloyd J. Phipps entered the University of Illinois in August, 1977, after serving as a teacher educator for nineteen years. He is best known among teachers of agriculture and agricultural studies as the author of the book "Agriculture Education for Public Schools: Dr. Phipps’ distinguish- ing background in teaching, research and service in agricultural education simply qualified him to write and con- tinuously this well known hand- book and many other books which he wrote dealing with teacher education, adult education, mechanics in agriculture, and other areas.

He was born and raised on a farm and livestock farm in the Illinois area located about 100 miles south of Chicago near the town of Roberts. He attended the University of Illinois and graduated with high honors. His first teaching position was in central Illinois at Nolin, where he taught agriculture for one and one-half years. Then he accepted a position at Car- bunton Junior College, about fifteen miles from the University where he taught agriculture in the University High School. At the end of 1949 he returned to the University of Illinois as an instructor in Vocational Education. There he completed his doctorate in 1949 and was promoted to assistant professor. Dr. Phipps quickly demonstrated his outstanding ability to teach, do research, and perform service and was made associate professor in 1953 and in 1956 received the rank of full professor.

Robert W. Walker

*Robert W. Walker is Associate Professor of Vocational and Technical Education at the University of Illinois, Urbana-Champaign, Illinois.

JUNE 1978

THE AGRICULTURAL EDUCATION MAGAZINE
UPDATE OF VO-AG TEACHER SHORTAGE

By David G. Craig
Teacher Education
University of Tennessee
Knoxville, TN

The shortage of vocational agriculture teachers has stabilized on a national basis. The shortage has occurred for at least thirteen years. A National Study of the Supply and Demand for Teachers of Vocational Agriculture in 1927 suggests some reasons for the short supply of teachers (see Table I).

First, the total number of secondary teaching positions has continued to rise at a rate of five to six percent per year since 1927. The number of post secondary positions has increased at a rate of 10 percent per year. Second, the record number of new college graduates entering teaching (1,085) was not enough to fill vacancies and newly created positions. Third, the regular turnover was steady at nearly 20 percent in 1927. A fourth reason is that only about 60 percent of the graduates in agricultural education entered the teaching profession (see Table II). Table I also indicates continued increases in temporary or emergency certificates, a three-year stability in teacher numbers but not available in and departments that cannot sub that because of the teacher shortage.

### TABLE I

<table>
<thead>
<tr>
<th>Position</th>
<th>1925-26</th>
<th>1927-28</th>
<th>1928-29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of positions</td>
<td>900</td>
<td>1,085</td>
<td>1,200</td>
</tr>
<tr>
<td>New college graduates</td>
<td>300</td>
<td>900</td>
<td>500</td>
</tr>
<tr>
<td>New college graduates entering teaching</td>
<td>1,085</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>New positions added during 1927-28 school year</td>
<td>200</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Number of graduates unavailable</td>
<td>900</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>Graduates 1927-28</td>
<td>900</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>Graduates 1927-28 available</td>
<td>1,085</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>Graduates 1928-29</td>
<td>1,200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE II

<table>
<thead>
<tr>
<th>Type of Teacher</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>50</td>
</tr>
<tr>
<td>Vocational</td>
<td>30</td>
</tr>
<tr>
<td>Agronomic</td>
<td>20</td>
</tr>
</tbody>
</table>

### TABLE III

<table>
<thead>
<tr>
<th>Type of Position</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>General agriculture</td>
<td>50</td>
</tr>
<tr>
<td>Vocational agriculture</td>
<td>30</td>
</tr>
<tr>
<td>Agronomic</td>
<td>20</td>
</tr>
</tbody>
</table>

### Table IV

<table>
<thead>
<tr>
<th>Type of Position</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>General agriculture</td>
<td>50</td>
</tr>
<tr>
<td>Vocational agriculture</td>
<td>30</td>
</tr>
<tr>
<td>Agronomic</td>
<td>20</td>
</tr>
</tbody>
</table>

### Placement of Graduates

In 1927, 1,749 young men and women were qualified through colleges and universities to teach vocational agriculture (see Table II). This was the highest number qualified during the 15-year history of the study. As an indication of the number of new positions of teachers in agricultural education, supervised visiting is made so that activities in the job may be conducted in relation to classroom instruction. The graduates in ACE are scheduled for regular employment and receive pay. Work periods include day, half day, full day, week, or other period depending on the cooperative agreement.

### Types of Teaching Positions

There have been slight trends toward multiple teacher departments and specialized programs. In 1927, 47 percent of the teachers teach both high school and college level courses (see Table III). As to kind of school, almost 50 percent of the teachers conduct vo-ag programs in general or comprehensive high schools. It is evident that those of staff, almost one-half of the departments have two (Concluded on the next page)

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**A.C.E. or S.O.E.P.?**

1. Agriculture production and operations
2. Agriculture business
3. Agriculture occupations

Agricultural educators have a number of special programs that are designed to meet the needs of students in the field of agriculture. These programs include:

1. **Agricultural Production Programs**
   - Farm Management
   - Crop Science
   - Animal Science

2. **Agricultural Business Programs**
   - Agricultural Economics
   - Agricultural Marketing
   - Agricultural Finance

3. **Agricultural Career Development Programs**
   - Agricultural Education
   - Agricultural Technology
   - Agricultural Science

**A.C.E. and Instruction**

Following the principles of cooperative education, school instruction is divided into four categories, which are: academic instruction; related instruction; job-related instruction; and job training. The latter two should be designed to provide students with the knowledge and skills needed for the job in agriculture. **A.C.E.** is designed to help students develop the necessary skills and knowledge for the job in agriculture. **S.O.E.P.** is designed to provide students with the necessary skills and knowledge for the job in agriculture.

**A.C.E. and the Community**

Schools that offer **A.C.E.** programs are closely tied to the community. The schools are often located in the area where the students live. The schools offer a variety of courses in agriculture, including traditional academic courses.

**Conclusion**

Supervised experience, cooperation programs, and agricultural education are integral parts of vocational agriculture. These programs are designed to provide students with the knowledge and skills needed for the job in agriculture. **A.C.E.** programs are designed to provide students with the necessary skills and knowledge for the job in agriculture. **S.O.E.P.** programs are designed to provide students with the necessary skills and knowledge for the job in agriculture. **A.C.E.** and **S.O.E.P.** programs are designed to provide students with the necessary skills and knowledge for the job in agriculture.

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**Note:** The data used for this report is from the annual report and Monograph published by A.A.A. in Nashville, Tenn., June 1928.
INTRODUCTION
Each year dozens of Vocational Agriculture Instructors leave teaching because of various reasons. These reasons include: economic offers from business and industry, a return to farming or ranching, a return to school for more education, or other endeavors, many times based upon an underlying motive of "just getting out of teaching." Is it true that a large percentage of our professors leave teaching after the first four years? Why the mass exodus? Can we provide some assistance to these individuals who are considering leaving your profession? The following suggestions are offered for your consideration.

IMPORTANCE OF THE FIRST YEAR
Experienced instructors will readily con- clude that their first year was the most difficult. Curriculum development, lesson planning, dealing with the school and community, familiarization with school budgets, policies, rules, and regulations, are all tasks that become very consuming upon the new teacher. Even though the first year may be the most trying and time consuming, if the new teacher works hard the first year, the instructor is over the hill as far as the intense demand upon time is concerned.

CONSIDERATIONS
Responsibility
The responsibilities of the vocational agriculture instructor are demanding. It is important that the instructor learn early in his professional career to place limits upon hours of input, even though an instructor who puts in long hours in vocational agriculture will more likely do so in the beginning. Input cannot be matched locally. Great ideas may be derived from professional instructional materials, however implementing these materials and adapting them to the local school and community is a must.

Delegation
Delegation responsibility to student and other individuals. Monitor is clearly been made to the delegation of trial. Other jobs might include: mailing, clean-up, headquartering, keeping up the curriculum for special events, inventory, in some cases grading tests and quizzes, and collating papers. In order to be a good, you must be a delegate.

Efficiency
Efficiency becomes a vital factor in the success of the vocational agriculture instructor. A systematic plan of action is essential — not only on a day-to-day basis, but weekly, monthly, and even yearly. Efficiency must be maintained in utilizing community resources, including the use of resources persons and advisory committees. Plan your work so that you get the maximum return. Organize those tasks that do not provide results — establish priorities.

Summary
In order to be a successful and satis- fied vocational agriculture instructor, you must get control of your job and yourself during your first year of teach- ing. Be as concerned about putting in too many hours at too few — set limits for yourself. Be a professional, but don't overdo it.

Become efficient, plan well, and get the maximum return. Organize your program. Be realistic. Can you do it? Yes, even if you work twenty-four hours a day. Just keep it up.

Organization
Update the filing system — once you get it organized, keep it up. Develop a filing system that is easy to do bulletins in notebooks and arrange for copies of your notes. Make your time fulfilling the responsibilities of your job. Don't be afraid to ask a
A student might be a farmer's helper in a cooperative education program, then Roger Jennings, Vo-Ag Teacher at Peters, OH, holds a retirement celebration for left to right: Harold Payne, (Jr. Advisor), Boyd Todd, and Gary Gray. [Photo courtesy Roger Jennings]

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