

CORNELL UNIVERSITY'S
DIRECTED WORK-EXPERIENCE PROJECT

Harold R. Cushman
Professor, Agricultural Education
Cornell University

Cornell University has recently contracted with the U. S. Office of Education to undertake a project dealing with "The Development and Improvement of Directed Work-Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level." During a 28-month period beginning October 1, 1965, a four phase developmental program will be conducted by Co-Directors* Harold R. Cushman and C. W. Hill with the assistance of a full-time evaluation specialist, two research assistants, a panel of 11 consultants drawn from the several fields of vocational education and 24 cooperating schools in the Northeastern part of the United States. The project has been assigned to the Educational Resources Development Branch, Occupational Research and Planning Program. Dr. Otto P. Legg will serve as Coordinator for the project.

A series of closely related efforts and events have set the stage and provide an atmosphere of urgency for an intensive thrust in the area of developing and evaluating directed work-experience programs. Even a cursory review of research and other literature in this area reveals that:

- (1) A relevant body of theory dealing with experience as a factor in learning underlies the directed work-experience program concept and provides a theoretical framework for continuing research efforts.
- (2) The passage of the Vocational Education Act of 1963 has broadened the task of vocational education in agriculture from preparation for farming to preparation for any occupation involving knowledge and skills in agricultural subjects. This shift in emphasis will inevitably place teachers of agriculture in contact with an expanded clientele drawn with increasing frequency from urban and suburban settings.
- (3) As the panel of consultants has indicated, programs of the future must be concerned with such vocational needs of the new clientele as :

* Professor Virgil E. Christensen assisted with the writing of the proposal but has since left Cornell University to accept another position.

- An increasingly urgent need for orientation to, and meaningful experience in, the world of work to compensate for the decline of such opportunities in the home settings of an ever more mechanized and urbanized society.
 - The need to stay in school for a greater span of years in training programs which provide opportunities to acquire skills to earn money and to learn at an early age the dignity of labor and the pride of workmanship.
 - The need to obtain realistic work experience in technologically up-to-date settings; a situation more apt to be found on the job than in the contrived settings of the classroom or school shop with their vulnerability to technological lag.
 - The need to develop attainable goals and occupational aspirations of a constructive nature through direct and personal involvement in the world of work.
- (4) The dynamic situation involving the emergence of new fields of expanded vocational offerings in agriculture will require a drastically revised directed work-experience program. The traditional supervised farming program conducted on the home farm under the guidance of parents and teachers must be replaced by work-experience programs based in commercial settings.
 - (5) There exists a wealth of sources from which to synthesize a consortium of innovative ideas appropriate for formulating specific procedures for guiding students, parents and teachers in developing and improving work-experience programs for the field of agricultural education.
 - (6) The several fields of vocational education are in essential agreement concerning recommendations for directed work-experience programs. The obvious exception lies in the area of how much work-experience is required to achieve the purposes of such programs.

Directed work-experience programs for agricultural education may in part be based on the best from the past but must also incorporate the most promising innovations. It is this challenge that has led to the formulation of the following objectives for the Cornell project.

Objectives

- (1) To develop tested procedures for the guidance of teacher-coordinators in developing and directing work-experience programs for expanded vocational education offerings in agriculture.

- (2) To compare the outcomes of two different "hour requirements" for directed work-experience programs in vocational education offerings in agriculture.

Procedures

The following procedures will be utilized in connection with the four-phase project:

Phase 1- Develop Procedures for Directed Work-Experience Programs
(October 1, 1965 - February 28, 1966)

Specific procedures will be developed for the guidance of teacher-coordinators in initiating and directing work-experience programs for students in emerging programs of vocational education in agriculture, other than farming. The procedures will be distilled from such broad sources as: observation of both typical and innovative work-experience programs in the several fields of vocational education; a comprehensive assessment of the work-experience expectations and concerns of students, employers, parents and school personnel which establish the setting and frame of reference in which directed work-experience programs in agriculture must develop; the recorded experience of professional vocational educators; contributions from theorists in psychology and other related disciplines, and the advice of a panel of consultants representing competent leadership in the several fields of vocational and technical education, the U. S. Employment Service and industry. The procedures will be presented in manual form appropriate for the guidance of teacher-coordinators in initiating and directing work-experience programs.

Phase 2- Try-Out of Procedures for Directed Work-Experience Programs
(March 1, 1966 - May 31, 1967)

State educational departments, boards of education, school administrators and teachers of agriculture will be contacted in order to determine the most appropriate locales for the try-out phase of the project.

The manual for teacher-coordinators will be reproduced in sufficient quantity for try-out purposes in sixteen pilot centers in schools within the Northeastern United States (and for dissemination). Eight pilot centers will be selected from schools where agricultural mechanics programs are being incorporated into the curricular offerings. Eight other pilot centers will be selected from schools where ornamental horticulture programs will be conducted.

The participating teachers will be brought together for a week-long training session prior to the try-out for instruction on "setting the stage for directed work-experience." Visits will be made by members of the project staff to the try-out centers during the school term prior to the actual placement of students at work stations to give individual guidance to the teacher-coordinators as they: establish local advisory boards; explain and promote the

directed work-experience program with students; employers, parents and school officials; select students and employers, and develop plans for directed work-experience with students, employers and school officials.

Just prior to the actual placement of students at work stations, a second week-long training session dealing with "coordinating and directing work-experience programs" will be conducted with teacher-coordinators.

Two different time requirements for directed work-experience programs will be utilized during the try-out. The Panel of Consultants will be asked to recommend an "optimum number of hours" for student experience at their work stations. One-half of the students in each school will be randomly selected to receive one-half of the "optimum number of hours" of work-experience as shown below:

<u>Optimum Number of Hours</u>	<u>$\frac{1}{2}$ Optimum Number of Hours</u>
$\frac{1}{2}$ students in each of four Agricultural Mechanics Programs	$\frac{1}{2}$ students in each of four Agricultural Mechanics Programs
$\frac{1}{2}$ of students in each of four Ornamental Horticulture Programs	$\frac{1}{2}$ of students in each of four Ornamental Horticulture Programs

Periodic visits will be made by members of the project staff to the try-out centers, during the year students are receiving work-experience, to assist the teacher-coordinator with operational problems.

Phase 3 Evaluation of Procedures and Outcomes (June 1 - September 30, 1967)

The sequence of events for evaluating the teacher-coordination procedures (and manual) for developing and directing work-experience programs (Objective 1) will be as follows:

- a. Currently with the try-out, four instruments will be selected (or constructed and field tested) including:
 - (1) Employer Satisfaction Scale
 - (2) Parent Satisfaction Scale
 - (3) Personal Development Scale
 - (4) Interview Schedule for obtaining additional data concerning diversity of experience, accident rates, length of work-experience, earnings, extent of supervision and placement of students; and employer, parent and student suggestions for improving the directed work-experience program.

- b. The "Employer Satisfaction Scale," "Parent Satisfaction Scale" and "Personal Development Scale" will be administered to ornamental horticulture and agricultural mechanics students just prior to graduation.
- c. The data called for on the Interview Schedule will be obtained just prior to graduation through teacher interviews with a random sample of students, employers and parents participating in each program.
- d. A Comparison Group will be selected consisting of students enrolled in four Ornamental horticulture programs and four Agricultural mechanics programs where work-experience programs have not been guided by the manuals. The Comparison Group will be randomly selected from the same states in which the Study Groups were drawn and will be composed of students at the same grade level.
- e. The "Employer Satisfaction Scale," "Parent Satisfaction Scale" and "Personal Development Scale" will be administered to, and the data called for on the Interview Schedule will be obtained from, students in the Comparison Group; just prior to graduation.
- f. The "Employer Satisfaction Scale," "Parent Satisfaction Scale," and "Personal Development Scale" will be scored; data obtained from the Interview Schedule will be summarized, and the data examined for significant differences between the Study and Comparison Groups.
- g. A one-week evaluation session will be conducted with teacher-coordinators to examine findings and to obtain teacher suggestions for improving the teacher-coordinator manual for developing and directing work-experience programs for vocational education offerings in agriculture.

The sequence of events for evaluating the outcome of the two different hour requirements for directed work-experience programs in vocational education offerings in agriculture (Objective 2) will be as follows:

- a. Currently with the try-out, three instruments will be selected (or constructed and field tested) including
 - (1) Ornamental Horticulture Achievement Test
 - (2) Agricultural Mechanics Test
 - (3) Attitude Toward Work Scales

- b. The "Ornamental Horticultural Achievement Test" and "Attitude Toward Work Scales" will be administered to Ornamental Horticulture students just prior to graduation.
- c. The "Agricultural Mechanics Achievement Test" and "Attitude Toward Work Scales" will be administered to agricultural mechanics students just prior to graduation.
- d. Data regarding "retention in school through graduation" and "employment two months after graduation" will be collected and examined for significant differences between the two "time" groups.

Phase 4 Revision of the Teacher-Coordinators Manual and
 Dissemination of Results
 (October 1, 1967 - January 31, 1968)

A group meeting of the Panel of Consultants will be held for the purpose of reviewing the findings of the project and to examine suggested revisions in the procedures for developing directed work-experience programs.

The revised manual and the final report of the project will be published and distributed.

A Final Word

The Co-Directors of the project will welcome inquiries or suggestions from any interested persons. Information concerning existing evaluation instruments of the sort called for in this project (or copies of same) will be particularly appreciated.

* * * * *

RESEARCH COORDINATING UNIT

New Mexico was one of the several states to receive USOE funds to establish a vocational research coordinating unit. Representatives from all state universities, vocational supervisors, governmental officials and other New Mexico educators met in October to identify possible uses for the unit and to establish research priorities for the state. A primary problem identified was determining New Mexico's vocational and technical education needs for the next decade. Other problems indicating a priority were a continuing study of occupational needs, and provide a vocational orientation for high school guidance programs.

* * * * *

Secretary to office manager: "I've taken all the criticism of my work I'm going to take! How do you spell quit?"