A COOPERATIVE VOCATIONAL-TECHNICAL EDUCATION RESEARCH AND DEVELOPMENT PROJECT

Gordon McCloskey

An accord with provisions of Section 4(c) of the Vocational Education Act of 1963, a Vocational-Technical Education Research and Development Project has been funded at Washington State University. Research and development are being pursued in cooperation with the Washington State Office of Public Instruction and the University of Idaho.

For the past two decades Washington State University and the Washington State Office of Public Instruction staff members have recognized the unprecedented speed and magnitude of occupational change. In cooperation with schools, community colleges, and colleges preparing vocational teachers, members of both staffs have jointly devoted increasing amounts of interdisciplinary effort to modernization of vocational-technical education facilities, curriculum, instructional aids, and counseling. Both staffs long sought more adequate resources for research which will provide bases for development of up-to-date programs of vocational-technical instruction and counseling.

The research has been planned in cooperation with school superintendents and vocational educators of major Northwest population centers, the Washington State Association of Community Colleges, and the Washington State School Directors Association. Research is being conducted by an interdisciplinary team of educators, occupational educators, economists, job analysts, sociologists, psychologists, and social psychologists presently on the staffs of Washington State University and the Washington State Board for Vocational Education and the University of Idaho.

Citations at hand indicate that modernization of vocational-technical curricula and counseling requires information about clusters of knowledge, skills, and traits most likely to equip workers college-bound youth for gainful employment in present and future occupations. Evidence also indicates equal need for more precise information about psychological, sociological, and economic factors that influence pupils' opportunities and willingness to pursue education essential for successful work in present and future occupations.

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Identification of Knowledge Useful in Related Occupations

One project task force is working with personnel directors and with industrial, agricultural, and commercial research and development directors and unions to identify and define clusters of knowledge most widely useful in occupations most likely to provide employment for substantial numbers of noncollege-bound youth.

Instruments and procedures to identify some major clusters in some occupations classified as manufacturing, construction, agricultural, agricultural-related, office, distributive, and service (health, home, institutional) are being developed.

The staff expects to obtain substantial amounts of data about some clusters in some occupations within a 15-month period. But identification of clusters common to a fuller range of occupations will require manpower and funds exceeding what is available for this project. The instruments and procedures developed by the Project will be available to the Project staff and other researchers for identification of other clusters and more comprehensive interrelationships when more adequate resources are available.

Identification of Factors Affecting Motivations

A second project task force is at work identifying psychological, sociological, and economic factors that influence pupils' opportunity and willingness to pursue education necessary for development of concepts, knowledge, skills, and traits essential for employment. These studies are aimed at identification of factors affecting motives, aspiration, and mobility.

A special analysis will be made of data already collected by the Department of Rural Sociology of WSU from 3,500 students in 30 rural high schools concerning the influence on educational and occupational aspirations of family background, peer group values, teachers and counselors, self-concepts, and other factors. This information was collected under a project supported by the Basic Research Branch, U. S. Office of Education. Data collection instruments used in the above study of educational and occupational aspirations of rural high school students are being modified to obtain comparable information on motives and aspirations from noncollege-bound students in urban high schools.

Information from the above studies of high school students can serve a partial base for developing experimental or pilot programs designed to stimulate greater participation in high school courses needed for successful careers of a nonprofessional nature.

Other research and development projects are being designed to explore more fully the psychological, sociological, and economic factors that influence pupils' opportunity, willingness and capabilities
to pursue various types and levels of vocational-technical education. Such factors will include values and behavior norms of pupils' reference groups, levels of self-assessment in comparison to other significant persons (role models), pupils' knowledge of occupations and their perceptions of their capabilities, parental perceptions and attitudes. The task force is giving priority to development of research instruments and procedures for measuring the influence of such factors on dropouts, academically handicapped persons, minority groups, and those who are unemployed or under-employed.

**Curriculum Instructional Materials**

A third project task force is planning development of modernized vocational-technical curricula and instructional materials. In cooperation with vocational education personnel and representatives of major industries, agriculture, and labor the staff is identifying urgent unmet needs for modernized curricula and instructional aids. The task force will embody up-dated content in "systems" of instructional procedures and materials.

**SOME RECENT DEVELOPMENTS**

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**COURSE GUIDES:** A number of new course guides have been developed and are now being used on a trial basis in various schools throughout the State. These include: **Introduction to Agricultural Science and Economics in Agriculture.**

Comprehensive course units have also been developed for various areas in animal and plant sciences. Student references for these units include: **An Introduction to Animal Diseases** and **An Introduction to Plant Diseases.**

In cooperation with the State Department of Vocational Education, sufficient copies of these materials, for high school student use, have been made available to all departments of vocational agriculture in the State.

**PILOT PROGRAMS:** Work-study programs are being conducted in agricultural mechanics in Amphitheater and Casa Grande High Schools. This type of program is also in operation in horticulture at Amphitheater. The results of these programs will serve as a basis for further development for this type of course next year. A one-day workshop on work-study programs in agriculture was conducted last August for high school administrators and teachers of agriculture. This session was directed by Dr. Lowery David from Clemson University.