

THE VOCATIONAL-TECHNICAL EDUCATION  
CONSORTIUM OF STATES

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Two continuing problems faced by the vocational education teacher are:

1. What skills are required for the jobs for which I am preparing my students?
2. How can I tell when they have mastered the necessary prerequisite skills?

Concern for these problems of relatedness of training and evaluation (or accountability) has prompted a great deal of interest in and support for the development and use of performance objectives and criterion-referenced test items which have been validated against actual job performance. To date, however, there has not been much progress in the development of such materials.

To overcome this limitation, the Florida State Department of Education, through its educational research and development program, undertook the development of catalogs<sup>1</sup> of performance objectives and criterion-referenced measures in occupational education. After realizing the scope of the task and the time and cost required to complete it, Florida decided to explore alternative approaches. This led to contracting with the Southern Association of Colleges and Schools, Commission on Occupational Education Institutions (SACS / COEI) to organize and administer a multi-state consortium for the production of catalogs of performance objectives and criterion-referenced measures in occupational education. After eighteen months of developmental work, the Vocational-Technical Education Consortium of State (V-TECS) was formed July 1, 1973, with SACS/COEI as the administering agency. The following seven states are currently members of V-TECS: Alabama, Florida, Georgia, Kentucky, Mississippi, Texas and Virginia. It is anticipated that additional states will join V-TECS beginning July 1, 1974.

The affairs of V-TECS are managed by a board of directors consisting of one representative from each member state. The representative from each state is appointed by the State Director of Vocational Education. SACS/COEI, as administering agency, provides

technical assistance and coordination of the activities for the member states. Each participating state assumes a proportional share of the expenses incurred by SACS/COEI in operating the consortium and designates a person to serve on a full-time basis as technical coordinator within the state.<sup>2</sup> The administering agency, with approval of the V-TECS Board, employs an executive director and sufficient staff to operate the consortium.

According to the V-TECS Bylaws, the purpose and objectives of the Consortium are:

1. Secure participation of divisions, departments or bureaus of vocational-technical education in state educational agencies (or their appointed representatives) in cooperative efforts for the purpose of producing and exchanging catalogs of performance objectives and criterion-referenced exercises in occupational education.
2. Develop, implement, and evaluate standard performance criteria to be utilized in the production of catalogs by each participating state to assure quality control and transportability of materials.
3. Develop, implement, and evaluate a system for periodically updating and revising catalogs developed by member states.
4. Secure additional technical or financial assistance from business and industry, other interested state or federal agencies and educational foundations.
5. Promote the concept of performance-based education as a means of improving curricula and providing for increased accountability in occupational education.

The Executive Director of V-TECS<sup>3</sup> is developing a model for use by the Consortium to manage the development, production, dissemination, and implementation of the catalogs of objectives. It is expected that the model will include the following activities:

#### I. Determination of Priorities and Assignment of Catalogs

Each member state establishes a priority list for catalogs to be developed. These lists are reviewed by the Board. Conflicts between states are resolved and the Board makes the final assignment to each state. Catalogs assigned are subject to acceptance by the state involved in the assignment.

#### II. Signing of Memorandum of Agreement

A memorandum of agreement is entered between the state developing a specific catalog and the Consortium. The memorandum

specifies what is to be done, when it is to be done, and staff responsibilities. This activity also involves the selection of a person to serve as project director<sup>4</sup> for each catalog being developed.

### III. Technical Preparation of V-TECS Staff and State Coordinators

Technical training will be provided on the system being used, the determination of decision criteria, interpretation of task analysis data, development of skills in writing performance objectives and criterion-referenced test items, and the monitoring of projects and quality control.

### IV. Domain Study for Catalog Development

This activity consists of a thorough study of what has been developed in the domain (broad instructional area) selected for catalog development. It includes a state-of-the-art study to find other materials that may be helpful, the development of a task list, and the development of background information to be secured from workers.

### V. Development and Implementation of the Domain Sampling Technique for the Task Statement Survey

A sample of incumbent workers, by domain area, will be selected. Survey booklets, containing lists of task statements will be mailed to the incumbent workers to secure information on the tasks they perform.

### VI. Development of Occupational Analysis System

The task statement survey data and background information collected from incumbent workers are analyzed to compute indices, such as task time-spent index, task criticality index, task difficulty and task perishability index, which are useful in catalog development.

### VII. Development of Catalogs of Performance Objectives and Criterion-Referenced Measures

Information from incumbent workers is combined with the knowledge of selected instructors, curriculum specialists, and measurement specialists to develop catalogs of performance objectives and criterion-referenced measures.

### VIII. Field Test of Commonality of Objectives

This activity is designed to determine the instructional acceptability of the performance objectives and criterion-referenced meas-

ures, to identify the common performance objectives across a wide group of occupational educational programs, and to determine the applicability of the performance objectives and criterion-referenced measures to the training of handicapped persons.

#### IX. Computerization of Performance Objectives and Criterion Referenced Measures

The development of a computer bank of objectives provides a means to give an immediate response to requests for catalogs, facilitate the revision and updating of the objectives, and provides a means of designing training programs to meet specific needs.

#### X. In-Service Education and Dissemination of Catalogs

States using the materials from the Consortium must develop a comprehensive plan for disseminating the catalogs and for providing in-service training to prepare instructional personnel and supervisory personnel in the technique of managing performance-based instruction.

#### XI. Revision and Updating of the Catalogs

This activity provides a means of securing information from instructional personnel, craft advisory committees, and incumbent workers to use as a basis for revising and updating the catalogs as needed.

#### XII. Third Party Evaluation of the Vocational-Technical Education Consortium of States

Plans are for the Consortium to be evaluated biennially by a third-party evaluator selected by the Board of Directors of V-TECS on a low-bid basis.

An important feature of the model is the provision for developing performance objectives on the basis of an inventory of the tasks performed by incumbent workers and the relative time spent performing the tasks. Additional information on task difficulty and task criticality may be secured from the immediate supervisors as well as the incumbent workers. The theoretical base for the model is that the most reliable source of task information is the incumbent workers. It is anticipated that such information can be obtained efficiently and effectively from incumbent workers by having them complete a task inventory booklet.

Currently, nineteen catalogs are being developed in the states which are members of V-TECS. They are as follows:

<u>STATE</u>	<u>O. E. CODE</u>	<u>AREA</u>
Alabama	17.1500 17.0100	Electronics Occupations Air Conditioning
Florida	17.0301 17.0302 01.0506	Body and Fender Auto Mechanics Turf Management
Georgia	14.0200 17.2302	Business Data Processing Production Machine Operator
Kentucky	07.0101 04.0600 17.1001 01.0301  14.0105 09.0201	Dental Assistant Food Distribution Carpentry Agriculture Power and Machinery  Tellers Child Care
Mississippi	17.1007 01.0504	Plumbing (Building Trades) Landscaping
Texas	17.3203 16.0605	Water Management Police Science Technology
Virginia	14.0700 and 14.0900 09.0203	Stenographic, Secretarial, Typing, and Related Food Management, Production, and Services

The consortium approach appears to be a workable means of developing performance objectives and criterion-referenced measures in occupational education. The formal cooperation of several states should reduce costs and avoid unnecessary duplication of effort.

#### FOOTNOTES

<sup>1</sup>A catalog is a collection of performance objectives with a matched set of criterion-referenced test items for a domain or broad instructional area broken down by job titles within the domain.

<sup>2</sup>The senior author of this article is serving as Technical Coordinator for Virginia.

<sup>3</sup>Ben A. Hirst, Jr. is the Executive Director of V-TECS.

<sup>4</sup>The junior author of this article is serving as Project Director for the catalogs being developed in Virginia.