
Student Assessment and Evaluation

The purpose of student evaluation is to assess performance (skill attainment) and knowledge learned in the educational program. Students can be evaluated by a variety of testing and measurement methods. Measuring student growth serves several purposes in the educational process. The purposes include:

1. Monitoring student progress,
2. Reinforce desired outcomes and behaviors,
3. A review to provide structure for students,
4. An aid in career guidance,
5. Classification and placement of students,
6. An aid for curriculum/instruction improvement, and
7. An assessment of teacher effectiveness.

Evaluation can be criterion-referenced or norm-referenced. Norm-referenced measurement is the traditional manner of testing. It involves the comparison of individuals one to another. The individuals are ranked within the class or group with regard to their achievement in the course and to some variable in assigning letter grades. Criterion-referenced measurement differs from norm-referenced measurement in that each student does not compete or compare with others but is asked to master or achieve specific skills and/or concepts. Upon mastering the material, the student is said to be competent in the specified knowledge or skill area.

Vocational Instructional Management System (VIMS)

The Vocational Instructional Management System (VIMS) has become Missouri's framework for competency-based instruction. The VIMS was adopted by the Missouri State Board of Education in 1982 as a practical means of defining objectives for learning/teaching, recording the progress of individual students toward the objectives, and reporting student achievement.

The mission of career and technical education is to help learners acquire the knowledge, skills, and attitudes necessary for success in the working world. VIMS is simply a systematic, common-sense approach to defining and measuring the broad-based knowledge, skills, and attitudes that students need to acquire as preparation to enter a variety of occupational areas.

As one method of instructional management, VIMS is based on a large body of educational research that can be summarized in two basic premises:

1. All students can learn what is expected of them to a satisfactory level if educators believe they can and if the school is organized to provide the time and resources they need for learning.
2. To steadily progress toward high expectations and to be self-motivated to continue learning, students must spend more than half their time working on tasks at which they experience a high degree of success.

These two principals - (1) varying time rather than achievement level for each student and (2) individualizing instruction to the extent that each student is able to experience more success than failure - introduce many variables into the teaching-learning process, therefore a management system is imperative.

The Department of Elementary and Secondary Education (DESE) believes the VIMS concept is a workable, effective way of organizing career and technical education programs so that productivity and accountability are “built in.” It is not a curriculum or a prescribed way of teaching, but a flexible approach with advantages for everyone - instructors, students, parents, administrators, board members, employers, and members of vocational advisory committees.

Six steps are involved in developing and implementing a Vocational Instructional Management System in the local education program. The six steps are:

I. Articulate Program Goal(s)

Initially, this meant to identify the occupation(s) for which students would be trained so appropriate knowledge and skills (outcomes or competencies) could be developed. In today's environment, consideration also needs to be given to goals associated with tech prep, integrating basic skills, and overall performance standards for the school. Refer to the section on *Writing a Program Philosophy* and *Developing Departmental Objectives* in this handbook for assistance in developing and articulating program goals.

II. Develop, Adopt, or Modify Competencies to be Learned in the Educational Program.

An important aspect of competency-based instruction is the specification of competencies that a student is to achieve. In order to communicate and keep track of a student's progress on these competencies, a form that is called a competency profile can be used. This form basically contains a list of the competencies (tasks) for a specific program or course, along with other information, that gives an overall picture of the student to prospective employers, parents, and other educators.

There are many uses for competency profiles. A competency profile:

1. Provides the school with a reporting system for vocational programs that supplement the present grading system;
2. Provides parents with a record so that they can trace their child's progress on individual tasks;
3. Provides the student and educator with an individual profile of where the student stands in achieving the competencies of a course or program;
4. Assists school personnel and students in job placement
5. Provides specific information for prospective employers in the hiring of vocational graduates;

6. Provides specific information that will help employers determine the future training needs of newly hired vocational students;
7. Provides a vocational program description that can assist school personnel and students in course selection; and
8. Provides schools with a public relations instrument for information relating to specific vocational programs.

A **sample competency profile** can be found in chapter 5 of this handbook . Competency profiles for all approved Agricultural Education courses can be obtained from the Instructional Materials Laboratory at the University of Missouri in Columbia.

III. Prepare Performance Objectives

This step in implementing a VIMS is too often overlooked by educators. Two different types of objectives are used in a VIMS.

“Terminal” Performance Objectives (TPOs) state how students can demonstrate attainment (mastery) of each competency. TPOs are a formalized way to specify what the teacher wants students to be able to do and should precisely define the conditions under which student performance will be assessed and the criteria that will be applied to determine successful performance (mastery). Mastery is ambiguous without a corresponding terminal performance objective.

“Enabling” objectives or study questions identify the specific knowledge, skills, and attitudes that “enable” students to perform a competency. Enabling objectives should “flow from” the terminal performance objective -- i.e., after defining how students will demonstrate acquisition of a competency, then specific knowledge and component skills and attitudes can be identified.

IV. Plan and Align the Instructional Delivery Methods

Instructional materials and processes should allow students to learn what is needed to demonstrate defined outcomes -- both the competencies (reflected in terminal performance objectives) and enabling objectives or study questions. Alignment means to identify, develop, and/or adopt curriculum and instructional practices appropriate for each competency.

V. Develop Performance Measures (Evaluation)

Student evaluation in a VIMS should be competency specific and criterion referenced. Terminal performance objectives should imply the kind of evaluation that will be conducted, (i.e., knowledge and/or performance).

Knowledge tests should be scored by competency, and the score for each student evaluated competency should be compared to the percent required for mastery to determine whether or not the competencies were “mastered.” Performance evaluations, whether project or product based, should use a checklist or related “instrument” which identifies all relevant performance standards that must be met for the corresponding competency to be considered mastered. Again, a predetermined criterion should be specified for performance evaluations.

VI. Maintain Competency Profiles (Recordkeeping System)

A competency profile lists the competencies that a student can attain in an instructional program and identifies the student's performance level on each. The performance information recorded on profiles (or in equivalent computerized records) should be based on appropriate assessments actually carried out in the classroom or laboratory. It is recommended that students maintain a “notebook” of completed evaluation forms and reports of test performance -- this documents both that the competency was evaluated and identifies the corresponding assessment method.

The **Vocational Administrative Management System (VAMS)** is a computer-based management information system designed for use in Missouri vocational schools. Using IBM computers, vocational school staff can use VAMS software along with a printer and scanner to manage the following three kinds of administrative information:

1. Useful administrative information about students and staff.
2. Information about the overall operation of the school.
3. Performance-based information about the school's instructional program and students' mastery of behaviorally defined job skills.

Grading Policies and Procedures

An important aspect of student assessment and evaluation is having well defined grading policies and procedures. A teacher of agriculture must have clear policies and procedures on how students will be graded for each course in the educational program. The school districts' policies and procedures should be reviewed prior to developing the policies and procedures for the Agricultural Education program.

One of the first responsibilities in developing grading policies and procedures is to determine the items to include in determining student grades and how each item will be weighted. The following are items that have been used as a basis for determining grades:

- Tests and quizzes
- Daily work and assignments
- Projects (classroom and laboratory)
- Portfolios
- Laboratory (work habits, quality and quantity of work, and safety)
- SAEP recordbooks (accuracy, neatness, and completeness)
- Notebook (completeness, neatness, and accuracy)
- Leadership and participation