Final Examinations as Tools for Instructional Management

The Allentown, Pennsylvania, Schools are using districtwide examinations to assess programs, provide feedback to teachers, and evaluate student mastery of selected objectives.

Most districts have in place, without realizing it, an excellent assessment tool with the potential for realistic self-evaluation and dramatic program improvement. This widely administered yet often neglected tool is the final examination. It can and should be our internal programmatic check and balance for locally developed curriculum to:

- Assess students' mastery of selected program objectives.
- Give teachers feedback on how well they're doing.
- Provide accurate diagnostic information that should help decrease the variance between what is written, what is taught, and what is learned.

Developing Quality Examinations

In 1980, the Allentown School District—an urban district in Pennsylvania with an enrollment of 13,200 students housed in two high schools, four middle schools, and 14 elementary schools—began a five-year program to use final examinations to improve instruction. During the first year, we developed six districtwide final examinations in 7th and 10th grade mathematics and English. Teachers received training in test development, item writing, and test analysis to ensure the development of quality examinations. Using the program of study and, in particular, the mastery objectives in the program of study, we identified the testable objectives and then devel-
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We developed tests to reliably and validly assess them. In order to compare data on a districtwide basis, the Allentown model required that all students take the same examination. This presented a twofold problem:

1. In 1980, students with an A average were exempt from taking final examinations. It seemed ironic that the very students whose academic futures depended on their ability to succeed on the PSAT, SAT, college final examinations, and eventually the GRE and LSAT could conceivably go through the system without having to prepare for one final examination. To answer this concern, we gradually phased out all exemptions.

2. Could students of all abilities be sufficiently challenged with the same examination? The "75-25 compromise" was a suggestion from the teachers that the common part of the examination, which is administered to all students, count as 75 percent of the final examination grade. The other 25 percent is based on a series of questions developed by individual teachers to meet the level of competency in each class. For instance, in addition to the regular examination, a gifted geometry class might be asked to do a proof of a geometric theorem, whereas a basic mathematics class could be given a set of less difficult problems.

Analyzing and Evaluating Results
Since we administered our first examinations in June 1981, the list has grown from six to 27. We now have districtwide final examinations in all mathematics and English courses from grades 7 through 12, and we have begun work in science and social studies. Each examination is administered to all students, and data on mean scores, standard deviation, and item analysis are extracted from each examination using ScanTron Optical Scanning equipment and a locally developed software package. A difficulty index is calculated to determine the frequency of correct and incorrect responses associated with each multiple-choice question. We can also determine how many students selected each distractor in each multiple-choice question.

Next, the curriculum department graphically portrays and analyzes the data. Follow-up meetings with teachers of subjects that have districtwide final examinations occur the following fall. Examination results are carefully analyzed and evaluated in an attempt to improve the classroom instructional program. Participants review a copy of the final examination, a list of tested objectives, and a graph portraying the difficulty indices of all questions on the test. The emphasis in these meetings is twofold: (1) to improve the quality of the test items, and (2) to assess how well students are learning what we are teaching. Many helpful insights have been gained from these meetings, some have resulted in inservice programs designed to bolster areas of weakness.

We publish an annual booklet containing the results of all examinations, and make presentations to the district administrators, school board, and public. In addition to obtaining valuable data used to improve instruction, we have also collected longitudinal data over the past four years, which indicates that the raw scores on 80 percent of the examinations have increased consistently since 1981.

Many districts allow teachers to develop their final examinations; others give a common examination by department, by track, or by school. After examinations are scored, grades recorded, and reports sent home, the examinations are placed on a shelf to gather dust until the ritualistic process occurs the following spring. But this doesn’t have to be the case. With the present emphasis at the local, state, and national level on assessing student growth through tests, it’s time to take a closer look at the final examination as a valuable tool in a district’s arsenal for program analysis and improvement.

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