Warning: Iceberg: A Checklist of Issues Related to Changing Achievement Tests

A Guide to Selecting and Using Tests

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AISD-81-59

9p.

1970 California Achievement Tests were replaced by the district with the 1978 Iowa Tests of Basic Skills. The major tasks were selection of a new instrument and securing funds to purchase it. However, during the transition, many smaller decisions must be made. The first is a determination that the old test is useless. A new test must be selected and money for its purchase secured. All staff concerned should be notified of the change. The curriculum should be reviewed before the new test is selected. Criteria and prerequisites must be updated. Changes in norming dates and test content need to be considered as well as revised forms and procedures. New reports should be designed for test scores. Staff must be trained in the use of the new instrument. Longitudinal comparisons should be resolved. The processing and scoring system should be redesigned. Old materials should be completely discarded and security measures should be prepared so that the access to tests is limited. Effective planning and a successful transition can occur if these lesser decisions are anticipated.

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Warning. Iceberg:

A Checklist of Issues Related to Changing Achievement Tests

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Publication No. 81,59
Warning! Iceberg! A Checklist of Issues Related to Changing Achievement Tests

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When your test booklets are all dog-eared and coming unstapled, when you have marked all five answers to some items in the booklets because students have marked the "correct" choice, when your college-bound seniors are scoring at the 25th percentile because you are still using 1965 norms, when half the teachers have copies of the test in their desks, and when older students support their habits by selling test items to freshmen, then you finally get up the nerve to face changing achievement tests. Every ounce of energy is focused on two tasks—selecting a replacement and obtaining the money to purchase it. When this happened in the Austin Independent School District, we discovered that these two tasks were just the tip of an iceberg. Literally hundreds of smaller tasks, issues, and decisions loomed below.

The selection of a new achievement test and the securing of the funds to purchase it are indeed the overriding concerns of systems changing tests. During the transition, hundreds of smaller decisions must be made—many of these involving changes necessitated by the new test but unanticipated beforehand. To ensure a successful transition, these decisions must be anticipated to allow planning to take place. The experiences of Austin's school system can be of great assistance to others, not so much in providing answers, as in identifying the issues which must be addressed.

Not impressed by the iceberg analogy? Try this one. Did anyone ever give you a tie or a scarf, and you had to buy a shirt to match it? Then you had to buy pants or a skirt to match that. Next, you had to buy a belt, then shoes—how about a hat? Welcome to the chain-reaction world of accommodating a new achievement test.

The attached "floe" chart graphically summarizes the major issues which were encountered by the testing staff in Austin when the 1970 California Achievement Tests was replaced by the 1978 Iowa Tests of Basic Skills. Some further details of each issue are presented below.

DETAILS OF THE MAJOR TASKS IN CHANGING ACHIEVEMENT TESTS

I. Determine that old test is useless.

II. Select a new test.

III. Secure money for purchasing the new test.

IV. Inform everyone. There are more people to inform than anyone realizes, and they each expect to be the first to know since they have their own icebergs. Not informing everyone early-on will haunt you all year.

A. Decision process: Why was a new test needed? Why in the world did you choose THAT one?!! Who had input into the decision? Who made the final decision?
B. Areas to be tested: Are they the same? What are they?

C. Testing dates: When will the tests be given? Is this a change?

D. Release of results: When will the results be released? Why not earlier?

A.-D.

1. Parents (public)
   a. Newsletters
   b. News releases
   c. Public service announcements (radio, TV)

2. Staff
   a. Staff publications
   b. Announcements
   c. Official memos
   d. Official calendars

V. Review the curriculum. Teachers pick up on this early—the new test does not measure anything from their favorite unit, or the new test measures map reading skills, and their students cannot yet locate the exit during fire drills.

   A. Relative emphasis on skills: How many items measure each skill on the new test?

   B. Terminology: What vocabulary and terms are different? We found that "borrowing" in our math books was called "renaming" on the test and that blanks were substituted for commas in long numbers. The students were probably nonplussed by this; the instructional staff took this very seriously.

   C. Skills not currently taught: Are new skills now going to be tested? Base 4, metric measures, map reading—we found several others, too.

IV. Update criteria and prerequisites. Changes in norming dates and test content combine to affect the number of students who are selected by existing criteria. A conscious decision to accept a shift in the impact of established criteria or to change criteria to keep a constant number of students in/out of programs is necessary.

   A. Course prerequisites: Should the new test be used to replace existing placement tests? We used the change in tests as an opportunity to drop separate language arts and science placement tests in favor of subscales on the new test. We also had percentile prerequisites for some reading and math courses. We retained the established criteria—probably not the better choice in our situation.
B. Minimum competency requirements for graduation: Should the requirements be changed to match the new areas tested or the new norms? Our change in tests coincided with a raise by the school board in the grade level equivalent for minimum competency. The impact of each change is unknown, confound it!

C. Goals and objectives: Do stated goals and objectives need revision to match new test areas and norms?

1. Campus-level objectives
2. Program objectives
3. State accreditation goals

D. Compensatory programs: Do selection and exit criteria need revisions?

1. Title I (alias Chapter I) programs
2. Limited English proficiency programs
3. State and locally funded programs

WII. Revised forms and procedures. Do not underestimate this one. Everywhere we looked there was a test name or some related information that had to be revised.

A. Administration dates and times: When will the test be administered?

1. Critical norming dates—probably different from the last test's
2. Length of individual tests
   a. Days of the week
   b. Mornings or afternoons

B. Test levels: Which level is best for each grade? Will out-of-level testing be allowed? What criteria will be used for determining the need for out-of-level testing?

C. Answer documents: Will the publisher's answer sheets be used or will unique ones be designed? When must they be order or printed?

D. Practice test: Will the publisher's be used or will a locally developed one be needed? Which grades and categories of students should take a practice test? We developed our own to use the first year since the test format and out-of-level directions were new to our students. Now we cannot get the schools to give it up.
VIII. Design new reports. Changing tests not only necessitates new reports, but also provides the opportunity for major changes if desired.

A. Teachers (student reports, classroom summaries)
B. Principals (school summaries)
C. Permanent records (student reports)
D. Parents, public (student reports, school and district summaries)
E. Administration, School Board (school and district summaries)

A-E.

1. Brochures
2. Printouts
3. Labels
4. Summaries

1-4.

a. Norms
b. Skill areas
c. Students excluded, included

IX. Train staff. This is a key task. Many of the teachers', counselors', and principals' established routines are being changed, and they will not learn every new procedure through written communications.

A. New procedures
B. Curriculum revisions
C. New criteria and prerequisites
D. New terminology
E. Use of results
F. New reports

A-F.

1. Written instructions
2. Workshops
   a. Answers to questions
   b. Training films
   c. Oral presentations
X. Resolve longitudinal comparisons. Our schools had a large investment in past years' test scores; therefore, elaborate measures were required to preserve that longitudinal base. We opted for a locally conducted equating study, then the schools were reorganized by the court for desegregation purposes, and most comparisons became moot.

A. Equating study
   1. By the publisher
   2. By the school system
      a. Sample
      b. Test
      c. Analyze

B. Match old and new test areas

XI. Design the processing and scoring system. If you process and score your own tests, this is another great opportunity to make major improvements. We started out by listing every problem, error, suggestion, dream, etc. that we had ever encountered, and then set out to address each one. We cut our turn-around time (by 85%), our error rate, and our blood pressure by redesigning our entire processing and scoring system.

A. Scheduling
   1. Document cleaning
   2. Optical scanning time
   3. Keypunching time
   4. Mailing of reports
   5. Computer time

B. Data entry
   1. Keypunching
   2. Optical scanning
C. Computer programming
   1. Norms tables
   2. Correct choice keys
   3. Skills tables
   4. Scoring programs
   5. Report generation

1.-5.
   a. Enter
   b. Proof, proof, proof, proof...

XII. Dispose of old materials. Old materials are everywhere. Disposing of them is like trying to remove warts. Usually, out-of-date tests cannot be sold, or even given away. Recycling may be possible—if you do not have to remove a billion staples.

A. In offices
B. On campuses
C. In storage

A.-C.

1. Sell
2. Give away
3. Recycle
4. Save for special purposes
   a. Special education practice
   b. Project evaluation
   c. Individual assessment
   d. File copies

XIII. Prepare security measures. An achievement test is a large investment which can be lost if security is loose. We were surprised to find copies in libraries, schools, and offices. We have had reasonable success in limiting access to copies in libraries and short circuiting orders to the publisher from school personnel.

A. Maintain an inventory
b. Restrict availability
   1. University libraries
   2. Schools
   3. Central offices
   4. Review copies
   5. Educational resource centers
   6. Publisher
      a. Sample copies
      b. Purchase orders

Obviously, the goal of this paper is to identify issues not to present solutions to them. After all, each school system's solutions must be unique to match local constraints. The next time that the Austin school system switches achievement tests, we will be pulling this paper out of the file well in advance of the change over.