

Assessment Alignment Issues: The Case of South Carolina

David Potter

South Carolina Education Oversight Committee

www.sceoc.org

Presentation at the Policy and Student Learning Conference

American Association for the Advancement of Science /

Project 2061

Washington, DC

May 17, 2002

Education Accountability Act of 1998

- Curriculum standards
- Assessments
- Teacher training and technical assistance
- Public reporting
- Rewards and intervention

Science Standards (Grade 6)

- **II. Life Science**

- A Unit of Study: Fungi and Plants**

- 1 Important levels of organization for structure and function include cells and whole organisms. All organisms are composed of cells - the fundamental unit of life.**

- a Identify (*1*) and explain (*2*) the function of plant cell parts (e. g., vacuoles, nucleus, cytoplasm, cell membrane, cell wall, chloroplasts).

- b Distinguish (*4*) between and illustrate (*3*) plant and animal cells (e. g., cell wall, chloroplasts, and nucleus).

- c Describe (*2*) the basic characteristics of two of the kingdoms of organisms - fungi and plants.

- d Compare (*6*) and contrast (*4*) three forms of fungi (mushrooms, yeasts, and molds).

- e Compare (*6*) and contrast (*4*) vascular and non-vascular plants, flowering and non-flowering plants, and deciduous and coniferous trees.

Palmetto Achievement Challenge Tests (PACT)

- Section 59-18-310 (A) Notwithstanding any other provision of law, the State Board of Education, through the Department of Education, is required to develop or adopt a statewide assessment program to measure student performance on state standards and:
 - identify areas in which students need additional support;
 - indicate the academic achievement for schools, districts, and the State; and
 - satisfy federal reporting requirements.
- All assessments required to be developed or adopted under the provisions of this section or chapter must be objective and reliable.

PACT Assessments, Grades 3-8, Exit Exam (10)

- ELA, Math, Science, Social Studies
- Spring administration
- Consequences for students, schools
- Mixed format
 - Selected response
 - Constructed response
 - Extended response (writing)
- Cyclical review of standards and assessments

Grade 6 PACT Science

Item Type	Number of Items	Points per Item	Total Points
Selected-Response	50	1	50
Constructed Response	2	1-4	8
Approximate Totals	52		58

Grade 6 Science Constructed Response Item Area Weights

Area	Science	Percentage
I	Inquiry	40
II	Life	20
III	Earth	10
IV	Physical	30

Education Oversight Committee

- Section 59-18-320. (A) After the first statewide field test of the assessment program in each of the four academic areas, and after the field tests of the end of course assessments of benchmark courses, the Education Oversight Committee, established in Section 59-6-10, will review the state assessment program and the course assessments for alignment with the state standards, level of difficulty and validity, and for the ability to differentiate levels of achievement, and will make recommendations for needed changes, if any. The review will be provided to the State Board of Education, the State Department of Education, the Governor, the Senate Education Committee, and the House Education and Public Works Committee as soon as feasible after the field tests. The Department of Education will then report to the Education Oversight Committee no later than one month after receiving the reports on the changes made to the assessments to comply with the recommendations.

Previous EOC Alignment Studies

- PACT English/language arts (ELA) and math assessments in grades 3 through 8
- Optional PACT ELA and math assessments in grades 1 and 2
- Terra Nova

Previous EOC Alignment Studies

- Committees reviewed items, identified standard(s) assessed
 - Teachers, curriculum specialists, college/university faculty
- Match
- Coverage
- Cognitive complexity
- Technical review

Current/Pending Assessment Alignment Studies

- PACT Science, grades 3 - 8
- PACT Alternate Assessment
- SC Readiness Assessment
- End of Course Assessment, Algebra I
- PACT Social Studies, grades 3-8
- PACT Exit Exam - ELA and Math

Assessment Alignment Studies

- Emphasis on quality
- Informed by data and evidence
- Public disclosure and discussion
- Continuous improvement

PACT Science Field Test Alignment Studies

- AAAS/Project 2061 review of grades 3 and 8
- SC review of grades 4 through 7
- Technical review of grades 3 through 8

Project 2061 Review of PACT Science Field Test

- Partnership - Project 2061 case study
- 18 analysts
- 3 days training, 10 days for review
- Item level analyses - bank, not forms
- Extensive profile of each task

Science Field Test Alignment Review Issues

- Who should do it?
- What should be aligned?
- How should the review be conducted (methodology)?
- When should alignment review take place?
- Where should the review be conducted?
- Why should alignment review be undertaken?

Who Should Conduct the Review of Alignment?

- Independent group
- Teachers, curriculum & instruction specialists, college/university faculty
- What are the roles for non-educators?

What Should Be Aligned?

- Items during development
- Field test forms
- Operational forms
- What do we learn about the standards, the curriculum, and instruction in this process, and what should we do about it?

How Should the Review Be Conducted (Methodology)?

- AAAS / Project 2061
- The assessment provides trustworthy inferences about student achievement of the standards.
- The assessment task targets the exact knowledge specified in the standard and is an effective probe of that knowledge.

AAAS / Project 2061

- Alignment between a task and a standard implies that students' responses to the task are likely to tell us whether they have acquired the knowledge specified in that standard.

Achieve, Inc.

- Confirmation of test blueprint
- Content centrality - can everything on the test be found in the state standards?
- Performance centrality - are students asked to demonstrate the skills expected in the standard?

Achieve, Inc.

- Challenge
 - Source of challenge
 - Level of cognitive demand
 - Level of challenge
- Balance and range - do the assessments focus on the most important content that all students should know?

Achieve, Inc. (2001). Measuring up: A standards and assessment benchmarking report for Massachusetts.

CCSSO / NISE

- Categorical concurrence - does the assessment include items measuring content from each standard?
- Depth-of-knowledge consistency - is what is elicited from students on the assessment as demanding cognitively as what students are expected to know and do as stated in the standards?

CCSSO / NISE

- Range-of-knowledge correspondence - is the breadth of knowledge assessed comparable to that in the standards - the number of objectives within the standard having at least one related assessment item/activity

CCSSO / NISE

- Balance of representation - to what extent are the items evenly distributed across objectives?

Norman L. Webb (1999). *Research Monograph No. 18: Alignment of science and mathematics standards and assessments in four states*. National Institute for Science Education and Council of Chief State School Officers.

American Federation of Teachers

- Criteria for alignment:
 - A state must use a test it developed and specify the standards it measures; or
 - If using an off-the-shelf test, indicate which standards are measured and the percentage of standards aligned to the test.

American Federation of Teachers (no date). *Aligning assessments: What we look for.*

www.aft.org/edissues/standards/SBS/Assessments.htm

National Education Association

- Requirement 9: A state should secure evidence that supports the ongoing improvement of its assessments to ensure that those assessments are:
 - appropriate for the accountability purposes for which they are used;
 - appropriate for determining whether students have attained state standards;

National Education Association

- appropriate for enhancing instruction; and
 - not the cause of negative consequences.
-
- The Commission on Instructionally Supportive Assessment (2001). *Building tests to support instruction and accountability: A guide for policymakers*. American Association of School Administrators; National Association of Elementary School Principals; National Association of Secondary School Principals; National Education Association; National Middle School Association.

American Educational Research Association

- Both the content of the test and the cognitive processes engaged in taking the test should adequately represent the curriculum. High-stakes tests should not be limited to that portion of the curriculum that is easiest to measure.

American Educational Research Association

- When testing is for school accountability or to influence the curriculum, the test should be aligned with the curriculum as set forth in standards documents representing intended goals of instruction.

AERA (2000). AERA position statement concerning high-stakes testing in PreK-12 Education.

When should alignment review take place?

- Continuously during test development?
- Before or after field testing?
- Intact, operational forms?

Where should the review be conducted?

- Logistics, especially if security must be maintained

Why should assessment alignment review be undertaken?

- The PACT
- Improves the quality of the assessment and accountability systems
- Enhances the credibility of the assessments

Alignment Between Assessments and Standards: Test Users

- Assessment fidelity to the standards
- Accuracy, consistency, and validity of assessment results - items, tests
- Information useful for diagnosis of student difficulties and for program evaluation
- Timely return of assessment results

Alignment Between Standards and Assessments: Test Developers

- Time
- Costs
- Requirements to release items/forms
- Disagreements within the professions
- Changes to the standards
- Clarity of the standards
- Amenability of the standards to assessment
- Item mortality

Alignment Reviews In South Carolina

- Enhanced discussion of roles and functions of assessments
- Improved the quality of state assessments
- Improved credibility of the accountability system