

**IMPLICATIONS OF NCLB
FOR ALIGNING
STANDARDS AND ASSESSMENTS:
MAJOR ISSUES AND “LESSONS LEARNED”**

October 11, 2002

Sri Ananda, Ph.D.

- 1. NCLB raises a host of alignment issues, including:**
 - alignment of state standards to state assessments**
 - articulation of standards and assessments across grade levels**
 - vertical equating and passing rates across grade levels**
 - alignment of state assessments to NAEP**

2. The purposes for alignment studies range from exploratory to confirmatory, and from informal to formal.

Examples:

- **To help a state decide whether or not to restructure its existing assessment system.**
- **To provide evidence from an external source of the content validity of a current assessment system.**
- **To help guide subsequent item development by identifying possible content gaps as well as areas in which there are sufficient items.**
- **To see how well a given state's standards compares to standards from other states that are considered exemplary.**
- **To show evidence of compliance with NCLB or some other law.**

- 3. Given NCLB and their own assessment and accountability priorities, many States want to quickly know: Where am I vulnerable? What are my content gaps?**

Example: Study of alignment between content standards for four western states and NAEP frameworks.

- Identify NAEP Content**
- Develop and Pilot-test Cross-walk Instrument and Decision Rules for Evaluating Alignment**
- Two or More Analysts Make Individual Ratings of State Standards in Relation to NAEP Content**
- When Individual Ratings Differ, Determine Consensus Ratings**

TABLE 12
NAEP Crosswalk
California Mathematics Standards Grade 8

NAEP Strand	NAEP Content	State Standard	Overall Rating*	Notes
Number Sense, Properties & Operations	Relate counting, grouping & place value (use place value to model and describe whole numbers & decimals, use scientific notation in meaningful contexts)	(7) Number Sense 1.2 (7) Number Sense 1.1	3	
	Represent numbers & operations in a variety of equivalent forms using models, diagrams & symbols (use number lines, use two- & three-dimensional region models to describe numbers, use other models appropriate to a given situation, such as, draw diagrams to represent a number or operation, write a number sentence to fit a situation or vice versa, interpret calculator or computer displays, & read, write, rename, order & compare numbers)	(7) Number Sense 1.1, 1.2 (7) Math Reasoning 2.5	3	
	Add, subtract, multiply & divide numbers (apply basic properties of operations, describe effect of operations on size and order of numbers, describe features of algorithms, such as, regrouping with or without manipulative or partial products, & select appropriate computation method, such as, pencil & paper, calculator, mental arithmetic)	(7) Number Sense 1.2	2	State standard only covers basic properties of operations.
	Use computation & estimation in applications (round whole numbers, decimals & fractions in meaningful contexts, make estimates appropriate to a given situation, such as, knowing when to estimate, selecting type of estimate, & describing the order of magnitude, selecting method of estimate, such as, front end or rounding, solving application problems using exact answers or estimates, & verifying solutions & determining reasonableness of results in real-world situations)	(7) Number Sense 1.3 (7) Math Reasoning 2.1, 2.3	2	State doesn't specify methods of estimating or real-world situations, rounding off in (4) Number Sense 1.3, 1.4.
	Use computation & estimation in applications by interpreting round-off errors using calculators/computers (truncating)		1	

*Overall Rating:

3 = State standards fully address or exceed NAEP concept by grade level.

2 = State standards partially address NAEP concept by grade level.

1 = State standards do not address NAEP concept by grade level.

- 4. Although there may be considerable content overlap, the alignment between NAEP content frameworks and state standards is not consistently strong; however, specific issues complicate alignment studies and make results difficult to interpret.**

Major Study Findings

- Determining the degree of correspondence between NAEP and some state content standards (Arizona's) is complicated by the fact that this state's standards are organized into grade spans, and hence do not lend themselves to unambiguous conclusions regarding what content would be covered by the end of grade 4.**

Major Study Findings (cont)

- ***Reading:*** a consistent finding across all four states (Arizona, California, Nevada, and Utah) is that much of the content covered by the NAEP frameworks (70% to 100%) is also addressed by the state standards. In fact, the reading content standards in all four states covered more content than is addressed by NAEP (e.g., decoding and word attack skills).
- ***Writing:*** Coverage of NAEP writing content by state writing standards ranged from moderate (40%-69%) to strong (70% - 100%). Interestingly, across all states *persuasive writing* is either not covered or only partially covered (in relation to NAEP) by grade 4 writing standards.
- ***Math:*** Of the three subject areas, math shows the lowest level of content overlap between state content standards and NAEP content.

- 5. External evaluators must work closely and collaboratively with States to design an alignment study that answers their particular questions of interest and guides the process.**

Example of Decision Rules for “Coding” Matches of English Language Arts Items to Grade-Specific Benchmarks:

- An item was coded to benchmark ELA-1-E5 (or ELA -1-M3) only if the relevant text was an extended passage, (i.e., at least 450 words for grade 4, or at least 500 words for grade 8).**
- An item was coded to ELA-3-E2 (or M2), ELA-3-E3 (or M3), ELA-3-E4 (or M4), and ELA-3-E5 (or M5) if the item specifically addressed the skills in these benchmarks.**
- An item was coded to benchmark ELA-5-E2 (or M2) if students were asked to locate an information source or information within a resource even if the page number or title of a page was given to them.**

- 6. The de facto assumption that custom CRTs are strongly aligned to state standards does not hold up against scrutiny in many cases.**

7. The issue of aligning standards and assessments should be viewed as a two-way process.

To what extent are the standards addressed by the assessments (what percentage of standards are addressed by assessments)?

To what extent does the current assessment(s) address the standards (what percentage of the assessment is aligned to standards)?

8. Because of the increasing focus on accountability across the educational spectrum, many States are interested in gap analyses that extend beyond the regular K-12 core curriculum.

Examples:

- **Career-technical standards and skills**
- **English language development curricula**
- **Adult education curricula**
- **Universal design considerations**

9. The issue of alignment should be proactively addressed at all key junctures in the development of standards, assessments, and accountability systems.

Examples of Steps to Help Ensure Alignment:

- Use exemplary items to bridge the processes of standards writing, establishing item specifications, and item writing.
- Build continuity between the standards and item development processes by having a subset of standards writers serve as item reviewers.
- Train item developers to draft items that are aligned to standards. Item developers identify the targeted standard(s) for each item they write; lead item developers verify each item's coding to standards.
- Have Content Review Committee members and other reviewers ascertain the accuracy of an item's coding to standards for each item they review. Project staff recode, revise, or discard those items that do not adequately align to the standards.
- Once test forms are created, conduct a formal alignment study to examine the relationship between standards and test forms.