What Is The Next Step?

- A review of the alignment results

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Delaware Alignment Study

Grades 3, 5, 8, and 10
English Language Arts (ELA)
Mathematics

Grades 4, 6, 8, and 11
Science
Social Studies

Major Questions:

- What do the alignment results mean?
- How to understand the results?
- What are the implications of the results of the alignment to the state assessment?

A Brief Overview:

What is alignment?

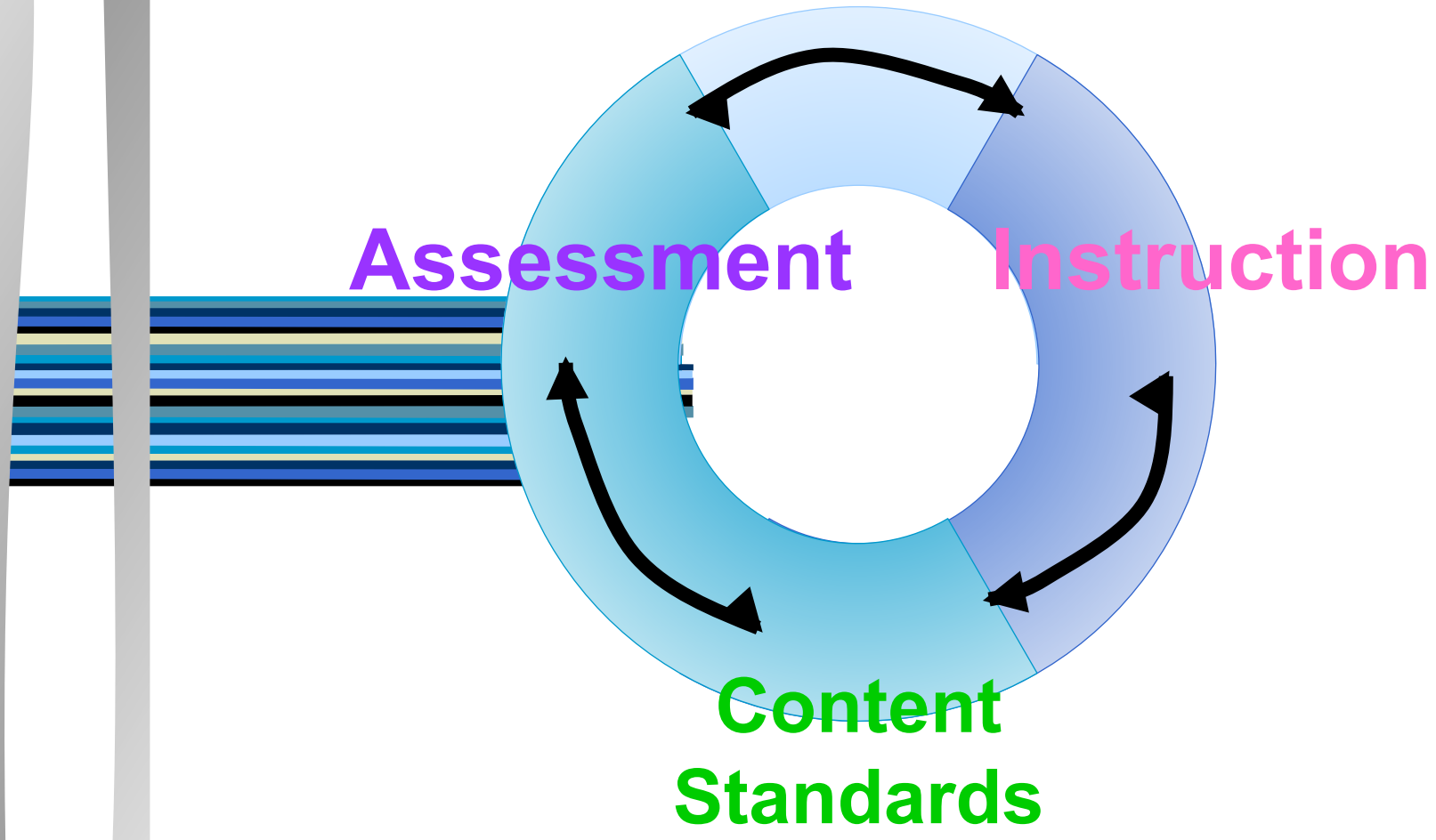
How is alignment generally measured?

Alignment is

the degree to which expectations from the standards and the assessments are in agreement and serve in conjunction with one another.

Alignment is Important

1. Assessment is an important element of the standards-based reform
2. Assessment is designed to measure student progress toward the state standards
3. Assessment has great impact on classroom instruction
4. Alignment analysis provides content-related construct validity evidence


Assessment
Instruction
Content
Standards

Three Perspectives:

Common Framework

Expert Consensus

Common Criteria*

Five Approaches:

Content Focus*

Articulation Across Grades

Equity and Fairness

Pedagogical Implications

System Applicability

Webb's Alignment Model

- Focus on content
- Use four evaluation criteria
- Allow multiple coding
- Use professional judgments and average the results

Webb's Alignment Criteria

1. Categorical Concurrence

2. Depth-of-Knowledge Consistency

3. Range-of-Knowledge Correspondence

4. Balance of Representation

The Process for Reviewing the Alignment Results

1. Standards Level
2. Assessment Level
3. Item Level

Other issues

Level One:

Review the content standards and then compare the alignment results to each standard.

Delaware Mathematics Standards

Process Standards

1 Problem Solving
2 Communicate Mathematically
3 Mathematical Reasoning
4 Mathematical Connections

Content Standards

5 Measurement, Computation, and Estimation
6 Number Sense
7 Algebra
8 Geometry
9 Statistics and Probability (Data Analysis)
10 Patterns, Relationships, and Functions

Summary for Grade 3 Mathematics

Standard	Categorical concurrence	Depth of Knowledge	Range of Knowledge	Balance of Representation
1	Yes	No	Weak	Yes
2	No	Yes	No	Yes
3	No	Yes	Weak	Yes
4	No	No	No	Yes
5	Yes	Yes	Yes	Yes
6	Yes	Yes	Yes	Yes
7	No	Yes	Weak	Yes
8	Yes	Yes	Yes	Yes
9	Yes	Yes	Yes	Yes
10	Yes	No	Yes	Yes

Summary for Grade 8 Mathematics

Standard	Categorical Concurrence	Depth of Knowledge	Range of Knowledge	Balance of Representation
1	Yes	Yes	No	Yes
2	Yes	Yes	No	Yes
3	No	Weak	Yes	Yes
4	No item	No item	No item	No item
5	Yes	Yes	Yes	Yes
6	Yes	Weak	Yes	Yes
7	Yes	Yes	Yes	Yes
8	Yes	Yes	Yes	Yes
9	Yes	Yes	Yes	Yes
10	Yes	No	Weak	Yes

The DSTP mathematics assesses students' knowledge of standards 5-10.

The process standards (1-4) are embedded in test items and they cannot be coded separately from the content standards.

The process standards are essential and are meant to be part of the curriculum and classroom instruction.

Delaware Mathematics Standard 4

Students will develop their ability to make mathematical Connections by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Delaware ELA Standards

1. Students will use written and oral English appropriate for various purposes and audiences.
2. Students will construct, examine, and extend the meaning of literary, informative, and technical texts through listening, reading and viewing.
3. Students will access, organize, and evaluate information gained by listening, reading, and viewing.
4. Students will use literary knowledge accessed through print and visual media to connect self to society and culture.

Summary for Grades 8 and 10 English Language Arts

Standard	Categorical Concurrence	Depth of Knowledge	Range of Knowledge	Balance of Representation
Grade 8				
1	No	No	No	Yes
2	Yes	Yes	Yes	No
3	No	Yes	No	Yes
4	Yes	Yes	Yes	Weak
Grade 10				
1	No	No	No	Yes
2	Yes	Yes	Yes	Weak
3	No	Yes	Yes	Yes
4	Yes	No	Weak	Yes

Delaware Writing Assessment

A text-based writing:
Based on a reading passage
Score 1 - 5

A stand-alone writing:
Respond to a writing prompt
Score 1 – 10

The writing score 1 - 15

Direct Writing vs. Indirect Writing Assessment

1. The number of items (or score points)

2. What are the expectations in the standards?

3. What does the writing assessment measure?

DE Writing Scoring Rubrics

1. Organization
2. Development
3. Sentence structure
4. Style and voice
5. Conventions*

Level Two:

Review the test specifications and compare the alignment results to each content domain and its weight specified in the test specifications.

Content Configuration in Mathematics

GR	Number Concepts (5 and 6)	Algebra Patterns (7 and 10)	Geometry & Spatial Sense (8)	Probability & Statistics (9)
3	50%	15%	20%	15%
5	40%	20%	20%	20%
8	30%	25%	25%	20%
10	15%	40%	25%	20%

Summary for Grade 5 Mathematics

Standard	Categorical Concurrence	Depth of Knowledge	Range of Knowledge	Balance of Representation
1	Yes	Weak	No	Yes
2	No	No	Weak	Yes
3	No	Yes	Yes	Yes
4	No	Weak	No	Yes
5	Yes	Yes	Yes	Yes
6	Yes	Yes	Yes	Yes
7	No	Yes	Yes	Yes
8	Yes	Yes	Yes	Yes
9	Yes	Yes	Yes	Yes
10	Yes	No	Yes	Yes

Summary Grade 10 Mathematics

Standard	Categorical Concurrence	Depth of Knowledge	Range of Knowledge	Balance of Representation
1	Yes	No	No	Yes
2	Yes	Yes	No	Yes
3	No	Yes	No	Yes
4	No	Yes	No	Yes
5	Yes	Yes	Yes	Weak
6	No	Yes	Yes	Yes
7	Yes	Weak	Yes	Yes
8	Yes	Weak	Yes	Yes
9	Yes	Yes	Yes	Weak
10	Yes	Yes	Yes	Yes

Level Three:

- Review the source of challenges provided by the reviewers
- Review the item coding and compare it with the coding by the item writer

Other Issues

1. The purpose of the content standards

2. The structure of the content standards

3. The feasibility of large-scale assessments

Purpose of Content Standards

As a guideline for curriculum and classroom instruction

As a framework for assessment (e.g., NAEP)

Structure of Content Standards

- General vs. Specific (e.g., number of standards or goals)
- Grade vs. Grade Cluster expectations

The Feasibility of Assessments

1. Time limit
2. Budget issue
3. Statewide assessments only measure a sample of standards
4. Measurable standards in large-scale assessments (e.g., listening, speaking)
5. Objectives of assessment (e.g., achievement, diagnostic, end-of-course)

The Implications

1. The degree of alignment
2. Review the quality of the content standards
3. Review the assessment
4. Improve test development and item writing
5. Use multiple measures