

# Lining Up: The Relationship between the Common Core State Standards and Five Sets of Comparison Standards



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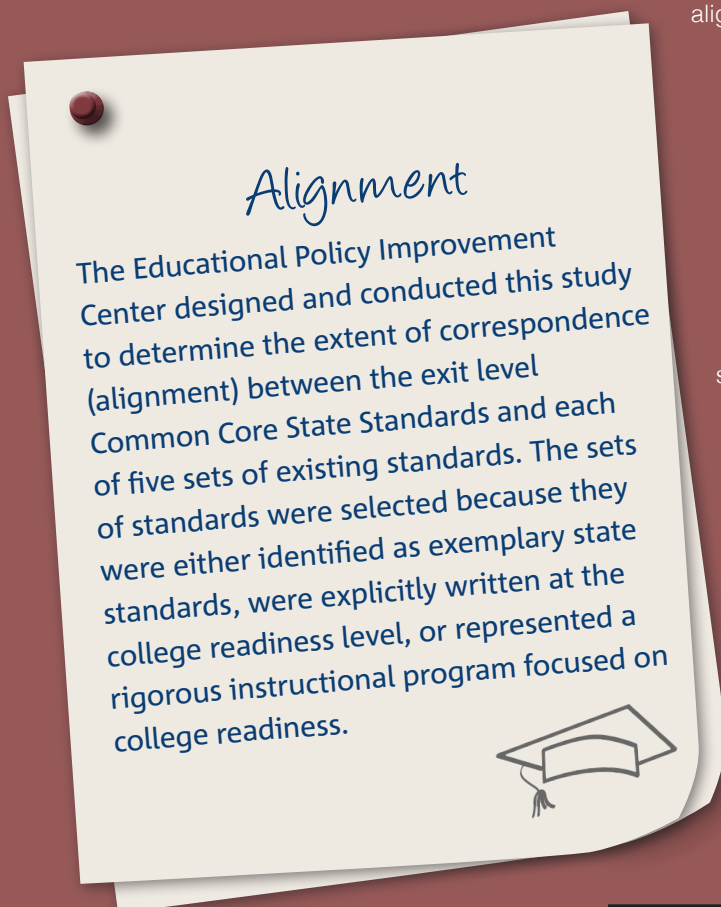


In June 2010, the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) released the Common Core State Standards.<sup>1</sup> The stated aim of the Common Core standards is to define the knowledge and skills students should achieve in order to graduate from high school ready to succeed in a wide range of postsecondary educational settings (Common Core State Standards Initiative, 2010a).

As of October 2011, 44 states and the District of Columbia had officially adopted the standards. This widespread potential implementation of the Common Core standards has led to interest by states and national organizations regarding the relationship between these new standards and existing systems of standards. Are the Common Core standards aligned with the standards states and others have developed over many years? Are they as challenging? Do they cover the same topic areas with the same emphases?

To help answer these questions, the Educational Policy Improvement Center (EPIC), designed and conducted this study to determine the extent of correspondence (alignment) between the exit level Common Core standards and each of five sets of existing standards. The sets of standards were selected because they were either identified as exemplary state standards, were explicitly written at the college readiness level, or represented a rigorous instructional program focused on college readiness. The purpose was to see if the Common Core standards cover similar content, how broadly they cover the comparison standards, and how the cognitive challenge level of aligned content matches up.

The study asks three questions about the Common Core standards in English language arts and literacy, and mathematics:



*Alignment*

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<sup>1</sup>Referred to hereafter as the Common Core standards.

1. To what extent are the knowledge and skills found in the comparison standards the same as or different from what is described in the Common Core standards? (match)
2. What is the cognitive complexity level of the Common Core standards and to what extent are the matched comparison standards at a higher or lower level of cognitive complexity? (depth)
3. How broadly do the matched comparison standards cover the content of the Common Core standards? (breadth)

- Texas: The Texas College and Career Readiness Standards in English/language arts, mathematics, and cross-disciplinary standards (released in 2008)
- KSUS: The Knowledge and Skills for University Success (KSUS) standards in English and mathematics,<sup>2</sup> developed as college-preparatory standards by Standards for Success (released in 2003)
- IB: The International Baccalaureate Diploma Programme English language arts and mathematics standards, developed by EPIC, for IB's Programs of Study for 10th–12th grades<sup>3</sup> (released in 2009)

## Study Overview

### Comparison Standards

The comparison standards selected for the study come from two states that have been regarded as having high quality educational standards: California and Massachusetts (Achieve, Inc., 2010). The Texas College and Career Readiness Standards are included because they represent one of the only sets of competencies and skill statements developed by a postsecondary education agency in collaboration with K-12 educators (Texas Higher Education Coordinating Board & Texas Education Agency, 2008). The other set of college readiness standards, the Knowledge and Skills for University Success (KSUS), were developed by university faculty in the early 2000s and represent the first set of such standards (Conley, 2003). Finally, to capture a more international perspective, the standards from the International Baccalaureate (IB) Diploma Programme are also examined. The IB Diploma Programme is offered in 141 countries and is becoming increasingly popular in the US.

The specific comparison standards are as follows:

- California: The Content Standards for California Public Schools, for the 11th–12th grade band in English language arts and for 8th–12th grade band in mathematics (released in 1997)
- Massachusetts: The Massachusetts Curriculum Frameworks, for the 11th–12th grade band in English language arts (released in 2001) and mathematics (released in 2000)

### Methodology

We adopted and adapted Cook and Wilmes's (2007) standards-to-standards alignment methodology that includes a combination of linking (match between standards) and correspondence (depth and breadth). The method derives from Webb's alignment methodology (1997, 1999, 2002a). The Cook and Webb approaches have been widely used to assess alignment of assessments and standards. The method employs panels of experts to review and rate content and cognitive processes for each standard and then use the expert ratings to calculate statistics of alignment. These statistics demonstrate how closely the assessment reflects the standards in terms of content and cognitive challenge (Webb, Herman, & Webb, 2007). Standards-to-standards alignment (Cook, 2007; Cook & Wilmes, 2007) provides a means to quantify and evaluate the extent of overlap between different sets of standards in terms of knowledge, skills, and content.

Three alignment indices provide the data to answer the study's three research questions:

1. **Categorical Concurrence:** the extent of overlap or match between the comparison standards and the Common Core standards.

<sup>2</sup>These did not include the Knowledge and Skills Foundations within the English and mathematics sections.

<sup>3</sup>Note that the study did not include any content from IB "options." These are additional required components, which each IB school selects. The number of options varies by course and by subject. The IB options do not have specific standards.

**2. Depth of Knowledge Consistency:** a comparison of cognitive demand of matched content between the sets of comparison standards and the Common Core standards.

**3. Breadth of Coverage:** how broadly matched comparison standards cover content elements of the Common Core standards.

Nine English language arts experts and seven mathematics experts comprising secondary and post-secondary educators completed two tasks. Each rated the Depth of Knowledge of each standard and then determined the degree to which each comparison standard matched content in the Common Core standards. When determining match, they identified up to three Common Core standards that corresponded with a standard in a comparison set. The limit of three standards follows the Webb protocol and philosophy that alignment should concentrate only on content central to the statements.

## Findings

The overall results of the study suggest substantial concurrence between the Common Core standards and the comparison standards, with somewhat greater alignment in mathematics than in ELA and literacy. For ELA and literacy, 36 of 40 analyses at the strand level meet the Categorical Concurrence criterion. For mathematics, all 25 analyses at the conceptual category level meet the Categorical Concurrence criterion.

The findings suggest general consistency between the cognitive challenge level of the Common Core standards and the five comparison standard sets. Mathematics shows somewhat more consistency of cognitive challenge than do the ELA and literacy standards. In ELA and literacy, 17 of 36 strand-level analyses indicate that the comparison standard sets are at or above the level of the Common Core standards. For mathematics, 19 of 25 conceptual category-level analyses indicate that the comparison standard sets are at or above the level of the Common Core standards. Overall, the standards from the comparison sets tend to cover the breadth of topics

contained in the Common Core standards. For ELA and literacy, 37 of 40 strand analyses show strong coverage. For mathematics, findings suggest that comparison sets show strong coverage of all 25 conceptual category analyses. While every standard in the Common Core standards may not have a match with each and every set of comparison standards, the topics around which the Common Core standards are organized are reflected in the comparison standards with a high degree of frequency.

## Conclusion

The business of analyzing alignment, cognitive challenge, and coverage between sets of standards remains an approximate art, even when ample care is given to controlling variation and ensuring reliable and valid results. This is one of the reasons we offer findings at a high level of aggregation. Educators should bear in mind the overall goals of the Common Core standards when considering the mechanics of alignment. Those goals are to raise the challenge level for U.S. students, to enable all students to pursue successful futures beyond high school, and to equip students with a set of core knowledge and skills that enable them to be adaptive learners throughout their lives.

Alignment is a preliminary and first step to achieving the goal of standards implementation. This study offers initial findings regarding five sets of comparison standards that are considered rigorous and good indicators of college and career readiness. While additional analyses at the individual state level are needed, the overall findings from this study suggest a general level of agreement between the Common Core standards and the comparison standards regarding what is important for high school students to know and be able to do and the cognitive level at which they need to demonstrate key skills in English language arts and mathematics in order to be ready for college and careers.