

# Reaching the Goal: The Applicability and Importance of the Common Core State Standards to College and Career Readiness



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# Acknowledgements

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Beyond those listed as authors of the report, additional EPIC staff made significant contributions. Charis McGaughy and Mary Seburn worked on the initial design and proposal for the study. A number of individuals, including Carla Anderson, Jan Tully, Mckenzie Gambee, Sara Frain, and Alanna Crabaugh helped with contacting and recruiting potential participants. Carl Green and Anne Irvine-Gordon assisted with the coding of the open-ended responses. Karin Klinger, Alison Rich, Tina Kerrigan, and Cara Strazzo collaborated to edit and prepare the document.

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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®. The stated aim of the Common Core State Standards is to define the knowledge and skills students should achieve in order to graduate from high school ready to succeed in entry-level, credit-bearing academic college courses and in workforce training programs (Common Core State Standards Initiative, 2010a).

The Common Core State Standards gave states an opportunity to voluntarily adopt common expectations in English language arts and literacy, and mathematics. With common standards in place, states could more easily and efficiently share best practices in curriculum and assessments, while still retaining flexibility on how best to teach these subjects locally (Phillips & Wong, 2010). As of July 2011, 44 states had taken up this invitation and had adopted the standards.

Major questions remain to be answered about these standards, chief among them the degree to which they reflect what is necessary to be ready for college and careers. To help answer this question, the Educational Policy Improvement Center (EPIC) designed and conducted this study. It examines the degree to which the knowledge and skills contained in the Common Core State Standards are applicable to and important for postsecondary readiness.

Our method was to have postsecondary instructors from a wide range of postsecondary courses and institutions rate each standard on its applicability and importance to their course. We began by recruiting a national sample of instructors from two- and four-year institutions in 25 course categories. A total of 1897 responses were received. First, we asked them to rate the applicability of each Common Core standard to their course. If the standard was applicable, we asked them to rate the standard's importance to success in the course.

### Instructors Rate Applicability

The study examines the degree to which the knowledge and skills contained in the Common Core State Standards are applicable to and important for postsecondary readiness. The study asked postsecondary instructors from a wide range of postsecondary courses and institutions to rate each standard on its applicability and importance to their course.



Each instructor was given the opportunity to rate both (English language arts [ELA] and literacy, and mathematics). Responses to these two questions and several supplemental questions provide the basis for our findings.

The 25 course categories include 14 from courses commonly associated with general education requirements for a bachelor’s degree and 11 that might be better considered as career-oriented, often required for two-year certificates or, in some cases, a bachelor’s degree in a career area. EPIC has collected this type of self-reported information previously and has found 70% to 90% consistency of instructor ratings of the standards with independent third-party expert analysis of course syllabi from these instructors (Conley,

Aspengren, Gallagher, Stout, & Veach, 2006; Educational Policy Improvement Center, 2008). Given the exploratory nature of this study, this method of data collection was deemed appropriate. Caution is taken throughout the report not to overgeneralize or place excessive weight on any individual data point. Instead, the findings and conclusions are summarized at a relatively high level of aggregation, while the interested reader can still examine the more detailed standards ratings.

We selected courses to be representative examples of common offerings in seven major subject areas: English language arts, mathematics, science, social science, business management, computer technology, and healthcare. The study does not cover the whole landscape of personnel who could provide information on college- and career-readiness, nor do the selected courses comprehensively cover all content areas. The data does, however, give insight on the Common Core standards from college instructors in a number of different fields and contexts.

**Table ES.1. Course Categories Represented in Study**

Content area	Course category
English language arts	Composition I
	Composition II
	English Literature
Mathematics	Calculus
	College Algebra
	Statistics
Science	Biology
	Chemistry
	Physics
Social science	Introduction to Economics
	Introduction to Psychology
	Introduction to Sociology
	U.S. History
	U.S. Government
Business management	Human Resource Management
	Introduction to Accounting
	Introduction to Business Management
	Introduction to Marketing
Computer technology	Computer Science I
	Database Management Systems
	Fundamentals of Programming
Healthcare	Anatomy and Physiology
	Foundations of Nursing
	Human Development
	Pharmacology

## Study Overview

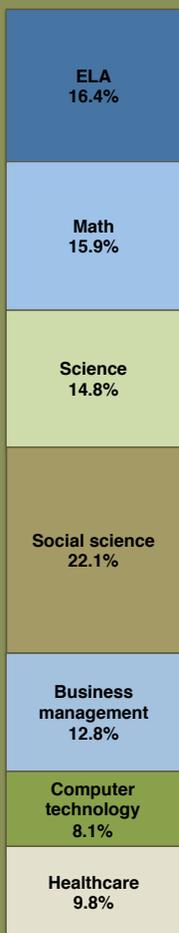
### Participants

Data were collected from college instructors using an online instrument. In order to ensure the most suitable participants, we used a nomination process in which we asked liaisons — department chairs, deans, provosts, and/or chief academic officers — to nominate individuals who either currently taught or had recently taught a course or courses from one of the 25 course categories. The course categories are contained in Table ES.1 Liaisons nominated instructors for 3625 distinct courses. The study includes data from the 1815 instructors who rated 1897 separate courses.<sup>1</sup> Figure ES.1 shows the distribution of courses across the seven content areas.

Instructors from all states and the District of Columbia participated in the survey. Nearly 64% of respondents came from public institutions, with 36% from private institutions.

<sup>1</sup>There were 66 instructors (4% of the sample) who were nominated for and completed the survey for more than one course.

**Figure ES.1. Percent of Participants by Subject Area**



Responses were geographically well balanced across regions of the U.S. Approximately 60% of the courses were taught at four-year institutions, the other 40% at two-year institutions. More than 50% of respondents had taught the course 10 or more times. Participating instructors, therefore, knew their course and content area extremely well.

Because the Common Core standards were written with the intention of being broadly applicable across a range of coursework and content areas — not only to English and mathematics courses — we asked respondents to rate both the ELA and literacy standards and the mathematics standards, regardless of the subject area in which they taught. We grouped the Common Core standards such that respondents rated 113 statements for ELA and literacy and 200 statements for mathematics.

### Survey

If respondents rated a standard as applicable (in other words, if it represented prerequisite knowledge and skills, content that would be reviewed in the course, or new information that would be introduced in the course), they were then asked to rate the importance of the standard on a 4-point scale that ranged from least to most important. They also had an opportunity to answer five optional questions that asked them to reflect on the standards as a whole. These questions focused on several dimensions, including cognitive challenge

level of the standards, whether they included all of the important knowledge and skills used in their course, as well as their general impression of the standards.

## Findings

### How applicable are the Common Core standards to postsecondary courses?

In general, we found that for the ELA and literacy standards, applicability ratings for non-literary reading and writing standards are very high, particularly when results from the English language arts strands of Reading for Informational Texts and Writing are combined with results from the literacy, subject-specific versions of these same strands. With few exceptions, a large percent of instructors across all content areas rated the Speaking and Listening strand and Language strand as applicable. Given the broad applicability of these standards to a wide range of postsecondary courses, the Speaking and Listening standards seem particularly important to teach and assess at the classroom level and to be included in some form by the two consortia of states working on common assessments of the Common Core standards.

For the mathematics standards, the applicability ratings varied according to the categories included in the standards.

For example, the Standards for Mathematical Practice were relevant to a large majority of the sample, whereas Functions and Geometry were applicable to a relatively small percentage of the sample.

For a majority of instructors in almost all content areas rated the Mathematical Practices as applicable.

Not every standard is applicable to every one of the 25 course categories. This should hardly be surprising given the wide range of courses we intentionally included in the study and the fact that we made all standards available for review by all respondents. Also not surprising, when applicability ratings are grouped by content area, they show that instructors of different content areas place varying degrees of emphasis on the eight ELA and literacy strands and the five mathematics

conceptual categories and Mathematical Practices.

### **How important are the Common Core standards to success in a wide range of postsecondary courses?**

Almost every standard received a mean rating well above 2.5, the midpoint between “less important” and “more important” on the 4-point scale. Most exceeded 3, “more important.” Therefore, interpretation of the importance ratings is relatively straightforward: respondents who considered a particular standard applicable also considered it to be important. The ELA and literacy standards on the whole received higher importance ratings than did the mathematics standards. Mathematics had more standards below 2.5, 25 of 200. Some of these were standards identified as being more specialized in nature. Only two of 113 English language arts (ELA) and literacy standards had means below 2.5.

#### **Importance of the ELA and Literacy Standards**

Instructors who taught courses in the English content area comprised the majority of respondents in all ELA and literacy strands except speaking and listening, and language for which responses were distributed more representatively across all course categories. Social science instructors made up the large majority of respondents in the Reading Standards in History/Social Studies, while respondents in the Reading Standards in Science and Technical Subjects were more broadly distributed, with about a quarter of respondents teaching science courses. The importance ratings for the Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects were also distributed representatively, with social science and science instructors providing just over half of the responses. The Language strand, while receiving high applicability ratings, also received the lowest importance ratings. These standards relate to use of the English language and include spelling, punctuation, and usage conventions and are very specific in nature, more specific than other ELA and literacy standards.

Standards that relate to students mastering comprehension

of nonfiction text with grade-appropriate complexity were highly rated, both generally and as they apply to specific content areas. Instructors placed relatively greater emphasis on standards that require students to extract key ideas and details from text, possess general writing skills — especially the writing process — use research to support written analysis, and write routinely over both extended and shorter periods of time.

#### **Importance of the Mathematics Standards**

Mathematics and science instructors comprise the majority of respondents in Number and Quantity, Algebra, Functions, and Geometry, in which they make up 85% of respondents. They are less than a majority in Statistics, where science and social science respondents make up a majority. Mathematical Practices had the widest range of respondents. For these standards, math and science instructors make up 43% of respondents, and social science instructors comprise an additional 17%, with three other content areas each contributing more than 10% of the responses.

Mathematics standards with the highest ratings include standards related to reasoning quantitatively and interpreting functions. Three algebraic concepts also received high ratings. These contain standards that expect students to create equations that describe numbers or relationships, interpret the structure of expressions, and solve problems with different equations. All respondents rated the Geometry category relatively lower. This finding suggests that the Geometry category may be a candidate for further review in order to increase its applicability and importance by eliminating or consolidating some standards. The Standards for Mathematical Practice, which authors of the Common Core standards stated should be applied across all applicable standards, are noteworthy because they received the highest importance ratings and because the ratings came from a very broad cross-section of respondents. These findings suggest that, as intended, the Standards for Mathematical Practice should indeed be implemented and assessed across subject

