

Defining and Measuring College and Career Readiness

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Context

- * College readiness and career readiness have become important policy goals for education over the past few years.
- * Common Core State Standards point toward college and career readiness.
- * However, many people contend that it is unclear what is meant by these terms.
- * What do they mean? What are some definitions? How can college and career readiness be measured? What are the implications of various measurement approaches?

Purposes of This Session

1. Provide an overview of the evolution and current state of definitions of college and career readiness.
2. Examine current understandings of college and career ready.
3. Review recent research on the Common Core in relation to college and career readiness.
4. Consider issues related to measuring college and career readiness.

College and Career Ready Definition

- * Conley, 2007, 2010
 - * The level of preparation a student needs in order to enroll and succeed—without remediation—in a credit-bearing course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program, or in a high-quality certificate program that enables students to enter a career pathway with potential future advancement.
 - * Succeed is defined as completing the entry-level courses or core certificate courses at a level of understanding and proficiency that makes it possible for the student to consider taking the next course in the sequence or the next level of course in the subject area or of completing the certificate.

College and Career Ready Definition

- * ACT, 2008
 - * The level of achievement a student needs to be ready to enroll and succeed—without remediation—in credit-bearing first-year postsecondary courses. And by postsecondary we mean primarily two-year or four-year institutions, trade schools, and technical schools. Today, however, workplace readiness demands the same level of knowledge and skills as college readiness.

Readiness vs. Preparedness

- * National Assessment Governing Board defines preparedness as a subset of readiness:
 - * “Preparedness focuses on academic qualifications, which are measured by NAEP. Readiness includes behavioral aspects of student performance—time management, persistence, and interpersonal skills, for example—which are not measured by NAEP.” (Technical Panel on 12th Grade Preparedness Research Final Report, 2009).

Different Types of *Readiness*

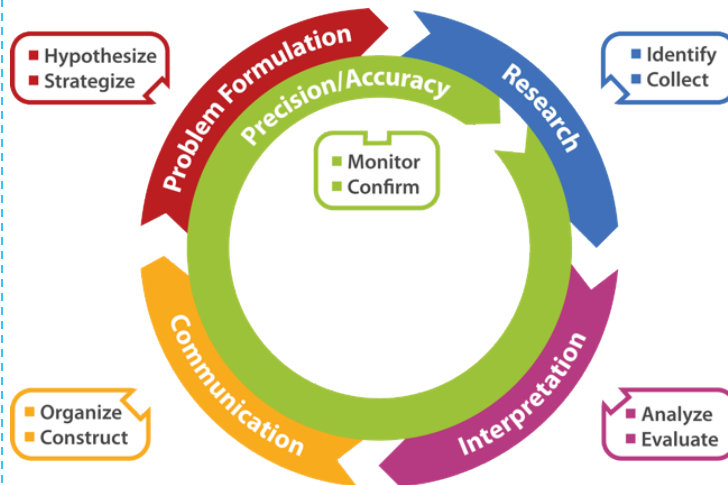
- * **Work ready** = Meets basic expectations regarding workplace behavior and demeanor
- * **Job ready** = Possesses specific training necessary to begin an entry-level position
- * **Career ready** = Possesses key content knowledge and key learning skills and techniques sufficient to begin studies in a career pathway
- * **College ready** = Is prepared in the four keys to college and career readiness necessary to succeed in entry-level general education courses

Four Keys To College And Career Readiness

Key Content Knowledge

- + Key terms and terminology
- + Factual information
- + Linking ideas
- + Organizing concepts

Key Cognitive Strategies



Key Learning Skills & Techniques

- + Time management
- + Study skills
- + Goal setting
- + Self-awareness
- + Persistence
- + Collaborative learning
- + Student ownership of learning
- + Technology proficiency
- + Retention of factual information

Key Transition Knowledge & Skills

- + Postsecondary program selection
- + Admissions and financial aid requirements
- + Career pathways
- + Affording college
- + Postsecondary culture
- + Role and identity issues
- + Agency

Prior Readiness Standards

- * Standards for Success (2003)
 - * First comprehensive set of college readiness standards.
 - * Collected information from 400+ faculty at AAU universities on what was necessary to be ready to succeed in entry-level courses.
 - * Identified “Knowledge and Skills for University Success.”
 - * Listed specific objectives and content knowledge.
 - * Outlined cognitive strategies and described learning strategies.
 - * Did not explicitly address career readiness.

Prior Readiness Standards

- * American Diploma Project Benchmarks (2004, with revisions in 2008)
 - * Contracted with economists to identify “promising jobs.”
 - * Surveyed employers from 22 occupations.
 - * Conducted focus groups with secondary and postsecondary educators from two-year and four-year institutions.
 - * Included business representatives in discussions and reviews of resulting standards.
 - * Claim the standards reflect an “unprecedented convergence” of educator and employer opinions on what it means to be college and career ready.

Prior Readiness Standards

- * College Board Standards for College Success (2006)
 - * Derived from multiple sources and formulated by College Board Standards Advisory Committees, consisting of secondary and postsecondary educators.
 - * Sequenced from 6-12 and not specifically a set of outcome standards.
 - * Claim to be aligned with Advanced Placement and college readiness.
 - * No specific reference to career readiness.

Prior Readiness Standards

- * ACT College Readiness Benchmarks (2007)
 - * Analyzed Zone 3 O*NET jobs.
 - * Found that 90% of Zone 3 jobs require a 5 on the ACT WorkKeys assessment.
 - * Keyed College Readiness Benchmarks to cut scores on the ACT.
 - * Conducted a concordance between ACT and WorkKeys scores on statewide sample of 11th graders.
 - * Identified comparable scores on WorkKeys and ACT College Readiness Benchmarks.
 - * Identified common skills associated with each score.
 - * Concluded that college and work readiness were functionally equivalent.

Prior Readiness Standards

- * Texas College and Career Readiness Standards (2009)
 - * Developed via convergent consensus method with teams of secondary and postsecondary educators.
 - * Reviewed extensively by secondary and postsecondary educators in Texas.
 - * Validated via postsecondary instructor input from 913 courses at two-year and four-year Texas institutions.

Current Readiness Standards: Common Core

- * Common Core State Standards (2010)
 - * English Language Arts/Literacy Standards designed down from the College and Career Ready Standards.
 - * “the CCR standards anchor the document and define general, cross-disciplinary literacy expectations that must be met for students to be prepared to enter college and workforce training programs ready to succeed.”
 - * Mathematics Standards are silent on reference point beyond stating they are to enable students “to access the knowledge and skills necessary in their post-school lives.”

Current Readiness Standards:

NAEP

- * Preparedness represents **academic** knowledge and skill levels in reading and mathematics necessary for placement into:
 - * Job training programs
 - * Credit-bearing entry-level general education courses that count toward a four-year degree
- * Preparedness is not readiness
 - * NAEP definition is academic preparedness—not success
 - * Readiness is more inclusive than NAEP preparedness
 - * “Habits of the mind” and behaviors that cannot be measured by NAEP, although they are necessary for success.

Current Readiness Standards:

CTE

- * CA CTE Standards in 15 industry sectors
- * Linked Learning
 - * Movement to design CTE courses that also meet college entrance requirements
- * High Schools that Work
- * University of California project to design CTE courses that fulfill UC A-G requirements

Current Readiness Standards: Work Readiness

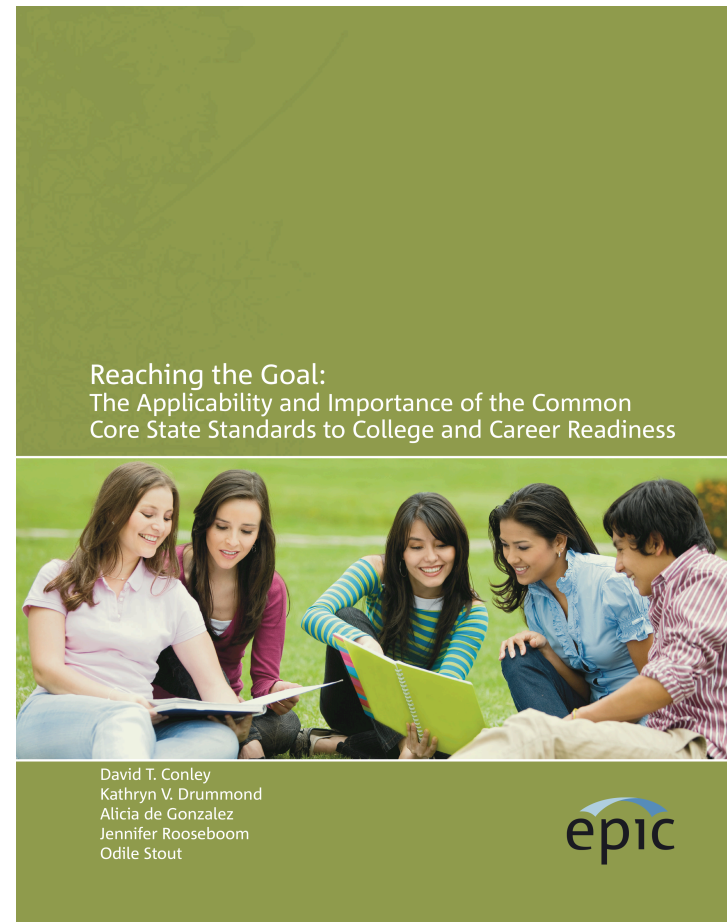
- * Industry Standards
 - * Many industrial groups have set standards that require high levels of education and preparation. A few examples illustrate:
 - * SAE International Standards for Aerospace, Automotive, Commercial Vehicle
 - * National Retail Federation for Customer Service, Retail Management, Retail Business
 - * National Bioscience Industry Skill Standards for Technicians

College and Career Readiness Research

- * EPIC Texas College Career Readiness Initiative
 - * Analyzed instructor ratings of TCCRS and syllabi from 913 entry-level courses at two- and four-year public institutions in Texas.
 - * Determined that specific content knowledge expectations varied significantly in both two- and four-year programs, particularly across certificate programs.
 - * Found a core of common expectations in the learning behaviors and cognitive strategies students needed to demonstrate.

Common Core Research

- * Conley, et al. (2011). *Reaching the Goal: The Applicability and Importance of the Common Core State Standards to College and Career Readiness*
 - * Study of 1900 entry-level courses in 25 areas, 12 from four-year institutions, 13 from two-year.
 - * Gathered instructors' ratings of importance and applicability of CCSS to their courses.
 - * Collected syllabi and key assignments and exams.



Common Core Research

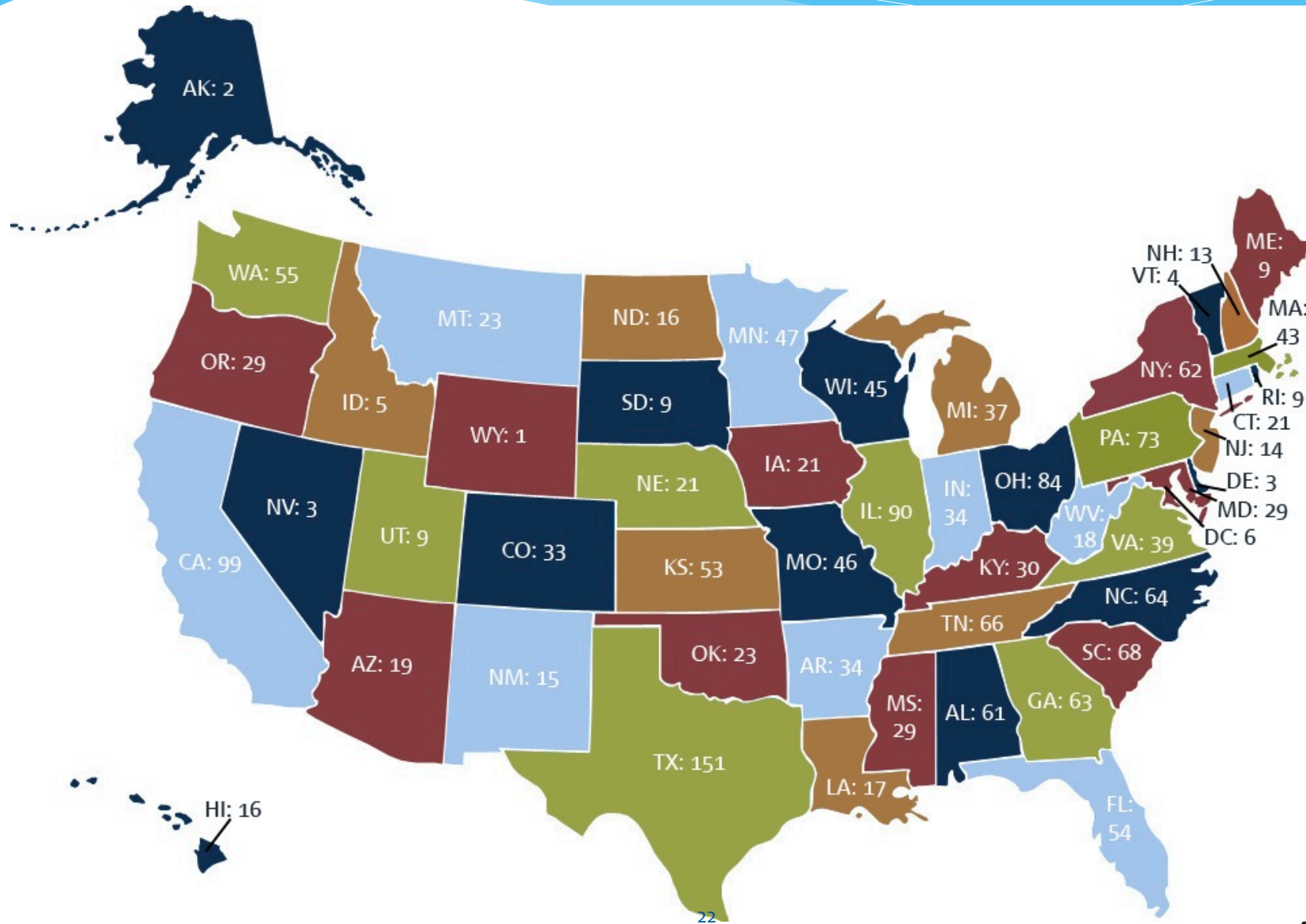
* Key Findings

- * CCSS are applicable and important to success in a wide range of postsecondary courses
- * Cognitive challenge level of the CCSS is sufficient.
- * CCSS are a coherent representation of the knowledge necessary for success in college courses.
- * The CCSS do not omit key knowledge and skills.
- * A core of knowledge and skill is common across general education and career oriented courses.
- * However, career areas tend to have distinct knowledge profiles that differ from general education.

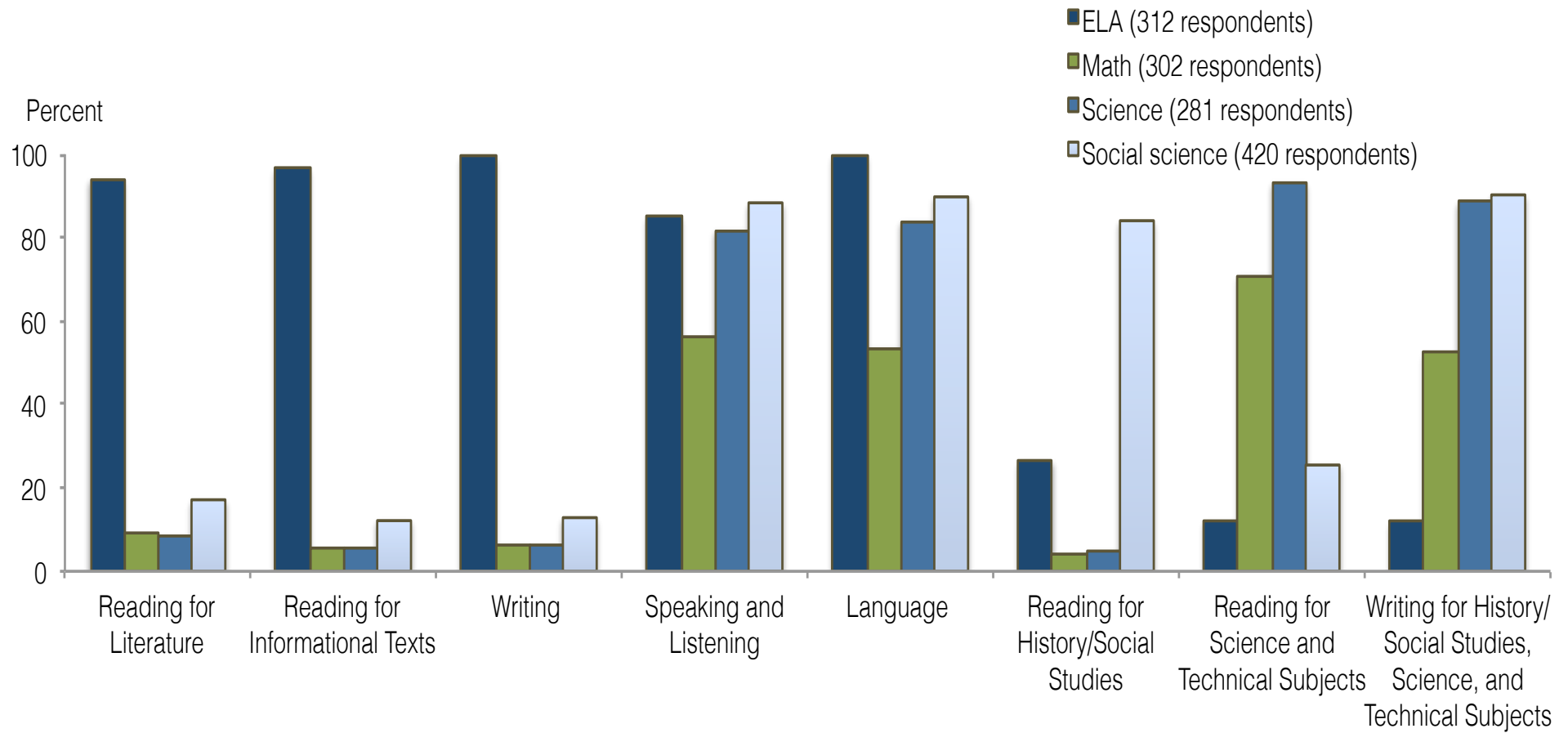
1897 Courses Rated

Content area	Course category	N	Total
English language arts	Composition I	312	1315
	Composition II		
	English Literature		
Mathematics	Calculus	302	
	College Algebra		
	Statistics		
Science	Biology	281	
	Chemistry		
	Physics		
Social science	Introduction to Economics	420	
	Introduction to Psychology		
	Introduction to Sociology		
	U.S. History		
	U.S. Government		
Business management	Human Resource Management	243	
	Introduction to Accounting		
	Introduction to Business Management		
	Introduction to Marketing		
Computer technology	Computer Science I	153	582
	Database Management Systems		
	Fundamentals of Programming		
Healthcare	Anatomy and Physiology	186	
	Foundations of Nursing		
	Human Development		
	Pharmacology		

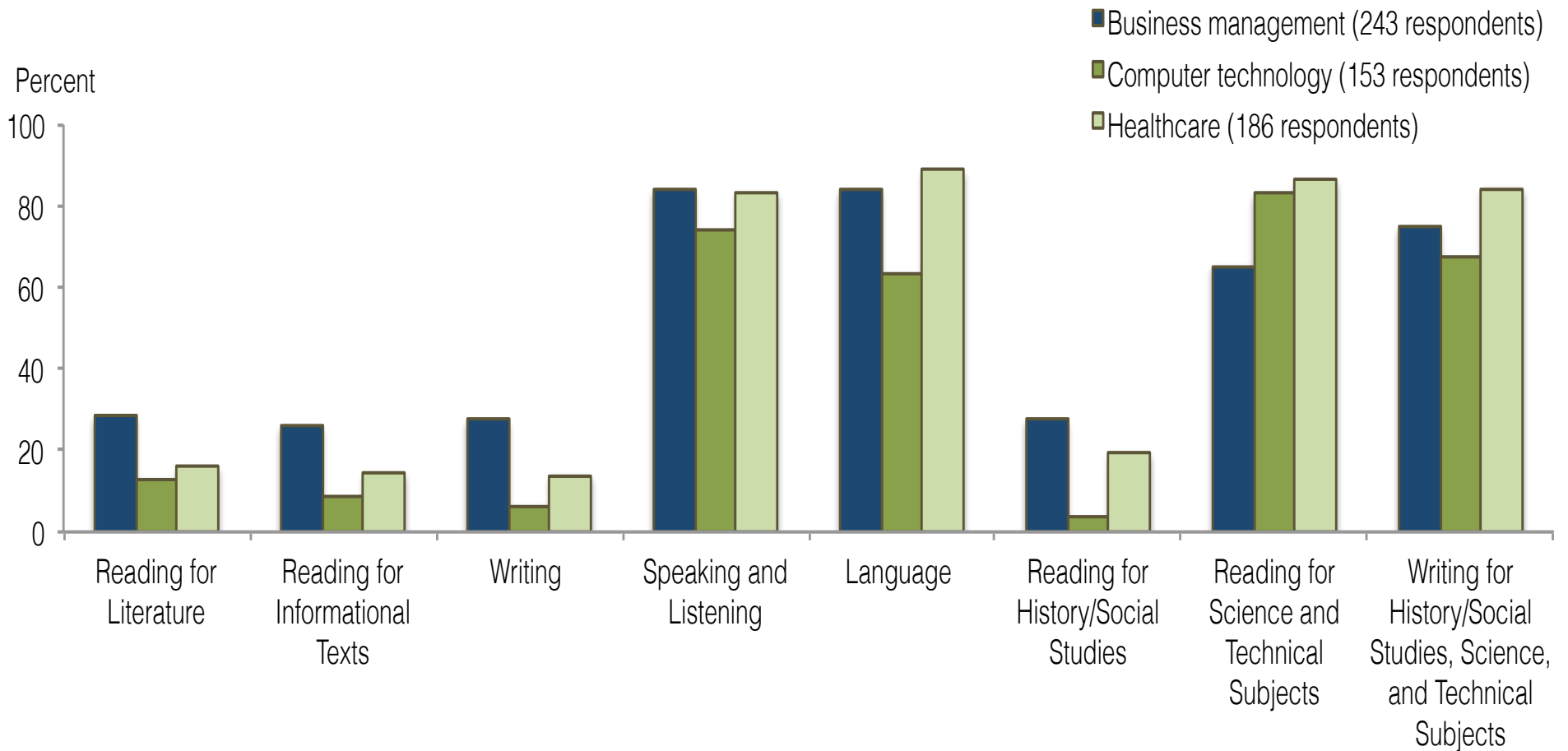
Respondents Geographically Distributed



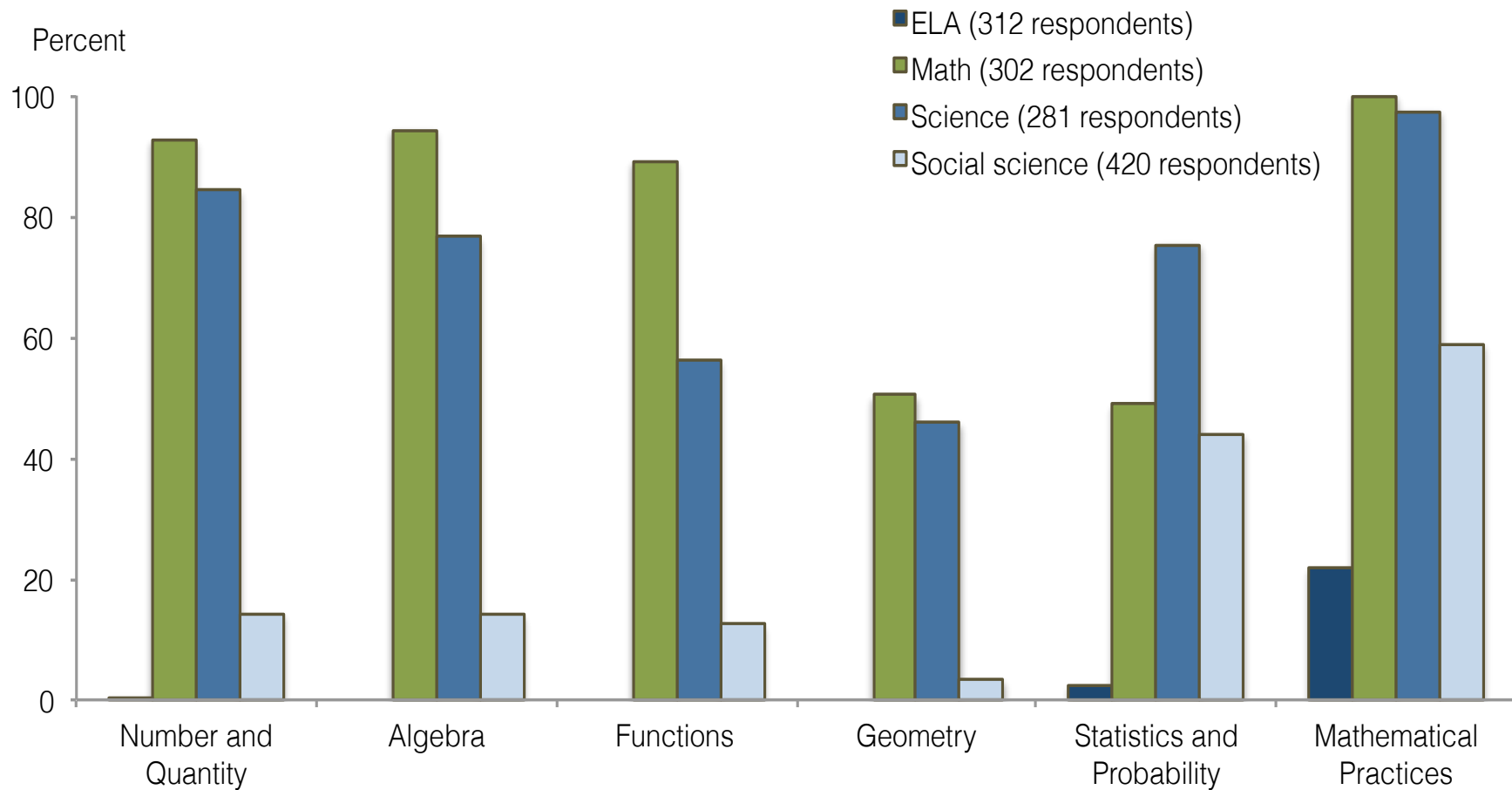
Applicability Ratings for ELA and Literacy: General Education Courses



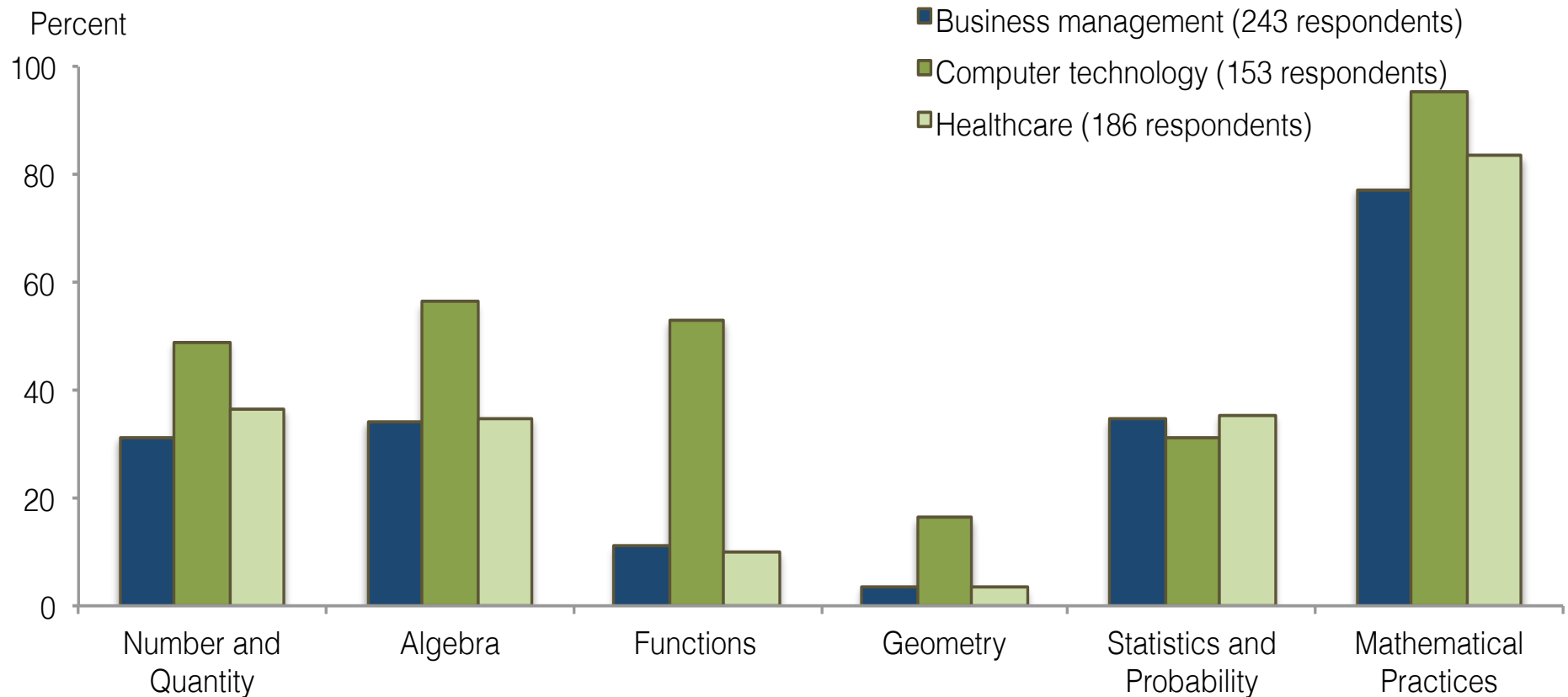
Applicability Ratings for ELA and Literacy: Career Oriented Courses



Applicability Ratings for Mathematics: General Education Courses



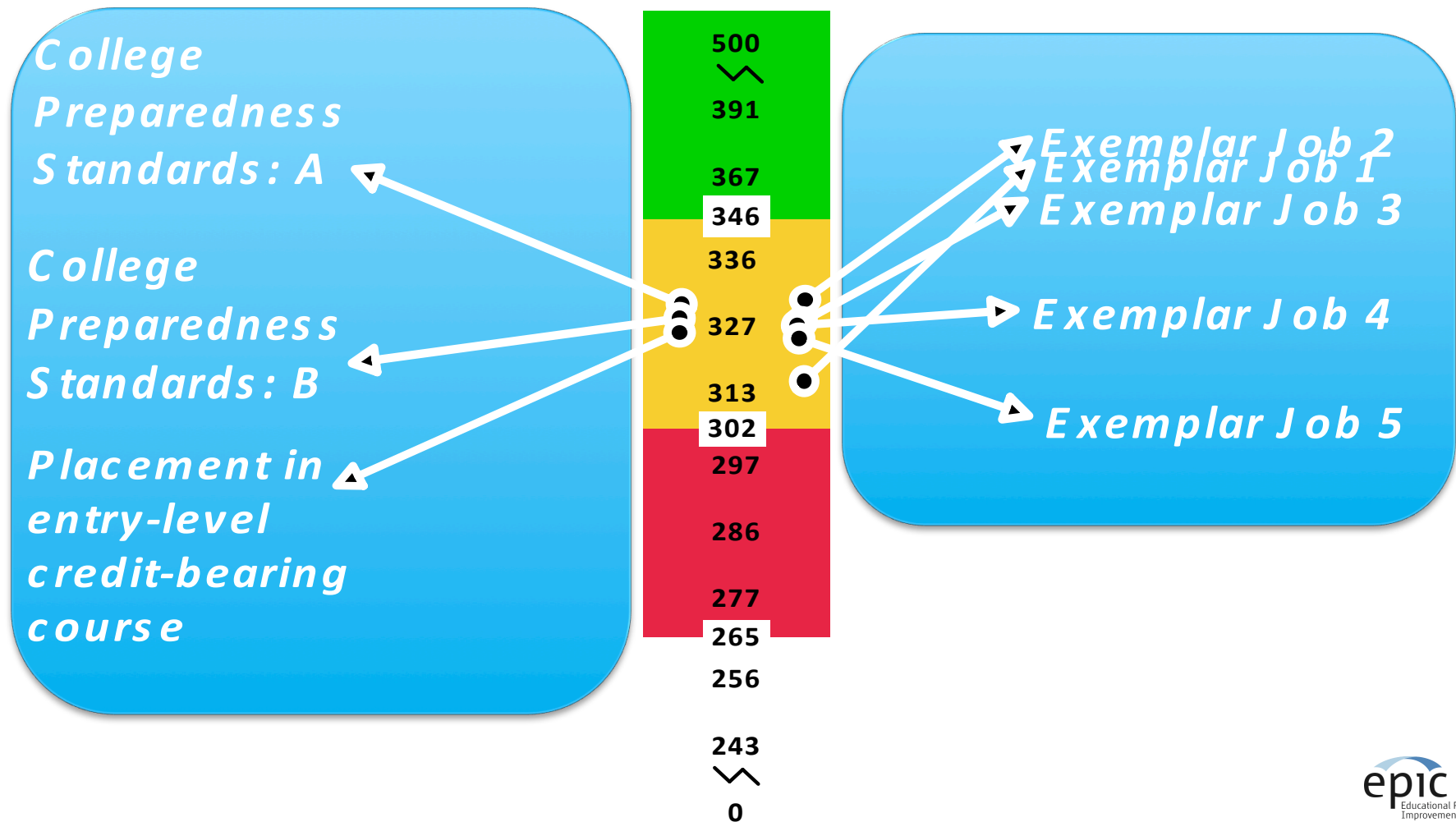
Applicability Ratings for Mathematics: Career Oriented Courses



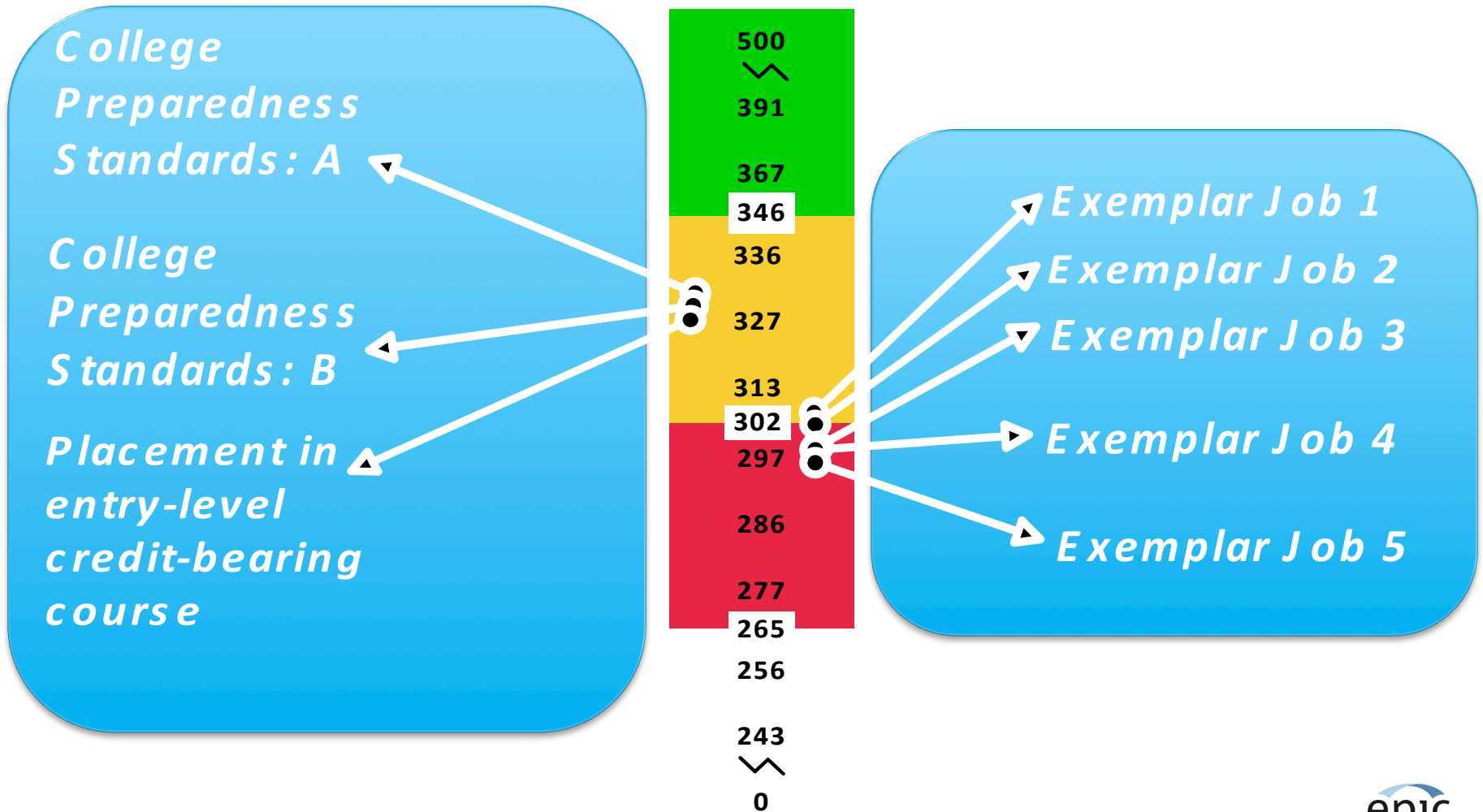
NAEP Preparedness Studies

- * **Content alignment studies** to evaluate extent of content overlap between NAEP and other assessments (completed)
- * **Judgmental standard-setting studies** to set cut scores on NAEP using definitions of preparedness for the specific post-secondary activity (underway)
- * **Statistical relationship studies** to project preparedness indicators onto NAEP scale by relating NAEP to performance on other assessments (underway)
- * **Survey study** to collect data regarding cut scores on other assessments used for placement decisions (underway)
- * **Benchmarking studies** to collect NAEP data on performance of students who have entered post-secondary activities (cancelled for now).

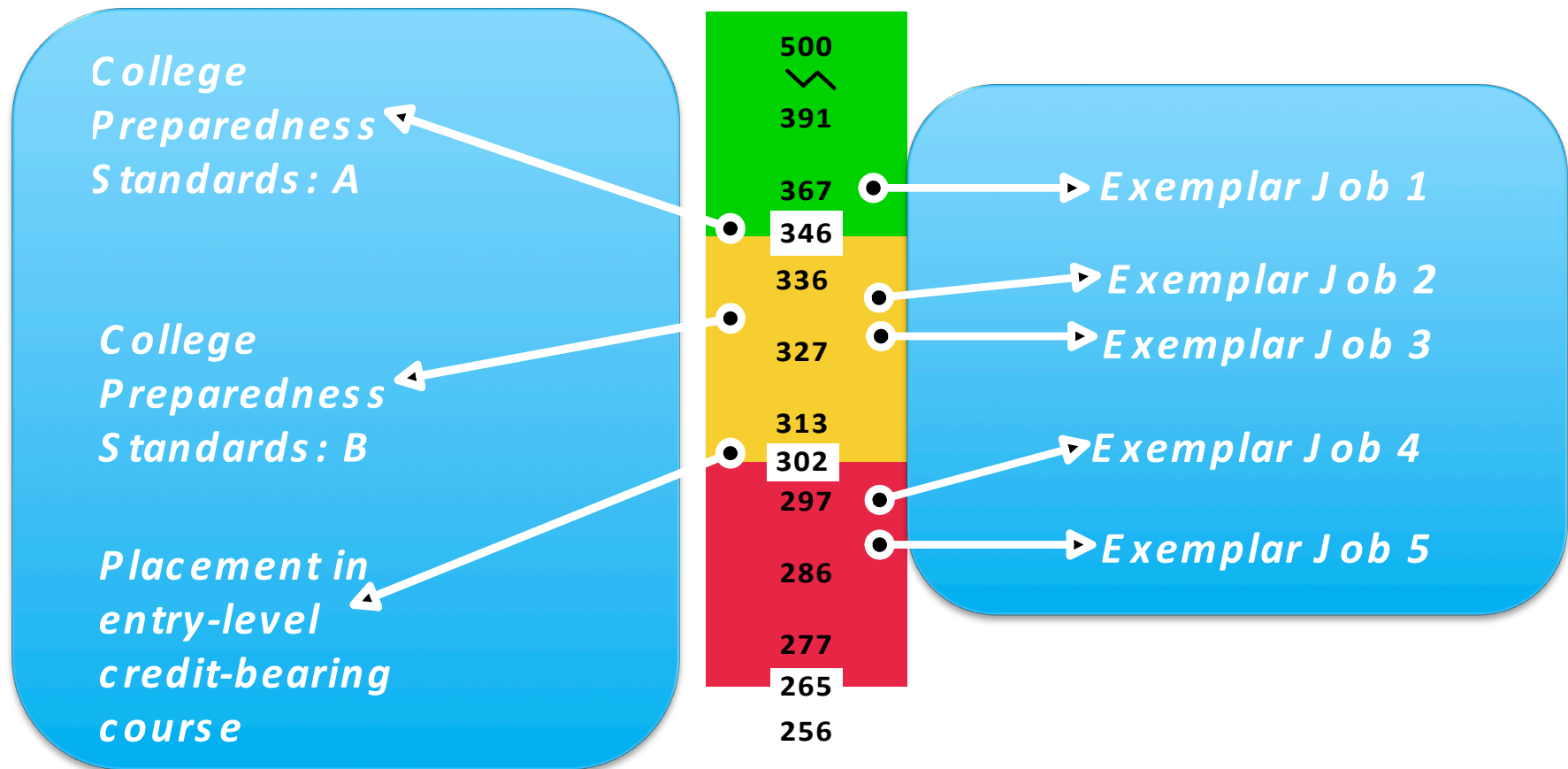
College and Career Preparedness: Same



College and Career Preparedness: Different



College and Career Preparedness: Unclear



Measuring College and Career Readiness

- * College eligibility measures are well developed but exceedingly narrow in scope.
- * Few general career readiness measures exist.
- * Each phenomenon is far more complex than current instruments and methods can gauge.
- * An openness to a wider range of indicators and data is necessary to understand the relationship between the two and to develop new systems for quantifying readiness across both dimensions.

Measuring College and Career Readiness

- * A broader range of measures is necessary to capture college and career readiness.
- * Not all students need the same set of knowledge and skills to succeed in college and careers.
- * Profiles of student strengths and weaknesses *in relation to specific postsecondary programs of study* would allow for better matches between students and programs and would enhance student success.

Conclusion

- * College and career readiness can be defined along a continuum from narrow to broad, from unidimensional to multidimensional.
- * A narrow definition is easier to measure and may be useful at a state level as a gross indicator of readiness but is far less useful at the individual student level.
- * A more expansive definition is more challenging to measure but yields more accurate data at the state level and more actionable information at the school and student level.
- * College and career ready definitions have areas of significant overlap in necessary Key Content Knowledge and Key Learning Skills and Techniques.
- * College readiness and career readiness are not exactly the same, but the commonalities are sufficient for developing simultaneous measures.

To Learn More About College and Career Readiness:



For more information,
visit www.epiconline.org