



Does Common Mean the Same?

Implementing State Standards and Assessments Equitably and Fairly

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The Common Core State Standards and the attendant assessments being developed by state consortia create a tremendous opportunity and simultaneous challenge for state boards of education. Many of the issues apply to all boards, even those in states that have not adopted the standards or assessments. Boards will need to think carefully about the nature of college and career readiness, the nature of sufficient performance to demonstrate readiness, and whether readiness is the same for all students or varies based on student skills in relation to the postsecondary program to which they aspire. This article explores these issues and suggests strategies that will result in the most students being ready for postsecondary educational success.

The Common Core State Standards (hereafter referred to as the Standards) are designed to culminate at the level of college and career readiness. This is an important difference from state standards that have as a practical matter stopped at a level of rigor below 12th grade, sometimes far below. It is important for state boards to think carefully about this new reference point and to understand that the new expectation accompanying the Standards is that all students will reach a performance level that allows them to continue to learn beyond high school in some formal learning setting, be that a four-year baccalaureate-granting institution, an associate's or certificate program, in the military, or in an apprenticeship or training program.



Conjunctive vs. Compensatory: Trade-offs

The advantage of a broader and more inclusive definition of college and career ready is that it becomes more feasible for more students to reach readiness because the precise knowledge and skills each student needs is influenced by their postsecondary aspirations. In other words, if college and career ready varies across the full range of postsecondary options, the skills necessary to demonstrate readiness are defined by specific programmatic requirements. This allows a wider range of students to demonstrate readiness sufficient to qualify for at least one program.

A crucial issue will be how the performance levels associated with readiness are set. The consortia assessments, SMARTER Balanced and the Partnership for Assessment of Readiness for College and Careers (PARCC) propose using the results from tests in English language arts/literacy and mathematics as the primary arbiters of college and career readiness. In the measurement world, a distinction is made between two ways of determining if someone meets a standard when multiple criteria or performance standards are present, as will be the case when the consortia assessments are implemented on their own or in combination with other state-specific measures.

A *conjunctive* system requires students to meet a defined level on all applicable measures. If the state sets high performance levels on all measures, then fewer students reach the required level on all of the measures. The net result is that fewer students achieve the standard. An example of



the use of conjunctive criteria would be a system in which all students are required to get 75% of the questions right on separate exams in English, math, and science. The advantage of this approach is that it is easier to say something about the level at which all students are expected to perform. The disadvantage is that any student who fails to reach the required performance level on only one of the exams does not meet the overall standard.

A *compensatory* system allows for some variation in scores across measures. Generally, a minimum score is established on each measure below which the score could not be compensated for by a higher score via another measure. However, within the defined range, a student could use stronger performance on one measure to compensate for a score that fell below the standard on another. The advantage of this approach is that more students are going to meet the overall standard. The disadvantage is that there may be more variation in the knowledge and skill level of the students who are declared to meet the standard.

The different effects of conjunctive and compensatory approaches are important for state boards to understand. The choice between the two reflects not just technical considerations, but values and beliefs within the state. Does the state's political and social culture believe that all students need to do all things equally well to be recognized as being college and career ready, or is there a belief that a college and career ready student is someone whose skills may vary, within a defined range, but can compensate for weakness in some areas with strengths in others?

This is a critical distinction because it could conceivably influence decisions about high diplomas, college course placement, and even admission into college programs. It's important to get this right. It's particularly important in light of the effect of what are called *classification errors*.



More Trade-offs: Classification Error

There are two types of classification errors. One type results in labeling some people as not qualified when they are; the other results in labeling some people as qualified when they are not. Classification error always exists to some degree, but it becomes more significant when the stakes of the classification are higher and when fewer data points are used.

When setting college and career readiness standards, states are going to have to decide which type of classification error is more tolerable; too many students admitted to college who don't meet all the standards in all areas, or too many students denied admission because they don't meet the standard in all areas even though they may meet the standard for a particular postsecondary program.

Further complicating the problem somewhat is the inclusive nature of the college and career ready definition offered previously. If the definition is kept narrow, namely, the ability to enter a four-year university without the need for remediation, then a conjunctive approach makes more sense. That's because students operating under such a definition are expected to be ready for the full range of disciplines, which they will encounter in their general education courses. They do need to be proficient in English, math, science, social sciences, and related academic areas because they will take courses in all of those areas to meet their breadth requirements. The assumption is that a sufficiently high score on English and math exams means they are ready for all of these courses.

However, students who are going on to postsecondary studies in programs that do not require the full range of academic disciplinary knowledge may have more room for variation in



readiness measures, particularly test scores. This may also be true for students who are very clear about the college major they wish to pursue. While all students do need a strong foundation of academic knowledge and learning skills, a student entering a program with a strong emphasis on basic number skills, such as accounting, may not need the exactly the same mathematical knowledge as a student entering a pre-engineering program, even though both programs require quantitative skills. Similarly, a student pursuing a medical records technician certificate or associate's degree will benefit from much stronger and more specialized reading and vocabulary skills than a student in an automotive technician program that emphasizes graphical information, schematics, and instructional manuals. Both need a foundational level of literacy, but the precise reading skills each needs could vary, and the score level they need to achieve on any particular set of measures may be different.

Herein lies a significant challenge boards face when implementing the Standards or any other set of college and career readiness criteria. Should the board set one high, consistent level of performance that all students need to reach, knowing that not all students will reach it and that many of those who don't reach it will still be perfectly capable of succeeding in the specific postsecondary area of study they wish to pursue, or, should the board adopt performance ranges that allow students to compensate for weaknesses in one area with strengths in another, based on the specific needs of the postsecondary program they seek to enter?

Each has its benefits and drawbacks. If standards are uniformly high, it becomes more difficult to achieve the national goal of all students college and career ready. It also seems unlikely that the percent of graduates going on to some

sort of postsecondary education program will increase significantly. If some compensation is allowed, states run the risk of being perceived in some quarters as lowering standards and of not expecting the same level of performance of all students. Either choice could lead to legislatures or the public to lose confidence in the performance levels that are set.

While there is no clear and obvious right answer for all states, research conducted at our center over the past decade sheds some light on what might make the most sense at a practical level. This research determined the actual knowledge and skills students need to succeed in entry-level college courses across a wider-than-normal range of academic settings. This research, conducted by me and my colleagues at the Educational Policy Improvement Center (EPIC), has yielded both a model that specifies college and career readiness in greater detail and detailed findings about differences in readiness across postsecondary programs.



The Four Keys of College and Career Readiness

We define college and career readiness as consisting of four “keys.” Students are ready to the degree to which they have mastered all four. They consist of the following:

Key Cognitive Strategies are the ways of thinking that are necessary for college-level work. They include formulating hypotheses and developing problem-solving strategies, identifying sources and collecting information, analyzing and evaluating findings or conflicting viewpoints, organizing and constructing work products in a variety of formats, and monitoring and confirming the precision and accuracy of all work produced.

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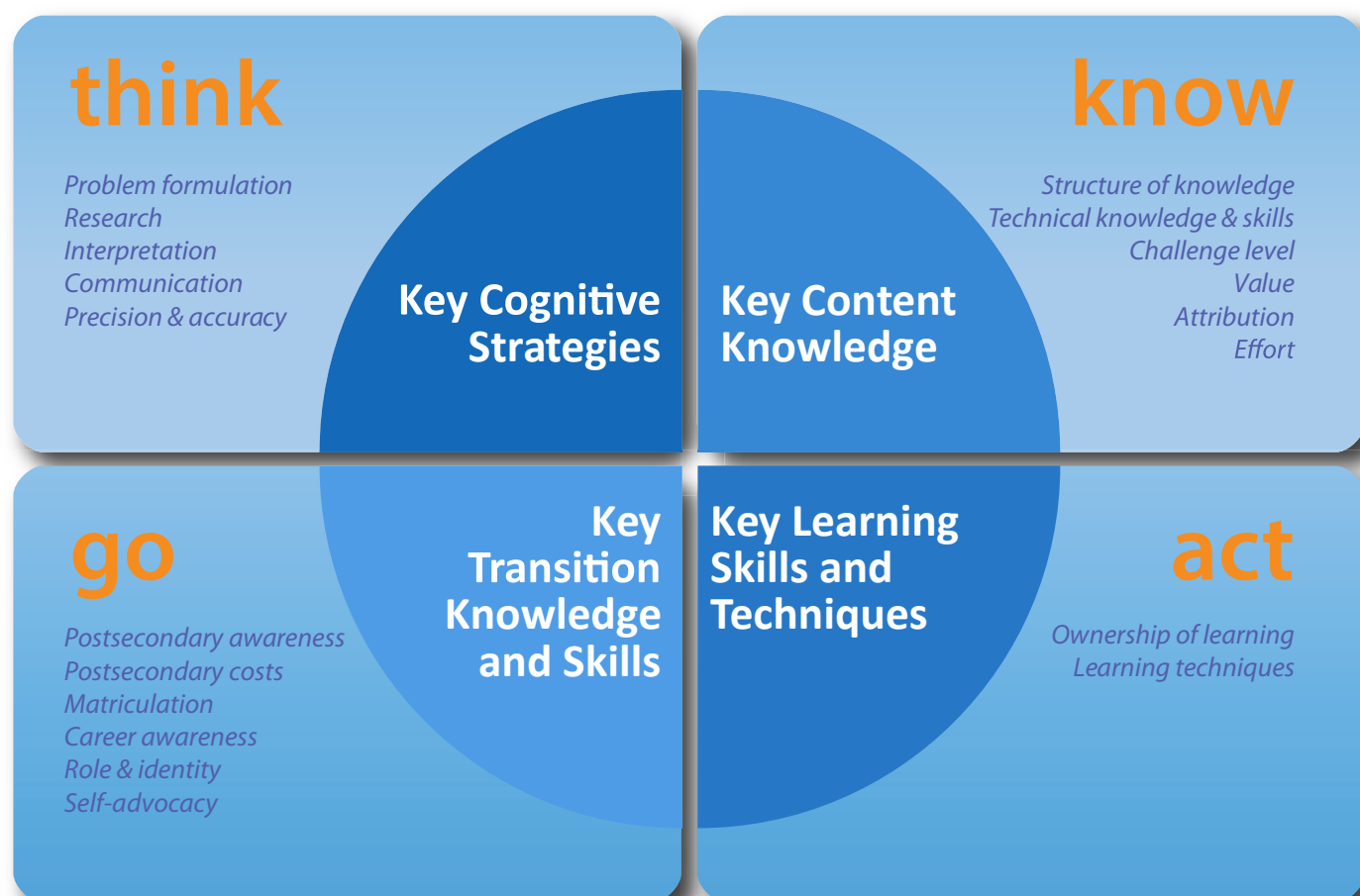


Key Content Knowledge refers to key foundational content and “big ideas” from core subjects that all students must know well, and an understanding of the structure of knowledge in core subject areas, which enables students to gain insight into and retain what they are learning. Also included in this Key are the technical knowledge and skills associated with career aspirations, the ways in which students interact with content knowledge, its perceived value to them and the effort they are willing to expend to learn necessary content, and their explanations of why they succeed or fail in mastering this knowledge.

Key Learning Skills and Techniques consist of two broad categories: student ownership of learning, which includes goal setting, persistence, self-awareness, motivation, progress monitoring, help

seeking, and self-efficacy; and specific learning techniques, such as time management, study skills, strategic reading, memorization techniques, collaborative learning, technology skills, and self-monitoring. These are applied across all subject areas.

Key Transition Knowledge and Skills are necessary to navigate successfully the transition to life beyond high school. This information is often privileged knowledge that is not equally accessible to all students. Least likely to have this information are students from families and communities historically under-represented in higher education or certain career pathways. This key includes, among other things, knowing which courses to take in high school in order to be admitted to an appropriate postsecondary





program, understanding financial aid options and procedures, being focused on a career pathway or major, understanding college-level and workforce norms and expectations, and knowing how to be a self-advocate within the institutional framework of postsecondary programs.

One of the clear implications of the Four Keys model of college and career readiness is that states are not currently gathering anywhere near enough information about student readiness across all four Keys. Current measures are limited to state tests and a high school grade-point average that is an amalgam of all courses taken. State tests, although useful in their own right, provide relatively little insight into specific knowledge and skills beyond the tested content. Grade point average, a valuable indicator in some respects, has unfortunately inflated significantly over the past 30 years so that today's B is more like yesterday's C.

Completely overlooked are three of the Four Keys: key cognitive strategies, key learning skills and techniques, and key transition knowledge and skills. Furthermore, students themselves are largely unaware of any deficiencies they may have in these areas and what they should be doing to correct them so that they are ready for postsecondary education. In fact, our research suggests that students overestimate their competence in the key cognitive strategies in particular, but are aware of their knowledge deficiencies in the area of transition to college and careers.



From Assessment Systems to Systems of Assessment

As new tests are implemented and current measures are reviewed and revised, states need to move away from assessment “systems” composed of often overlapping, redundant, or disconnected performance data, and toward a system of assessments model that continues to yield information that addresses major state needs in the accountability area, but also meets the needs of students, teachers, schools, and postsecondary education institutions. Rarely is it possible to achieve this goal with a single test or even multiple measures when they all test content knowledge alone.

A carefully designed system of assessments takes into account the varied needs of all the constituents who use assessment data and collates information from enough different sources to address those needs. It does so in a way that results in a holistic picture of students, schools, and educational systems. Such an approach does not waste or duplicate information.

Cut scores set the line of demarcation between two levels of performance, generally a level that is acceptable and a level that is not. These are entirely appropriate for state-level accountability purposes but nowhere near as appropriate for decisions about individual students. In other words, it is more acceptable for a state to identify a single score on a test that signifies readiness overall statewide. It is less acceptable to use the same score to make high-stakes decisions about individual students.

The higher the stakes, the more information that is needed. For example, if test scores are to be used to make graduation, placement, or admissions



decisions, then classroom-based performance evidence should also be included. This type of evidence is rarely collected systematically. It can be gathered via tasks and assignments that are consistent statewide and scored by teachers using high quality, validated scoring guides to ensure sufficient reliability. Student performance on the tasks can be combined with test scores or with other classroom-based information on student performance. Some of this evidence could provide insight into student mastery of some of the other Four Keys. Teacher reports on students could include the ability of students to sustain effort when confronted with difficult tasks; the ability to manage time to complete complex, multi-step assignments; and the ability to work with others to improve both individual and group performance. This type of information provides additional valuable evidence of readiness for postsecondary educational opportunities and career pathways when used in combination with scores on English and math tests.

A system of assessments approach opens the door to a much wider array of measurement instruments and approaches. Currently, states limit their assessment options because almost all assessment is viewed through the lens of accountability measures and the technical requirements associated with high-stakes testing. The accountability tests also rely on particular psychometric models and techniques that make perfect sense in the environment of high-stakes testing, but are not appropriate when using other types of information for other purposes.



Moving Toward Student Profiles

The practical result of a much wider range of performance information is to be able to generate student *profiles*. The profile gauges student knowledge and skill in relation to aspirations and goals as well as relative to cut score levels. A profile approach supports a compensatory measurement system. The profile emphasizes the match between student knowledge and skills and the specific postsecondary program to which they aspire. Considerable evidence exists to suggest that students can overcome specific knowledge and skill deficiencies or weaknesses to a certain degree if they are highly motivated to succeed in a particular field, the skill itself is not at the heart of what is needed to succeed in that area, and they possess a set of learning techniques and strategies that enable them to acquire those skills as they need them.

Using the profile approach, a student could be judged ready for a field of postsecondary study and still be expected to strengthen other skills in non-critical areas in order to proceed. This approach enables the largest number of students possible to be allowed to go on to postsecondary studies while still signaling to them and their accepting institutions the areas in which they need to improve. A profile system is only possible with a much wider range of information on student knowledge, skills, and abilities. That system needs to collect necessary information by means of a far more robust and varied set of instruments and methods.

Gathering and reporting information in this fashion is consistent with the “Four Keys” model introduced previously and leads to a full portrait of college and career readiness. The profile provides



students a clear reading on the degree to which they are ready to pursue their postsecondary goals. While much of this information would be less useful for high-stakes accountability purposes, it is absolutely essential for students to have as they seek to become ready for college and careers.



What the Standards Do—and What's Overlooked

The Standards do help establish more clearly and at a higher level the knowledge and skills students need in English and math to be college and career ready. However, many other aspects of the Standards are overlooked due to a single-minded focus on English and math skills. For example, the Standards emphasize speaking and listening, two key skills for success in today's economy and society. The consortia assessments will have a speaking task and at least one consortium will have a listening task. However, the uses of these assessments are unclear and they do not appear to be included in final readiness determinations by either consortium. Another key skill, technology mastery and use, is not assessed directly, but is referenced in the Standards in various places. Measuring student technology skills in more direct and detailed ways will encourage students to develop these skills.

Furthermore, our research leads us to conclude that the literacy and numeracy knowledge and skills specified in the Standards should not be limited to English and math classes. Our findings indicate that postsecondary instructors in a wide array of courses outside of English and math emphasize the importance of the English and math standards. Unfortunately, it appears in too

many states and districts that the Standards are being analyzed in relation to existing English and math content frameworks or courses, with little consideration for their integration into and application within science and social studies courses, in particular.

Finally, writing skills in a variety of genres, but expository writing in particular, along with the ability to conduct research are not as yet assessed by most states. These skills are best assessed at the classroom level with tasks that take extended periods of time. The Standards in writing expect students to produce multiple drafts in multiple genres and be able to adapt their writing based on the nature of the audience. The research standards expect students to be able to collect and integrate information to produce a logical, coherent document with justification for conclusions reached. These skills, all critical for postsecondary readiness, are going to be difficult to assess adequately via the consortia assessments alone, no matter how innovative or technically sophisticated they are. These skills are so important that they need to be valued and measured in ways that give students much more information on where they stand and what they need to do next in these areas to continue to progress toward college and career readiness.

Further complicating the equation is the fundamental lack of connection and communication between secondary and postsecondary education in most states. A few states have begun to convene their respective governing boards jointly, and some have required coordination around specific policy areas. These are heartening first steps. They represent a beginning on a long journey toward more fully aligned systems. The next steps along the road will be more challenging. They will require substantive agreement on what constitutes readiness, how



it will be measured, how the measures will be valued by each system, and how each system will ultimately change and adapt to ensure more students make a successful transition from high school to college, prepared to succeed.



New Tools, New Strategies

All of this will require new tools for high schools and colleges to work on their own and collaboratively. EPIC has been working over the past decade to help states and schools improve college and career readiness for all students. Our model has tools in three categories: Calibrate, Create, Connect.

Calibrate means finding out more about how ready students are for college in all of the Four Keys. To do so, we created a system of classroom-based performance tasks that are scored against a set of key cognitive strategies that reflect what our research has found to be important for success in entry-level college courses. These include:

- **Problem Formulation:** formulate hypotheses or theses before proceeding further, develop strategies to complete the task
- **Research:** identify appropriate sources, collect information sufficient to address the problem
- **Interpretation:** analyze information using appropriate methods, evaluate results against rules and evidence criteria
- **Communication:** organize the response before writing or constructing, construct according to the formats and rules of the discipline and with the audience in mind

- **Precision and Accuracy:** monitor and correct mistakes throughout, confirm accuracy of all aspects of the final product

To calibrate further, we use a self-report instrument that students, teachers, counselors, and administrators complete to describe readiness in each of the Four Keys. The responses generate a schoolwide action plan. For individual students, a profile is developed using the information from the performance tasks, the self-report instrument, and other data, such as courses taken, grades received, and scores on other relevant tests. This profile helps students map out an action plan for college and career readiness.

Create enables schools to redesign or adjust their program so that courses are better aligned with one another, with the Standards, and with college and career readiness. The first step is to create high quality syllabi for all courses. Using an online tool that employs a wizard-like process, each teacher in a school builds a syllabus that contains much more detailed information about expectations, course goals, activities, and assessment methods and standards.

Once all courses have consistently high quality syllabi that are aligned to relevant standards, courses are aligned to one another horizontally across identical or similar courses, and vertically throughout the course sequence and from grade level to grade level. With this information in hand, a pathway analysis of each student's planned program and cumulative transcript ensures that each student is taking a challenging program of study aligned with the Standards.

Connect is the process of building stronger linkages between secondary and postsecondary education for the purpose of understanding expectations and aligning programs. This can begin by having secondary and postsecondary



faculty sit down together and discuss student work products. These workshops let high school and college instructors share specific observations about work quality and more general expectations for students in their classes. This can lead to changes in instruction and expectations at both levels.

These discussions can lead high school teachers to redesign their courses so that they become more “college-like.” Teachers consult “reference courses,” which are examples of high quality entry-level college courses. High school teachers and curriculum developers can refer to these when revising high school courses to get challenge level and content coverage right.

This initial alignment work can lead to “paired courses.” The final high school course in a sequence is paired with the first college course in the same sequence, and the syllabus of each course is modified to better reflect expectations of the other level. The net result is a smoother transition for students. Students in a paired course benefit from assignments and assessments that are more consistent between high school and college, more comparable grading criteria, and workload expectations that progress from high school to college.



The Opportunity

The process of implementing the Standards, developing appropriate assessments, and setting proper cut scores is challenging enough. Thinking more broadly about the full spectrum of college and career readiness beyond the Standards is even more challenging. State boards of education have a historic opportunity to define college and career readiness as more than a single set of exam scores or content knowledge measures. Doing so will require thoughtful attention to a broader array of information and a more inclusive definition of assessment. The result will be more students ready to pursue postsecondary opportunities that will lead them toward more fulfilling lives as productive and participating members of society.