

A Complete Definition of College and Career Readiness

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In many circles, efforts are under way to develop definitions of college readiness, career readiness, or both. This brief contains a definition that is the culmination of 18 years of study and research on this topic. Major work conducted by the author and his colleagues that contributes to this definition includes a proficiency-based college admissions system developed for the Oregon University System, a national study on college readiness standards sponsored by the Association of American Universities, multiple analyses of entry-level college courses sponsored by the College Board and others, college and career readiness standards developed under the sponsorship of the Texas Higher Education Coordinating Board and subsequent studies of their validity relative to college and careers, a study of career preparation programs sponsored by the National Assessment Governing Board, and two major studies sponsored by the Bill & Melinda Gates Foundation on the alignment of the Common Core State Standards to college and career readiness.

Additionally, the Educational Policy Improvement Center (EPIC) works on a continuing basis with secondary and postsecondary faculty to help them improve student readiness for college and postsecondary success. What is learned from practice is incorporated into tools, techniques, and strategies to help all students become ready for college and careers. All of this information from practice contributes to this definition.

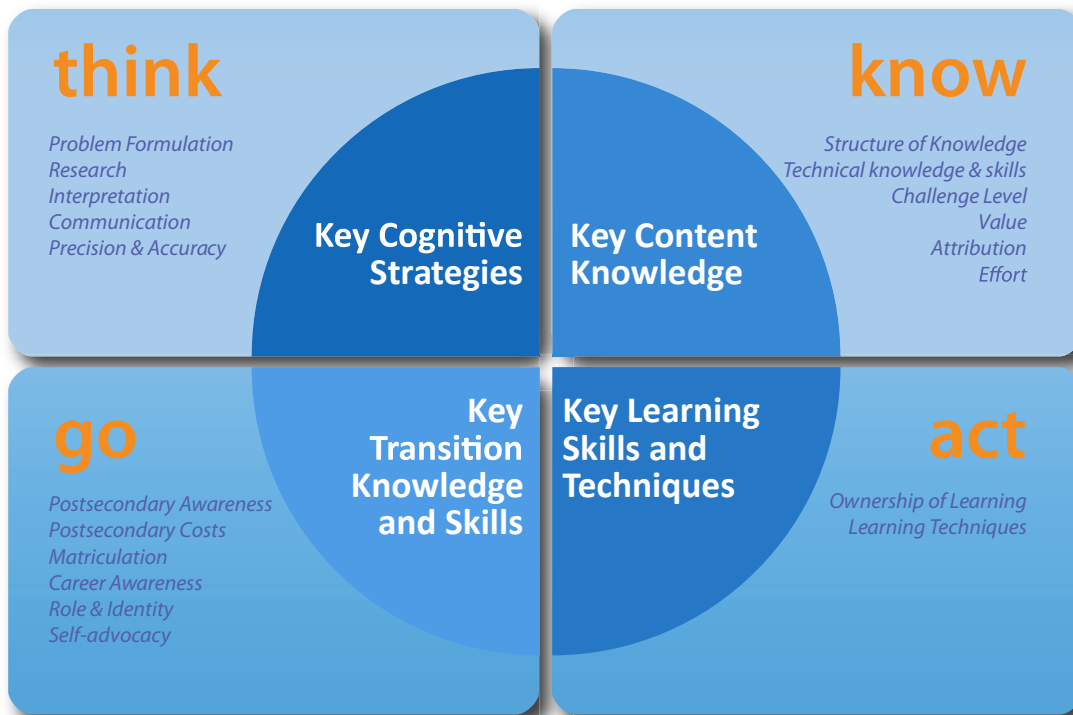
This definition, then, is based on both empirical evidence gathered via multiple research studies and on-the-ground interactions with practitioners attempting to improve programs that affect a wide range of students, particularly those who would be first in family to attend college. Postsecondary, in this definition, refers to any formal setting in which an individual pursues additional instruction beyond



high school. This might include two- or four-year degree programs, certificate or licensure programs, apprenticeships, or training programs in the military. Furthermore, this definition differs from indices or “cut scores” that use a single cut score alone or in combination with another element, such as high school grade point average, to predict college success. This definition is designed to be actionable. It describes what students should know and be able to do in general terms that can then be defined and addressed with increasing detail and measured in a variety of ways using appropriately complex measures.

A Definition of College and Career Readiness

A student who is ready for college and career can qualify for and succeed in entry-level, credit-bearing college courses leading to a baccalaureate or certificate, or career pathway-oriented training programs without the need for remedial or developmental coursework. However, not every student requires the same proficiency in all areas. A student’s interests and post-high school aspirations influence the precise knowledge and skill profiles necessary to be ready for postsecondary studies. Therefore, a single cut score on a test given to high school students does not take into account this individualization of the match between knowledge and skills on the one hand, and aspirations on the other. A secondary program of instruction should be designed to equip all students with sufficient knowledge and skill as identified in the following section. The measure of success should be student success in their chosen field of postsecondary education or post-high school training. Measuring this requires a more specialized and adapted assessment strategy than can be achieved with a single cut score on a single test.



The Four Keys to College and Career Readiness

College and career readiness consists of four “keys.” Students are ready to the degree to which they have mastered all four. They consist of the following:

Key Cognitive Strategies

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.

Key Content Knowledge

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

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.

Key Transition Knowledge and Skills

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.

How Are the Four Keys Expressed in Academic Performance?

Students who are on the path to college and career readiness can do many of the following:

- read a range of types of material, with an emphasis on informational texts
- interpret tables, graphs, charts, and pictures as they relate to content contained in text
- demonstrate fluency in several modes of writing, most notably expository and descriptive, and not just narrative or opinion
- show quantitative literacy based on an understanding of measurement and number systems and their application through the level of foundational concepts of algebra and geometry
- be able to locate, organize, understand, and interpret a wide range of types of data through a series of methods that include basic statistics and other means for displaying data
- understand the scientific method and possess insight into the big ideas and organization of knowledge in the sciences
- possess awareness of how social systems operate and how they are studied, how history is studied, and some of the major trends and organizers used to describe history
- engage in career planning through career exploration and the development of career management skills
- demonstrate some proficiency in a second language and show awareness that languages reflect cultures
- have experiences in and appreciation of creative, and expressive arts

Key Cognitive Strategies

- + Problem formulation
 - + Hypothesize
 - + Strategize
- + Research
 - + Identify
 - + Collect
- + Interpretation
 - + Analyze
 - + Evaluate
- + Communication
 - + Organize
 - + Construct
- + Precision & accuracy
 - + Monitor
 - + Confirm

Key Content Knowledge

- + Structure of knowledge
 - + Key terms and terminology
 - + Factual information
 - + Linking ideas
 - + Organizing concepts
- + Technical knowledge and skills
- + Challenge level
- + Value
- + Attribution
- + Effort

Key Learning Skills and Techniques

- + Ownership of learning
 - + Goal setting
 - + Persistence
 - + Self-awareness
 - + Motivation
 - + Help seeking
 - + Progress monitoring
 - + Self-efficacy
- + Learning techniques
 - + Time management
 - + Test taking skills
 - + Note taking skills
 - + Memorization/recall
 - + Strategic reading
 - + Collaborative learning
 - + Technology proficiency

Key Transition Knowledge and Skills

- + Postsecondary awareness
 - + Aspirations
 - + Norms/culture
- + Postsecondary costs
 - + Tuition
 - + Financial aid
- + Matriculation
 - + Eligibility
 - + Admissions
 - + Program
- + Career awareness
 - + Requirements
 - + Readiness
- + Role and identity
 - + Role models
- + Self-advocacy
 - + Resource acquisition
 - + Institutional advocacy

Why Is This a Definition of Both College and Career Readiness?

Being college ready and being career ready are similar, but not necessarily the same. Analyses of college courses required for degrees and certificates find that the learning skills and foundational knowledge associated with college success overlap considerably those necessary for success in certificate and training programs that lead to careers. Given this overlap, it serves little useful purpose to separate students into two distinct groups in high school (one bound for college, the other for work). More and more jobs require some amount of post-high school training, and, in any event, all workers are going to need to be adaptive learners throughout their careers to cope with changes to their jobs and the way they work. All students aspire to enter the workforce eventually and, to do so, all will need a set of similar foundational thinking skills, content knowledge, and learning strategies if they are to succeed in their careers and be productive members of society.

However, some potentially notable differences can be found between college readiness and career readiness. College readiness generally means the ability to complete a wide range of general education courses, while career readiness refers to readiness for courses specific to an occupational area or certificate. And while the foundational content knowledge is similar in all cases, the precise skill profile associated with success in a career course pathway may be more focused than that required for a bachelor's degree. This means that secondary schools can prepare all students in a common core of foundational academic knowledge and skill while also acknowledging the strengths of students who have passions and interests in particular career pathway areas.

Additionally, many of the attitudinal characteristics necessary for success in the workplace are also vital or taken as a given in postsecondary studies. These include ethical conduct, ownership of one's behavior, initiative, resilience, collaborative teamwork, motivation, and self-regulation skills.

What Isn't in the Definition?

It's possible to identify other important factors not addressed by the definition, such as positive citizenship, parental support and peer group influence, and, perhaps most importantly, student financial capability to attend college. These factors and others are indeed important, but schools cannot necessarily teach or influence them as directly as they can the Four Keys. It is important for schools to help students become good citizens, access financial resources, gain parental support, and develop peer networks that support postsecondary readiness. But the areas in need of most direct attention and generally under the most direct control by schools are those enumerated in the Four Keys to College and Career Readiness.