

Rethinking College Readiness

High schools need to graduate greater numbers of young people prepared for college and careers. But how should readiness be defined?

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The likelihood that students will make a successful transition to the college environment is often a function of their readiness—the degree to which previous educational and personal experiences have equipped them for the expectations and demands they will encounter in college. A key problem is that the current measures of college preparation are limited in their ability to communicate to students and to educators the true range of what students must do to be fully ready to succeed in college. This article outlines a broader, more comprehensive conception of college readiness, one built on four facets: key cognitive strategies, key content knowledge, academic behaviors, and contextual skills and knowledge.

Cognitive Strategies. At the heart of college readiness is development of the cognitive and metacognitive capabilities of incoming students. These include analysis, interpretation, precision and accuracy, problem solving, and reasoning. Student facility with these strategies has been consistently and emphatically identified by those who teach entry-level college courses as being centrally important to college success.

Content Knowledge. Close behind in importance is knowledge of specific types of content knowledge. Several studies have led to college readiness standards that specify key content knowledge associated with college success. Writing may be by far the single academic skill most closely associated with college success, but the “big ideas” of each content area are also very important building blocks.

Academic Behaviors. Also contributing to student success is a set of academic self-management

behaviors. Among these are time management, strategic study skills, and awareness of one’s true performance, persistence and the ability to utilize study groups. All require students to demonstrate high degrees of self-awareness, self-control and intentionality.

Contextual Skills and Knowledge. Finally, an increasing number of studies have highlighted the complexity of the contextual knowledge associated with application and acculturation to college. The application process has a great deal of technical information associated with it, while the first-year college experience has a strong cultural component. Students who are the first in their families to apply to and attend college are particularly at a loss to deal with issues of this nature.

A Definition of College Ready
College readiness can be defined as the level of preparation a student needs in order to enroll and succeed—without remediation—in a credit-bearing general education course at a post secondary institution that offers a baccalaureate degree or transfer to a baccalaureate program. “Succeed” is defined as completing entry-level 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. This conception uses as its reference point “best practices” entry-level courses as opposed to the stereotypical freshman course.

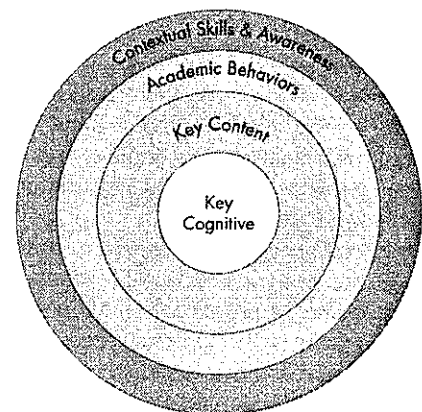
The college ready student envisioned by this definition is able to understand what is expected in a college course, can cope with the content knowledge that is presented and can develop as a result of the course the key intellectual

lessons and dispositions the course was designed to convey. In addition, the student can get the most out of the college experience by understanding the culture and structure of postsecondary education and the ways of knowing and intellectual norms of this academic and social environment.

Components in a Comprehensive Definition of College Readiness

The college ready student is proficient in the four elements of the model presented here. Figure 1 demonstrates the relationship among the four facets of college readiness. This model derives from the author’s research and related studies.

FIGURE 1: FACETS OF COLLEGE READINESS



The model argues for a more comprehensive look at what it means to be college ready and is explained in greater detail below.

Key Cognitive Strategies

The success of a well-prepared college student is built upon a foundation of key cognitive strategies that enable students to learn content from a range of disciplines. Some of the specific

key cognitive strategies identified as being most important to student success include the following:

Problem formulation and problem solving: The student develops and applies multiple strategies to formulate and solve routine and non-routine problems, and selects the appropriate method for solving complex problems that require method-based problem solving.

Research: The student engages in active inquiry and dialogue about subject matter and research questions and seeks evidence to defend arguments, explanations or lines of reasoning. The student documents

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assertions and builds an argument that extends from previous findings or arguments. The student utilizes appropriate references to support an assertion or a line of reasoning. The student identifies and evaluates data, material and sources for quality of content, validity, credibility and relevance. The student compares and contrasts sources and findings and generates summaries and explanations of source materials.

Reasoning, argumentation, proof: The student constructs well-reasoned arguments or proofs to explain phenomena or issues, utilizes recognized forms of reasoning to construct an argument and defend a point of view or conclusion, accepts critiques of or challenges to assertions, and addresses critiques and challenges by providing a logical explanation or refutation, or by acknowledging the accuracy of the critique or challenge.

Interpretation: The student analyzes competing and conflicting descriptions of an event or issue to determine the strengths and flaws in each description and any commonalities among or distinctions between them. The student synthesizes the results of an analysis

of competing or conflicting descriptions of an event or issue or phenomenon into a coherent explanation. Based on available evidence, the student states the interpretation that is most likely correct or is most reasonable. The student presents orally or in writing an extended description, summary and evaluation of varied perspectives and conflicting points of view on a topic or issue.

Precision and accuracy: The student knows what type of precision is appropriate to the task and the subject area, is able to increase precision and accuracy through successive approximations when a task or process

is repeated, and uses precision appropriately to reach correct conclusions in the context of the task or subject.

These key cognitive strategies are broadly representative of the foundational elements that underlie various "ways of knowing." They are at the heart of the intellectual endeavor of the university. They are necessary to discern truth and meaning as well as to pursue them. They are at the heart of how postsecondary faculty members think about their subject areas.

Academic Knowledge and Skills

Academic knowledge and skills consist of big ideas, key concepts and vocabulary that create the structure of the various disciplines and subjects.

Core Academic Subjects Knowledge and Skills

English: The knowledge and skills developed in entry-level English courses enable students to engage texts critically and create well-written, organized and supported work products in both oral and written formats. The foundations of English include reading comprehension and literature, information gathering, writing, editing,

analysis, critiques and connections. To be ready to succeed in such courses, students need to build vocabulary and word analysis skills, including roots and derivations. Similarly, students need to utilize techniques such as strategic reading that will help them understand a wide range of non-fiction and technical texts.

Math: Students with a thorough understanding of the basic concepts, principles, and techniques of algebra are more likely to succeed in an entry-level college mathematics course. College-ready students possess more than a formulaic understanding of mathematics. They have the ability to apply conceptual understandings in order to extract a problem from a context, to solve the problem and then to interpret the solution back into the context.

Science: College science courses emphasize scientific thinking in all its facets. This includes the communication conventions followed by scientists, the way that empirical evidence is used to draw conclusions, and how such conclusions are then subject to challenge and interpretation. Students come to appreciate that scientific knowledge is both constant and changing at any given moment. Students grasp that scientists think in terms of models and systems as ways to comprehend complex phenomena.

Social Sciences: The social sciences entail a range of subject areas, each with its own content base and analytic techniques and conventions. The analytic methods that are common across the social studies emphasize the skills of interpreting sources, evaluating evidence and competing claims, and understanding themes and events within larger frameworks or organizing structures. The social sciences consist of certain "big ideas" (theories and concepts) that are used to order and structure all of the detail that often overwhelms students.

Academic Behaviors

Key academic behaviors include self-awareness, self-monitoring, and self-control. These tend to transcend content areas.

Self-management is a form of metacognition, the act of thinking about how one is thinking. Examples of some key self-management skill areas include: awareness of one's current level of mastery and understanding (and misunderstandings) of a subject; the ability to reflect on what worked and what needed improvement

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regarding a particular academic task; the ability to persist when presented with a novel, difficult or ambiguous task; the tendency to identify and systematically select among and employ a range of learning strategies; and the capability to transfer learning and strategies from familiar settings and situations to new ones.

Another important set of academic behaviors is student mastery of study skills necessary for college success. Important study-skill behaviors include time management, stress management, task prioritizing, using information resources, taking class notes, and communicating with teachers and advisors. An additional critical skill is the ability to participate successfully in a study group and to recognize the potential value of a well-structured study group.

Time management is perhaps the most foundational of all the self-management and study skills. Examples of time management techniques and habits include: accurately estimating how much time it takes to complete all outstanding and anticipated tasks and allocating sufficient time to complete the tasks, using calendars and creating "to do" lists to organize studying into productive chunks of time, locating and utilizing settings conducive to proper study, and prioritizing study time in relation to competing demands such as work and socializing.

Contextual Skills and Awareness

College knowledge consists of the privileged information necessary to apply successfully to college, gain necessary financial aid, and then, subsequent to matriculation, understand how college operates as a system and culture.

Students must master the information, formal and informal, stated and unstated, necessary to be eligible for admission, select an appropriate post-secondary institution, gain admission to a college and obtain financial aid. This knowledge is distributed inequitably in society.

Success in college is enhanced for students who possess the knowledge and skills that enable them to interact with a diverse cross-section of academicians and peers. These include: the ability to collaborate and work in a team, knowledge of the norms of the "academic" culture and how one interacts

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with professors, administrators and others in that environment, the ability to be comfortable around people from different backgrounds and cultures, the ability to take advantage of academic and personal support resources available on most campuses, and the ability to demonstrate leadership skills in a variety of settings.

Conclusion

Clearly, far fewer students are truly ready for college when measured

against this multi-dimensional model than when judged by current conventional measures of courses taken and grades received in high school. The goal of presenting a more comprehensive model of college readiness is to highlight the gaps that exist between *college-eligible* and *college-ready*.

Colleges can take steps to ensure that more students are college ready. First, colleges should adopt a set of college readiness standards that specify the key cognitive strategies and content knowledge that incoming students are assumed to know. Second, colleges should be clearly focused on enabling students to develop the key cognitive strategies, key content knowledge and self-management skills necessary for college success. Third, colleges need to work to simplify the application and financial aid process and to provide better support services for these students.

By adopting the four-part conception of college readiness presented in this article, high schools and colleges can communicate in the same terms what it takes for students to be ready for postsecondary education. Making certain that they are not just eligible, but prepared, will help students achieve their goals and help colleges function better.

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