Key Issues of Student Readiness for College Success: Research and Practices

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Today’s Talk Is Based on Research Reported in:
Starting with a Reference Point: What is College and Career Readiness?

- College and career readiness can be defined as *success*—*without remediation*—*in credit-bearing general education courses or a two-year certificate program.*
- “*Succeed*” is defined as being able to progress successfully in the chosen program.
- College readiness and career readiness are similar but not the same.
Four Key Dimensions of College Readiness

• Key Cognitive Strategies
  o Problem formulation, research, interpretation, communication, precision and accuracy

• Key Content Knowledge
  o Key foundational content and “big ideas” from core subjects

• Academic Behaviors
  o Self-management skills: time management, study skills, goal setting, self-awareness, persistence

• Contextual Skills and Awareness
  o Admissions requirements, college types and missions, affording college, college culture, relations with professors
Characteristics of the Four Key Dimensions

- **Key Cognitive Strategies** and **Key Content Knowledge** should be thought of as co-equal and interdependent.
  - Students can only develop their cognitive capabilities in the context of challenging, appropriate content.
- **Academic Behaviors** can be as important to success as content knowledge.
- **Contextual Skills and Awareness** ("College Knowledge") is information often not available to students who would be first-in-family to attend college.
What Is Key Content Knowledge?

• **Components:**
  - Organizing concepts
  - Linking ideas
  - Key terms and terminology
  - Factual information

• **The brain retains this type of information to the degree to which it can:**
  - generate connections or links among the pieces to make a structure
  - associate emotions, positive or negative, with the information
  - find the information meaningful, relevant, or useful
  - apply or use the information in a variety of authentic situations
  - receive timely feedback on how useful the information was to achieve a specific purpose or general goal.
What Are Cognitive Strategies

• What are cognitive strategies?
  o Systematic approaches to achieve key learning goals that take into account the rules and methods of the academic disciplines that are necessary to achieving the goal
  o Elaborate plan of action that chooses among alternative approaches and anticipates potential problems that must be addressed to solve a problem or complete a complex task
The Key Cognitive Strategies
Novice-to-Expert Progression
To College Readiness

- **Green** indicates the student is at or above college readiness thinking.
- **Blue** indicates the student is below college readiness thinking.
- **Gray** indicates performance levels not scored at that benchmark level.

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<tr>
<th>Benchmark Level I</th>
<th>Benchmark Level II</th>
<th>Benchmark Level III</th>
<th>Benchmark Level College Ready</th>
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How Novices and Experts Solve Problems

**Novices:**
- are slower and more deliberate
- know individual facts about topics
- learn about pieces of systems
- memorize bits of information and encode the bits superficially
- tend to focus on discrete knowledge in isolation of the structure of a discipline
- reason in specific contexts by using recently-acquired information
- recall information by rote

**Experts:**
- are faster and more accurate
- organize facts into “chunks” for better recall and application
- integrate pieces of knowledge into systems frameworks
- connect new knowledge to existing knowledge
- learn through example and analogy
- use analytical skills to apply knowledge and select procedures
- generalize knowledge to new settings and circumstances
- create mental cues to facilitate recall
General characteristics of college-ready students

1. *Consistent intellectual growth and development* over four years of high school as a result of studying increasingly challenging academic content

2. *Deep understanding of key foundational ideas and concepts* from the core academic subjects

3. A *strong grounding in the knowledge base* that underlies the key concepts of the core academic disciplines as evidenced by the ability to solve novel problems and think more like experts in the subject area
General characteristics of college-ready students

4. Facility with a range of *key intellectual and cognitive skills* and capabilities that can be broadly generalized as the ability to think

5. *Reading and writing skills* and strategies sufficient to process the full range of textual materials commonly encountered in entry-level college courses and to respond successfully to the written assignments commonly required in such courses

6. Mastery of *key concepts and ways of thinking found in one or more scientific discipline* sufficient to succeed in an introductory-level science course that could lead to a major in an area requiring scientific knowledge
General characteristics of college-ready students

7. Comfort with a range of numeric concepts and principles sufficient to take at least one introductory-level math course that could lead to a major that requires additional mathematics

8. Ability to accept critical feedback including critiques of written work submitted or an argument presented in class

9. Ability to assess objectively one’s level of competence in a subject and to devise plans to improve work quality
General Characteristics of College-ready Students

10. Ability to *study independently and with a study group* on a complex assignment requiring extensive out-of-class preparation that extends over a reasonably long period of time.

11. Ability to *interact successfully with a wide range of faculty, staff, and students*, including among them many who come from different backgrounds and hold points of view different from the student’s personal viewpoint.

12. *Understanding of the values and norms of colleges* and within them disciplinary subjects as the organizing structures for intellectual communities that pursue common understandings and fundamental explanations of natural phenomena and key aspects of the human condition.
What Readiness Looks Like In An Individual Student

This profile describes a student whose content knowledge is strong, but for whom some concerns remain: cognitive strategies are not developing, college knowledge is below optimal and academic behaviors are somewhat erratic. This profile could be used to diagnose and prescribe in high school or to link the student with support services in college.
Practical Implications

• Readiness for postsecondary success is highly conditional and situational.
• Generic measures such as cut scores on placement tests are useful at the extremes only, not near the cut point.
• Much more fine-grained information on readiness is needed.
• That information needs to be used by the student to take ownership for learning and by the institution to take ownership for targeted supports to students.
Key Issues

• Current definition is deficit-driven and specified by a very few data points, sometimes only one data point.
• All students who fail to exceed the cut point are assumed to be unprepared to succeed in college.
• By extension, all students who are “non-remedial” are presumed to be college ready.
• Neither of these assumptions is strictly true.
• If the focus remains on reducing the remedial rate, the larger issue of being college ready will never be engaged.
• Instead, if each student is considered to be both ready and not ready for college to varying degrees, a rethinking of “remedial” becomes necessary.
Key Issues

• Readiness consists of the student’s ability to do the work and the program’s ability to support the student.
  o What skills and attributes does the student have in relation to the requirements of the program?

• The readiness of each student needs to be determined in relation to her or his aspirations.
  o Arbitrary barriers need to be removed in favor of appropriate prerequisite expectations that guide students to be properly prepared.

• Skill deficiencies need to be dealt with on a modular basis.

• Data systems need to be continuous, comprehensive, and able to generate information on multiple dimensions of college readiness.
Key Issues

• Colleges offer numerous resources, but students do not connect with these very well.
  o College resources need to be carefully designed and matched to student needs.
  o Students need to be required to access certain support resources in order to proceed in their program of study.

• Supports need to be “just in time” and focused.
  o What math knowledge and literacy skills does the student need for the program in which he or she is enrolled?
  o Does the student have cognitive strategies and learning techniques to draw upon beyond following directions?
  o What study skills does the student need for the program in which he or she is enrolled?
  o Does the student understand all the ways college is different from high school?
Key Issues

• Community colleges have a responsibility to specify the knowledge and skills necessary to succeed in each certificate or transfer program.

• Key entry-level postsecondary courses need to be consistent enough across the state so that high schools can orient instruction toward them, and returning students know what they need to do to succeed.

• Diagnostic tools can be much more sophisticated and keyed to actual program requirements, not generic notions of remedial/non-remedial.

• High quality support services can then be developed with some certainty about where students need help.
Creating A Profile Based on the Four Dimension Model

- **Content knowledge**
  - Consortia assessments of Common Core
  - State end-of-course exams
  - Better placement tests
  - Better hs and college in-class measures

- **Key cognitive strategies**
  - Complex in-class tasks and assignments
  - Culminating projects with specified criteria
  - Diagnostic tasks as a placement component

- **Academic behaviors**
  - Teacher reports
  - Student self-reports
  - Inferred from complex tasks, assignments

- **Contextual skills & awareness**
  - Knowledge tests, required website tutorials
  - Student self-reports
  - Inventories of support services accessed
Recommended Actions

• Make the reference points for readiness explicit and identify them clearly:
  o Common Core State Standards?
  o UC A-G Requirements?
  o ICC/Education Roundtable Standards?
  o CCC Student Learning Outcomes?
  o CDE Content Standards and Frameworks?

• Get the most out of assessment data and be clear about the desired uses
  o California Standards Tests?
  o Consortia common assessments?
  o EAP?
  o Placement tests?
Recommended Actions

• Develop explicit course expectations statewide for key entry-level courses.
• Work with secondary education to align these with the Common Core State Standards and common assessments to determine how the necessary knowledge and skill for these courses will be developed in secondary school.
• Develop and publicize “reference courses” that show what is expected in these key entry-level courses.
• Encourage high schools to align appropriate exit courses with a corresponding entry-level reference course.
Recommended Actions

• Expect local action within a state framework.
  o Develop local high school-college partnerships for the purpose of connecting secondary and postsecondary education locally on numerous levels.
  o Create vehicles for high school and college faculty to interact, develop aligned expectations for students, acquire a deeper understanding of each other’s goals and challenges.
  o Improve basic communication of expectations between postsecondary and secondary institutions locally, including deadlines and due dates along with resources available at postsecondary institutions to help students succeed.
  o Develop a continuum of high school-to-college programs, such as senior seminars, Advanced Placement, dual enrollment taught in the high school, dual enrollment at the college, summer bridge programs.