Four Keys to College and Career Readiness

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Council of State Governments
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Today’s talk is based on:

- College Knowledge: What it Really Takes for Students to Succeed and What We Can Do to Get Them Ready
- College and Career Ready: Helping All Students Succeed Beyond High School
Today’s students are entering a different world.
TODAY’S STUDENTS HAVE TO SHOW STRONG SKILLS TO ENTER THE CURRENT WORKFORCE.

The United States is out of step with the rest of the world’s richest industrialized nations, *growing faster but creating far fewer jobs.*

The reason is that **U.S. workers have become so productive that it’s harder for anyone without a job to get one.**

Companies are producing and profiting more than when the recession began, despite fewer workers.

• They’re hiring again, but not fast enough to replace most of the 7.5 million jobs lost since the recession began.*

About 1 in 3 students who enroll in either a four-year or two-year college will transfer at some point.¹

Anywhere from 65 to 85 percent of students will change their majors at least once.²

Young adults change jobs an average of seven times from age 20 to 29.³

The result is reduced lifetime income and diminished career development.

We’re entering a **POLICY ENVIRONMENT** focused on **college and career readiness**.

+ NCLB waivers demand college/career readiness standards.
+ ESEA reauthorization elevates college and career readiness.
+ Individual states are setting college/career ready goals.
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.
**Different Types of Readiness**

- **WORK Ready**: Meets basic expectations regarding workplace behavior and demeanor.
- **JOB Ready**: Possesses specific knowledge necessary to begin an entry-level position.
- **CAREER Ready**: Possesses sufficient foundational knowledge and skill and general learning strategies necessary to begin studies in a career pathway.
- **COLLEGE Ready**: Is prepared in the four keys of college readiness necessary to succeed in entry-level general education courses.
Key Cognitive Strategies
- Problem formulation, research, interpretation, communication, precision and accuracy

Key Content Knowledge
- Key terms & terminology, factual information, linking ideas, organizing concepts

Key Learning Skills & Techniques
- Time management, study skills, goal setting, self-awareness, persistence, collaborative learning, student ownership of learning, technological proficiency, retention of factual information

Key Transition Knowledge & Skills
- Postsecondary program selection, admissions requirements, financial aid, career pathways, postsecondary culture, role & identity issues, agency

Four Keys of College and Career Readiness
KEY COGNITIVE STRATEGIES

+ Systematic approaches to achieve key learning goals that use the methods and ways of thinking of the academic disciplines to achieve the goal

+ Elaborate plan of action that chooses among alternative learning approaches and anticipates potential problems that must be addressed to solve a problem or complete a complex task
Moving Students from Novice to Expert Thinkers

- Secondary school tends to treat all learners as novices.
  - Emphasis is on declarative learning (repeating facts) and procedural learning (following directions), not on conceptual learning.
  - Content may become more complex, but learning strategies stay the same.

- As a result, students do not develop deep expertise as learners in general or as thinkers in any subject area.

- The net result is that students arrive in college and the workplace with little understanding of how experts even think about problems.
**NOVICES:**
- tend to focus on discrete knowledge in isolation
- reason in specific contexts by using recently-acquired information
- know individual facts about topics
- are slower and more deliberate
- learn about pieces of systems
- recall information by rote

**EXPERTS:**
- are faster and more accurate
- connect new and prior knowledge
- learn through example and analogy
- create mental cues to facilitate recall
- integrate pieces of knowledge into systems frameworks
- generalize knowledge to new settings and circumstances
- organize facts into “chunks” for better recall and application
- use analytical skills to apply knowledge and select procedures
KEY CONTENT KNOWLEDGE

+ Key terms and terminology
+ Factual information
+ Linking ideas
+ Organizing concepts
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.
COMMON CORE STATE STANDARDS

WHAT THEY ARE:

+ Attempt to identify what students should know and do in relation to best practices standards and international competitors.

+ Keyed toward greater cognitive challenge.

+ Seek to be more focused.

+ A framework for more detailed development of curriculum.
COMMON CORE STATE STANDARDS

WHAT THEY ARE NOT:

+ A complete catalog of all of the knowledge students will need to succeed in every college course and career pathway.

+ A comprehensive model of college readiness that takes into account key areas beyond content knowledge and (to some degree) thinking skills.
KEY LEARNING SKILLS AND TECHNIQUES

+ Time management
+ Study skills
+ Goal setting
+ Self-awareness
+ Persistence
+ Collaborative learning
+ Student ownership of learning
Option 1: FIXED Mindset

“Intelligence is static.”

+ Avoid challenges
+ Give up easily
+ See effort as fruitless
+ Ignore feedback
+ Threatened by others’ success

As a result...
+ Plateau early
+ Achieve less than full potential

Confirms a deterministic worldview
Option 2: GROWTH Mindset

“Intelligence can be developed.”

+ Embrace challenges
+ Persist through obstacles
+ See effort as necessary
+ Learn from feedback
+ Inspired by others’ success

As a result...
+ Achieve at higher levels

Creates greater sense of free will
KEY TRANSITION KNOWLEDGE AND SKILLS

+ Contextual: What are my options?
+ Procedural: How do I apply and enroll?
+ Financial: How do I afford it?
+ Cultural: What are the behavioral norms of college?
+ Personal: How do I advocate for myself? What is my identity?
Projected Enrollment in Postsecondary Education, 2009-2020

1% increase in white students

25% increase in black students

43% increase in Hispanic students

25% increase in Asian/Pacific Islander students

SOURCE: National Center for Educational Statistics (2011)
Students who would be first-in-family to go beyond secondary education have many of the following characteristics:

- Lack key contextual knowledge about tertiary education opportunities, costs, purposes, prerequisite skills, organizational/cultural values and norms.
- May not view post-secondary education as valuable or realistic.
- Tend not to use available support resources.
- May suffer from “imposter syndrome” and be more likely to give up when faced with performance problems.
Key Cognitive Strategies
+ Problem formulation, research, interpretation, communication, precision and accuracy

Key Content Knowledge
- Key terms & terminology, factual information, linking ideas, organizing concepts

Key Learning Skills & Techniques
- Time management, study skills, goal setting, self-awareness, persistence, collaborative learning, student ownership of learning, technological proficiency, retention of factual information

Key Transition Knowledge & Skills
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“So now what?”

Accountability Design Principles to Address College and Career Readiness
Accountability measures need to focus on *success after high school*, not awarding diplomas.
College readiness is \textit{not a} \textbf{CUT SCORE}.

We need to move to \textbf{PROFILES} of \textit{knowledge} \& \textit{skills}.
College readiness is a CONTINUUM.

- Rigorous HS courses
- Honors courses
- Dual enrollment courses taught at HS
- Dual enrollment courses taught at college
- Advanced Placement courses
- Early enrollment in college
## Measuring College Readiness

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<thead>
<tr>
<th>Measurement Type</th>
<th>Pro</th>
<th>Con</th>
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<tbody>
<tr>
<td>College admissions tests (e.g., SAT, ACT)</td>
<td>• Normally distributed&lt;br&gt;• Well established, easy to administer, familiar to the public&lt;br&gt;• Longitudinal trend data&lt;br&gt;• Combines content knowledge and critical thinking skills</td>
<td>• Not all students complete&lt;br&gt;• More a measure of eligibility than readiness&lt;br&gt;• No real or natural cut score&lt;br&gt;• Tremendous variation across institutions&lt;br&gt;• Limited prediction power</td>
</tr>
<tr>
<td>High school grade point average</td>
<td>• Well established, familiar to the public&lt;br&gt;• Somewhat of a composite measure&lt;br&gt;• One metric for all subjects and courses&lt;br&gt;• No additional cost to administer</td>
<td>• Highly variable in composition&lt;br&gt;• Difficult to say what it measures&lt;br&gt;• Subject to range restriction and false precision&lt;br&gt;• Not consciously connected to college readiness</td>
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# Measuring College Readiness

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<td>Graduation rates</td>
<td>• Prerequisite to college admission in most cases</td>
<td>• More of an endurance than quality measure</td>
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<td>• Already a policy focus</td>
<td>• Tremendous variability in knowledge and skill</td>
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<td></td>
<td>• Well established, familiar to the public</td>
<td>• Subject to manipulation by various means</td>
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<td></td>
<td>• Motivating to some students</td>
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<td>AP/IB test scores</td>
<td>• Sets a high bar for students</td>
<td>• Not all students have access to</td>
</tr>
<tr>
<td></td>
<td>• External exams</td>
<td>• May be too high of a bar to expect all students to meet</td>
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<td></td>
<td>• More complex assessments</td>
<td>• Low scores not as predictive</td>
</tr>
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<td></td>
<td>• Consistent across districts and states</td>
<td>• Expense</td>
</tr>
<tr>
<td>Cut scores on admissions tests</td>
<td>• Cheap and easy to use</td>
<td>• Have no real meaning</td>
</tr>
<tr>
<td></td>
<td>• Easy to report</td>
<td>• Cut level is arbitrary</td>
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<tr>
<td></td>
<td>• Linked to predicted grades</td>
<td>• Very narrow measure</td>
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| Postsecondary ed (PSE) applications | • Good goal to have all students apply to college  
• Is also a measure of access to info needed to apply  
• Goes beyond graduation rates | • Not really a measurement of readiness but of aspiration  
• Can be “gamed” by having everyone apply  
• Falls short of enrollment |
| Students enrolled in PSE immediately after graduation | • Is also a measure of how well high schools are focused on college/career readiness  
• Very tangible, can develop strategies to increase | • Influenced by a range of other factors  
• Does not get at success or persistence to degree  
• Some students wait to apply  
• Some drop out immediately |
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| Placement tests      | • Well established measures  
                      • Institution-specific  
                      • Gets PSE buy-in and ownership  
                      • Tests basic skills only | • Narrow in scope  
                      • Low challenge level  
                      • Cut scores vary across postsecondary institutions |
| College remediation rates | • Focuses attention on the problem  
                              • Often a legislative priority  
                              • Linked to fiscal issues as well | • Hard to quantify consistently  
                              • Can be gamed  
                              • Harder to hold secondary ed responsible |
| State assessments    | • Well established  
                      • Already paid for  
                      • Correlate decently with PSE freshman GPA | • Weren’t really designed as PSE readiness measures  
                              • Often geared to a much lower performance level and have ceiling effect issues |
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<td>Student self-reports</td>
<td>• Can cover a much wider range of variables</td>
<td>• General distrust of self-reported information</td>
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<td></td>
<td>• Have been shown to be sufficiently reliable</td>
<td>• Can’t be linked to high stakes accountability systems or value-added models very well</td>
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<td></td>
<td>• Relatively inexpensive, efficient</td>
<td>• Require students to take it seriously</td>
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<td></td>
<td>• Generate actionable information</td>
<td>• Take up more class time</td>
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<tr>
<td>Embedded performance tasks</td>
<td>• Generate better data on complex thinking</td>
<td>• Must be integrated into regular instruction</td>
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<td></td>
<td>• Generate data on readiness dimensions beyond cognitive measures</td>
<td>• Teachers must score them, or must be scored externally</td>
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<td>• Guide and focus the secondary curriculum on readiness skills</td>
<td>• Tasks must meet technical adequacy requirements</td>
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<td>Proficiency-based grading</td>
<td>• Measures what students can do relative to readiness</td>
<td>• Challenging to operationalize</td>
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<td></td>
<td>• Replaces existing grading</td>
<td>• Teachers may not want to change how they grade</td>
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<td></td>
<td></td>
<td>• Lots to learn about it</td>
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<tr>
<td>College/career readiness assessments</td>
<td>• Designed specifically to measure wide range of readiness variables</td>
<td>• Many still in development</td>
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<td></td>
<td></td>
<td>• Limited longitudinal data</td>
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<td></td>
<td></td>
<td>• Colleges don’t use results well</td>
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<tr>
<td>College/career readiness assignments</td>
<td>• Tie to c/c assessments</td>
<td>• Require changes in curriculum</td>
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<tr>
<td></td>
<td>• Ensure students learn what is tested on c/c/ assessments</td>
<td>• May require teacher PD</td>
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<tr>
<td></td>
<td></td>
<td>• Not really measures per se</td>
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<tr>
<td>Opportunity-to-learn measures</td>
<td>• Ensures curriculum is aligned with readiness</td>
<td>• Requires syllabi to be rewritten</td>
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<td>• Allows multiple pathways that all address readiness</td>
<td>• Requires external review of syllabi</td>
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<td>• Is an all-school activity</td>
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PolicY imPlications

+ Accountability systems need to focus on successful transitions beyond high school, not on graduation rates.

+ More measures than content tests in math and English are necessary to gauge true readiness.

+ Teachers should be evaluated on their ability to develop key learning skills in students, not just content knowledge transmission.
For more information, visit www.epiconline.org