Four Keys to College and Career Readiness

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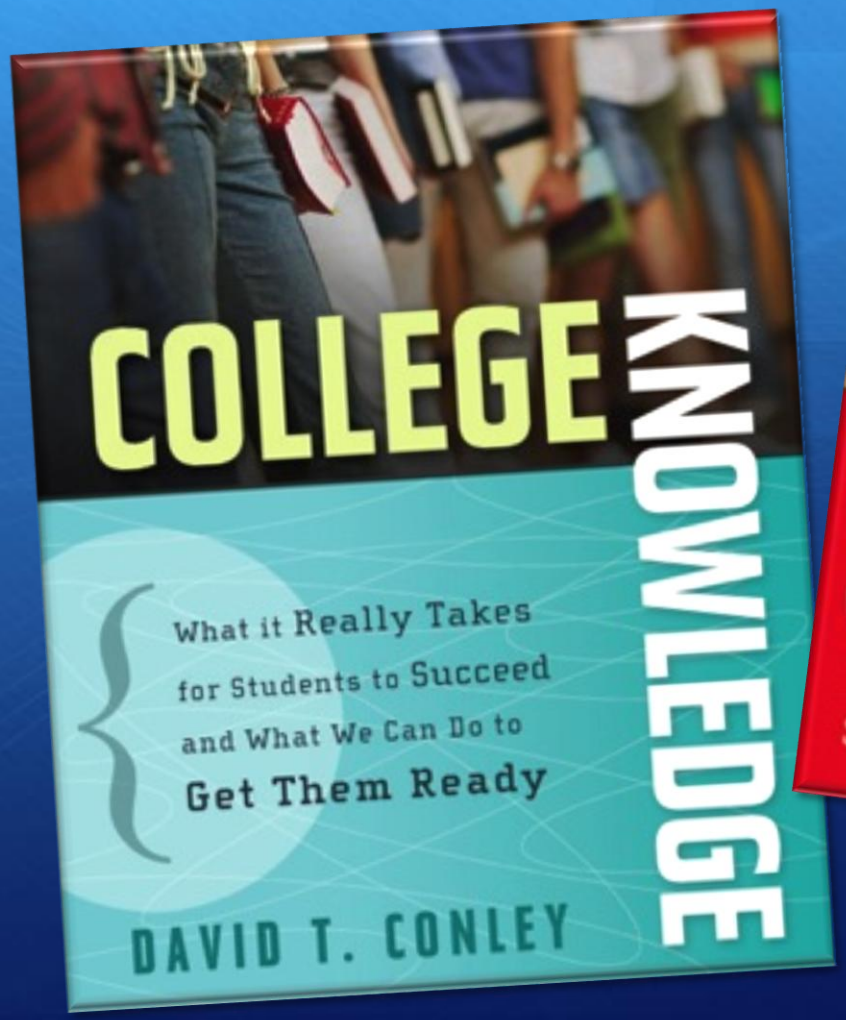
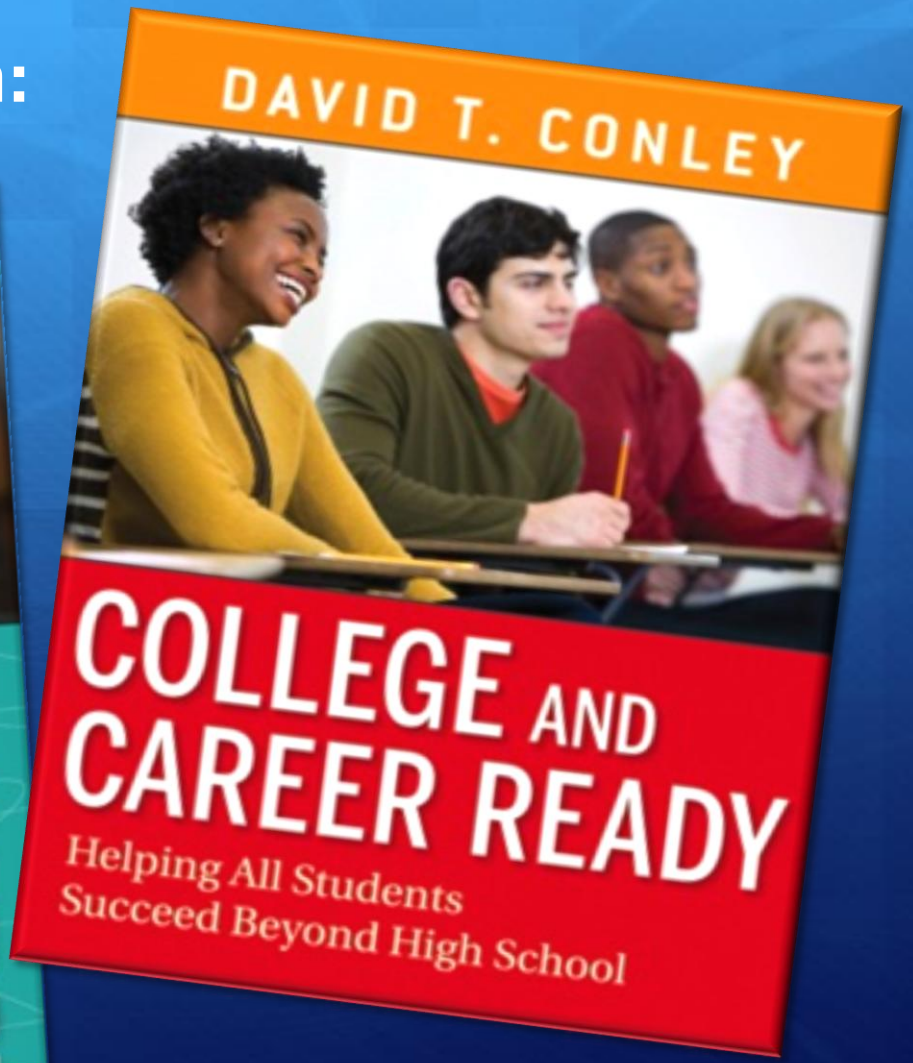
Today's talk is based on:





YESTERDAY

Work for large company

One job for life

Steadily increasing pay

Stay in hometown

Secure retirement

Well-paying jobs available in low-skill professions

No real international competition for good jobs

TODAY

Work for small company

Multiple jobs

Pay freezes/cuts

Move for work or career

Uncertain retirement

Low-paying jobs in low-skill professions

Cut-throat international competition for good jobs

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.*

* Weisman, Paul. "U.S. productivity gains stifle job creation." *USA Today.* April 4, 2011.

the SWIRL *of* young adulthood

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.

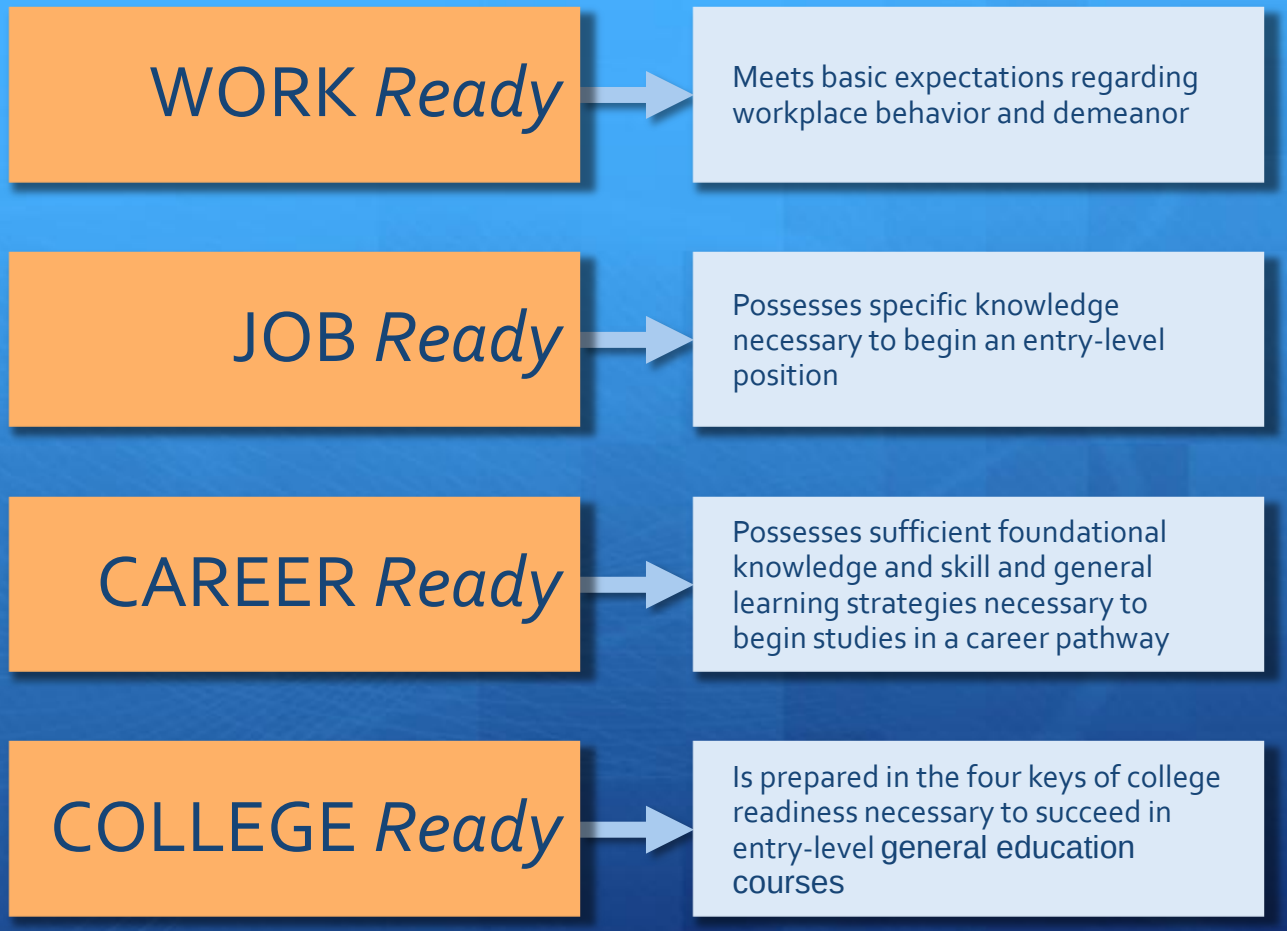
SOURCES: [1]National Association for College Admission Counseling (2010). [2]ACT (2005). [3]US Department of Labor Statistics (2010).

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



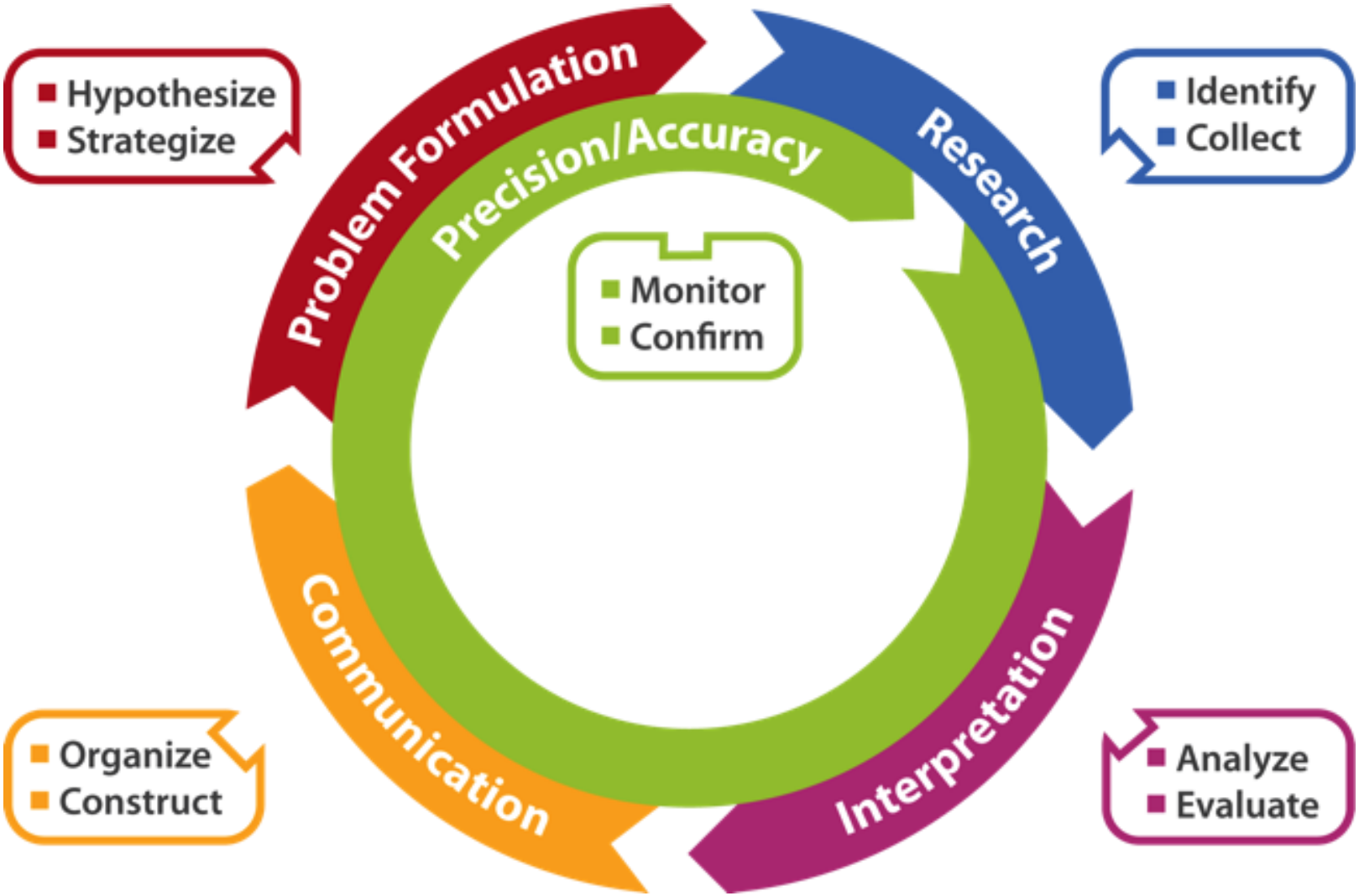
Different Types of *Readiness*

Four Keys of College and Career Readiness

- **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

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


Hypothesize
Strategize
Problem Formulation
Identify
Collect
Research
Precision/Accuracy
Monitor
Confirm
Organize
Construct
Communication
Interpretation
Analyze
Evaluate

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

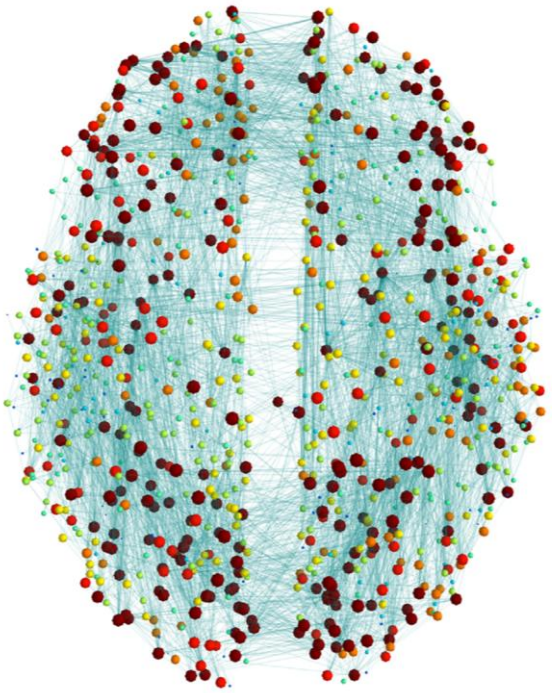
EXPERTS:

- 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…

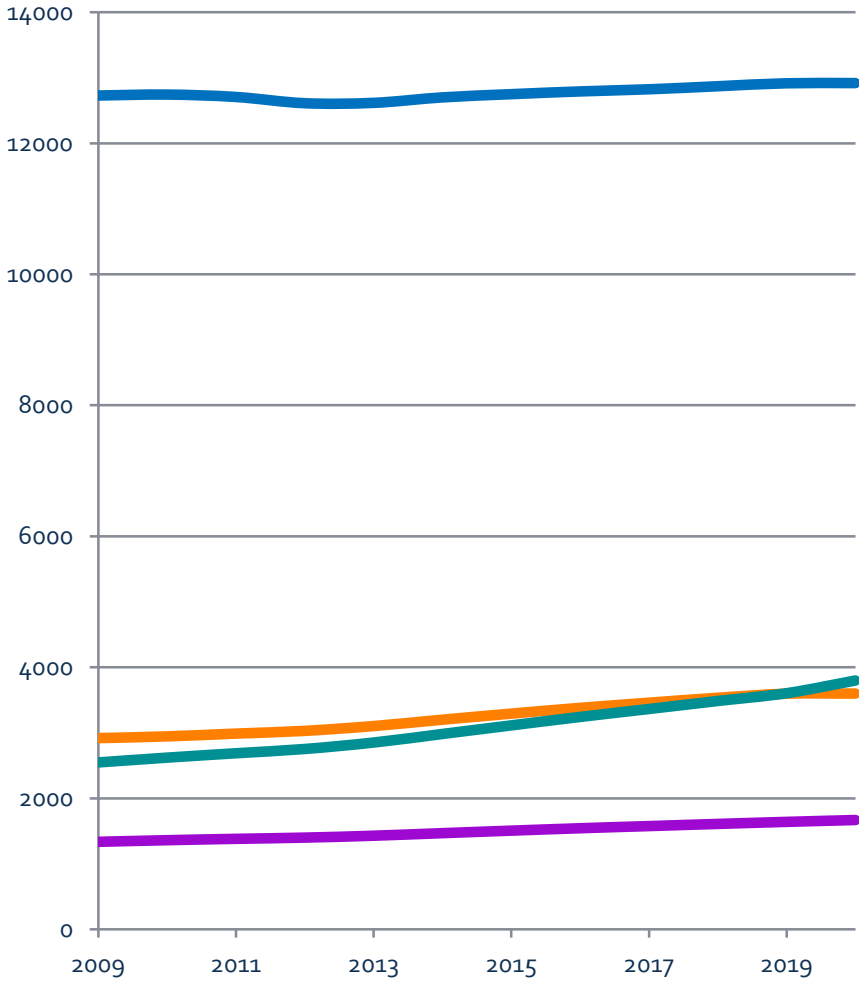
+ Achieve at higher levels

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)

FIRST-GENERATION COLLEGE STUDENT CHARACTERISTICS

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.

How do you

THINK

Key Cognitive Strategies

- Problem formulation, research, interpretation, communication, precision and accuracy

What do you

KNOW

Key Content Knowledge

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

How do you

ACT

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

How do you

GO

Key Transition Knowledge & Skills

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

"So *now* what?"

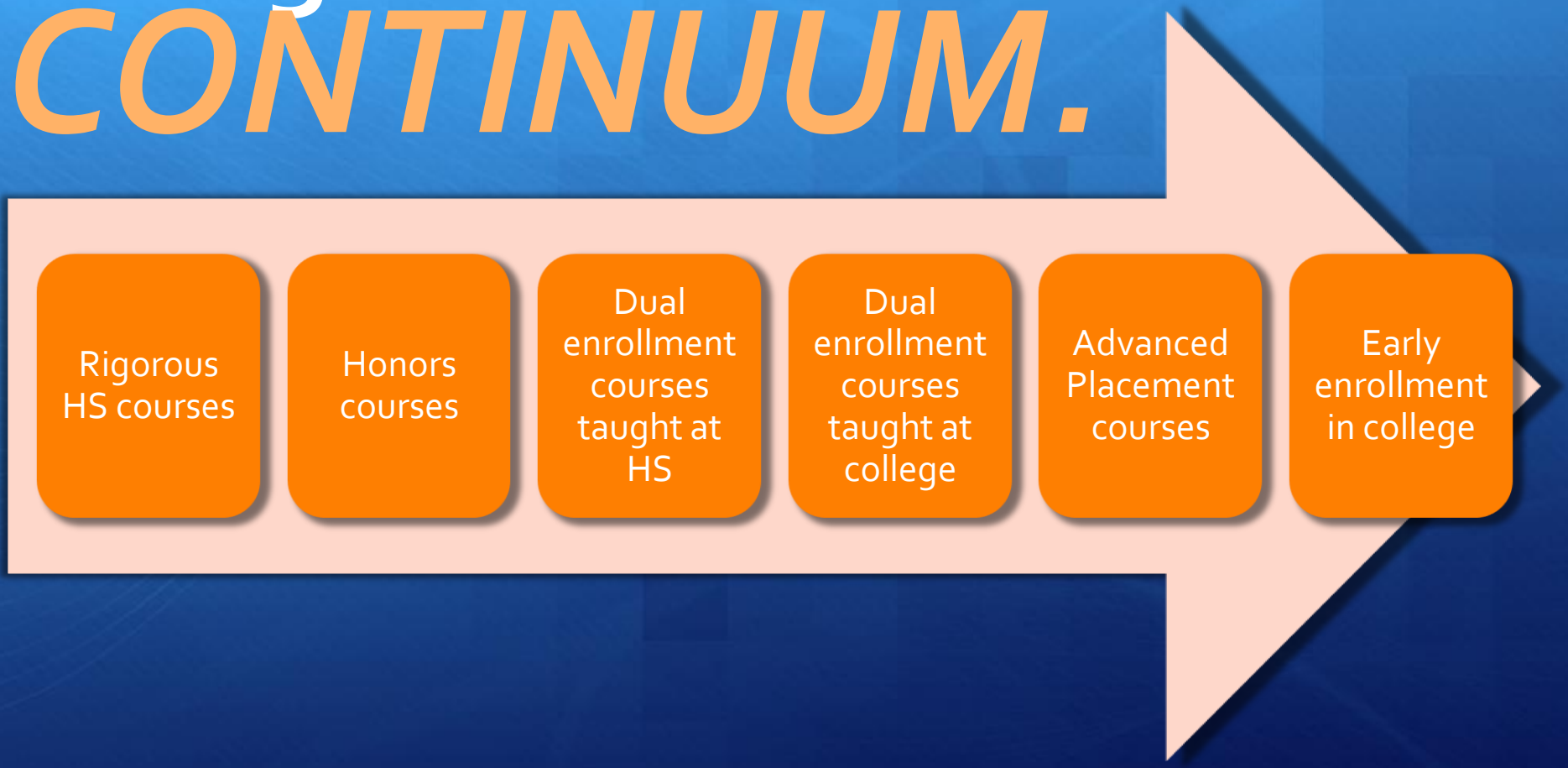
Accountability Design Principles to Address College and Career Readiness

Accountability measures need to focus on *success after high school*, not awarding diplomas.

College readiness is
not a CUT SCORE.

We need to move to
PROFILES
of *knowledge* & *skills*.

College readiness is a *CONTINUUM.*



Measuring College Readiness

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

Measuring College Readiness

Measurement Type	Pro	Con
Graduation rates	• Prerequisite to college admission in most cases • Already a policy focus • Well established, familiar to the public • Motivating to some students	• More of an endurance than quality measure • Tremendous variability in knowledge and skill • Subject to manipulation by various means
AP/IB test scores	• Sets a high bar for students • External exams • More complex assessments • Consistent across districts and states	• Not all students have access to • May be too high of a bar to expect all students to meet • Low scores not as predictive • Expense
Cut scores on admissions tests	• Cheap and easy to use • Easy to report • Linked to predicted grades	• Have no real meaning • Cut level is arbitrary • Very narrow measure

Measuring College Readiness

Measurement Type	Pro	Con
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

Measuring College Readiness

Measurement Type	Pro	Con
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

Measuring College Readiness

Measurement Type	Pro	Con
Student self-reports	• Can cover a much wider range of variables • Have been shown to be sufficiently reliable • Relatively inexpensive, efficient • Generate actionable information	• General distrust of self-reported information • Can't be linked to high stakes accountability systems or value-added models very well • Require students to take it seriously • Take up more class time
Embedded performance tasks	• Generate better data on complex thinking • Generate data on readiness dimensions beyond cognitive measures • Guide and focus the secondary curriculum on readiness skills	• Must be integrated into regular instruction • Teachers must score them, or must be scored externally • Tasks must meet technical adequacy requirements

Measuring College Readiness

Measurement Type	Pro	Con
Proficiency-based grading	• Measures what students can do relative to readiness • Replaces existing grading	• Challenging to operationalize • Teachers may not want to change how they grade • Lots to learn about it
College/career readiness assessments	• Designed specifically to measure wide range of readiness variables	• Many still in development • Limited longitudinal data • Colleges don't use results well
College/career readiness assignments	• Tie to c/c assessments • Ensure students learn what is tested on c/c/ assessments	• Require changes in curriculum • May require teacher PD • Not really measures per se
Opportunity-to-learn measures	• Ensures curriculum is aligned with readiness • Allows multiple pathways that all address readiness	• Requires syllabi to be rewritten • Requires external review of syllabi • Is an all-school activity

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