College and Career Readiness: Intentions and Dimensions for the Future Workforce

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MISSION

The mission of the Center for Educational Outreach is to engage with communities across the state for the purpose of applying the scholarly resources of the University of Michigan where needed to promote academic excellence at the pre-college level, to encourage students to value higher education, to stimulate college participation and success rates in the state, and to attract a well-prepared diverse student body to the University of Michigan.
5 Ways College Pays

• Greater Wealth
• More Security
• Better Health
• Closer Families
• Stronger Communities

Economic Imperative
Competitiveness Imperative

• National /Corporate
  – Employers search for the best available talent

• Global
  – USA no longer #1 in educational attainment
College Degree Attainment by Country

Population that has attained at least tertiary education
Percentage, 2009 or latest available year
Statlink [http://dx.doi.org/10.1787/888932506628]
Future Work Force Needs

• 85% of current jobs and 90% of fastest growing job sectors require some post-secondary education
• Interpretation, analysis, collaboration, creativity, innovation, inventiveness, interactive.
• Repetitive tasks are done better by machines.
College Completion BIG GOAL

•College Board, Natl. Conference of State Legislators, President Obama, Lumina Foundation’s “Big Goal for 2025”*

•Increase the number of Americans with high-quality college degrees from the current 39% to 60%.

•To accomplish this goal we must dramatically increase college degree attainment among first-generation, low-income, and students of color whose degree attainment rates are significantly lower than the national average and for whom the attainment gap has been widening.

*Source: Lumina Foundation’s Strategic Plan - Goal 2025
America’s College Access Challenge

• The chance of enrolling in college by age 19 in USA: 45.6%;
• In Michigan: 44.1% (rank 33)

Source: Postsecondary Opportunity, 2013
Percentage of 9th-graders planning to enroll in a license/certificate, associate's, or bachelor's program during their first year after high school, by race/ethnicity and sex: 2009

1 Total includes other racial/ethnic groups not shown separately in the figure.

NOTE: Reporting standards for Native Hawaiians/Pacific Islanders were not met; therefore, data for this group are not shown in the figure. Data weighted by W1STUDENT. Race categories exclude persons of Hispanic ethnicity.

Averaged freshman graduation rate (AFGR) in public schools, by race/ethnicity and sex: 2008–09

NOTE: AFGR is an estimate of the percentage of an entering freshman class graduating in 4 years. For 2008–09, it equals the total number of diploma recipients in 2008–09 divided by the average membership of the 8th-grade class in 2004–05, the 9th-grade class in 2005–06, and the 10th-grade class in 2006–07.

Percentage of 2004 high school graduates who immediately enrolled in first postsecondary institution, by race/ethnicity and sex: 2006

NOTE: Race categories exclude persons of Hispanic ethnicity.

NOTE: The graduation rate was calculated as the total number of students who completed a degree within 150 percent of the normal time to degree attainment (for example, for bachelor’s degrees, 6 years) divided by the number of students in the revised cohort (i.e., the cohort minus any allowable exclusions). For this indicator, the revised cohorts are the spring 2011 estimates of the number of students who entered a 4-year institution in fall 2004 and the spring 2003 estimates of the number of students who entered a 4-year institution in fall 1996 as first-time, full-time undergraduates seeking a bachelor's or equivalent degree. Students who transferred to another institution and graduated are not counted as completers at their initial institution. For more information on the Integrated Postsecondary Education Data System (IPEDS), see Appendix B - Guide to Sources.

Do the Arithmetic!

**HS Grads x College Attendance x College Graduation**

- Males: \[(.72) \times (.67) \times (.58) = .28\]
- Females: \[(.79) \times (.74) \times (.58) = .34\]

- *At current degree completion rates, we need to produce an additional 23 million degrees by 2025.*
- *We have a long way to go to reach the BIG GOAL!*
Twenty states spell out skills and knowledge students need to be college-ready. In those states, readiness expectations are communicated using one or more of the following strategies: courses, skills, standards, and tests. Fourteen states include academic-content standards in their definitions of college readiness, and 13 recommend or require college-preparatory courses. Fewer states use definitions that incorporate specific test scores or rely on narrative descriptions of skills needed for college success. Thirteen of the 20 states use multiple strategies to define readiness.

SOURCE: EPE Research Center, 2009
Washington State College Readiness Math Standards

• The College Readiness Standards in Math (CRS) were commissioned to define the core knowledge and skills expected of students in college entry-level mathematics courses and courses with quantitative components, providing information and support needed for success in the transition from secondary to postsecondary education.

2010 Revised Version - 1/10 P2 v.1
College Readiness as Courses Taken

• “College ready” is defined as having graduated from high school; having taken four years of English, three years of math and two years each of natural science, social science, and foreign language; and having a NAEP reading score of at least 265, representing a “basic” level of reading achievement.

Source: Greene and Winters, 2005
College Readiness as Test Scores

• ACT defines “college readiness” in terms of the probability that a student earning a given score on the ACT exam, called benchmarks, will also earn a passing grade in the corresponding college course. For example, students who meet the ACT Benchmarks have about a fifty percent chance of earning a B or a 75 percent chance of earning a C in the corresponding college course. The benchmarks are calibrated for English, Math, Reading and Science.

• The ACT reports that only 25 percent of students taking the ACT meet all four of the College Readiness Benchmarks.
### ACT Benchmarks

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<th>College Course</th>
<th>ACT Subject-Area Test</th>
<th>EXPLORE Benchmark Grade 8</th>
<th>EXPLORE Benchmark Grade 9</th>
<th>PLAN Benchmark</th>
<th>ACT Benchmark</th>
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</tbody>
</table>

Source: [ACT's College Readiness Benchmarks](https://www.act.org/content/act.Width/3.pages, 282KB)
College Readiness Skills

• **The College Board Standards for College Success (CBSCS)** define the knowledge and skills students need to develop and master in English language arts, mathematics and statistics, and science in order to be college and career ready.

• College readiness implies students who are prepared not only to enroll in college, but to succeed in college and 21st-century careers.

• Common Core Standards define knowledge and skills that our young people need for success in college and careers.

• Students have knowledge, skills and abilities that are aligned with college expectations.

• Nothing prepares students for college-level studies more thoroughly than a rigorous, high-quality high school education.
The Cognitive Domain and the “College Ready” Student

- Communication Skills (writing)
- Reading Skills (speed & comprehension)
- Quantitative Skills (algebra/problem-solving)
- Analytic Reasoning Skills
- Interpretation/Evaluation Skills
- Can lead to an emphasis on test scores as measures of academic achievement & ability.
Yet, academic achievement is mediated by a number of factors.

- Self-esteem
- Motivation
- Engagement with subject matter
- Pro-social behavior
- Academic Capital
Sedlacek’s Non-Cognitive Predictors

• Positive Self-Concept
• Realistic Self-Appraisal
• Negotiates the “system”
• Prefers long-term goals
• Strong Support person or network
• Leadership experience
• Community Involvement
• Knowledge acquired in the field

The Affective Domain and the “College Ready” Student

- Goal Oriented/Motivated
- Conscientious
- Confident/Competent (Self-efficacious)
- Good Time-Management Skills
- Independent
- Resilience (Grit!)
- Has a support network
Conley’s Operational Definition

• College readiness can be defined operationally 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 postsecondary 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 is calibrated against what our recent research has come to define as “best practices” entry-level courses as opposed to the stereotypical freshman course (Conley, Aspengren, Gallagher, & Nies, 2006a, 2006b; Conley, Aspengren, Stout, & Veach, 2006c). If students are prepared to succeed in best practices courses, they will be able to cope with the full range of college courses they are likely to encounter.

Source: D. T Conley, EPIC, 2007
Conley’s Dimensions of College Readiness

- **Key Cognitive Strategies**: analytic reasoning, problem solving, inquisitiveness, precision, interpretation, evaluating claims
- **Key Content Knowledge**: writing skills, algebraic concepts, key foundational content and “big ideas” from core subjects.
- **Academic Behaviors**: self management, persistence, time-management, study groups, awareness of performance
- **Contextual Skills & Awareness**: admissions, requirements, college costs, college purposes, types of colleges, college culture.
College-Going & College Readiness

• Intentions with respect to college-going
  – Develop competencies
  – Acquire knowledge
  – Cultivate habits of mind
  – Credentialing for career entry
  – Income generation/support adult life
  – Promote Community Leadership
  – Work force development

• Dimensions of college readiness
  -Cognitive
  -Affective
Conclusion

• College readiness requires competency in both the cognitive and affective domains.
• Our schools should cultivate both facets of behavior.
• Our colleges and universities should evaluate student competencies in both domains for purposes of admission.
References


• Lumina Foundation for Education. (2010). A Stronger Nation through Higher Education. Indianapolis, IN: Author.


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