

The Condition of College and Career Readiness

This report looks at the progress of the 2016 ACT®-tested graduating class relative to college and career readiness.

This year's report shows that **64%** of students in the 2016 US graduating class took the ACT test, up from 59% in 2015 and 49% in 2011. The increased number of test takers over the past several years enhances the breadth and depth of the data pool, providing a comprehensive picture of the current graduating class in the context of college readiness, as well as offering a glimpse at the emerging educational pipeline.

As a research-based nonprofit organization, ACT is committed to providing information and solutions to support the following:

- **Holistic view of readiness.** The 2014 ACT report, *Broadening the Definition of College and Career Readiness: A Holistic Approach*, shows academic readiness is only one of four critical domains in determining an individual's readiness for success in college and career. Cross-cutting capabilities, behavioral skills, and the ability to navigate future pathways are also important factors to measure and address. Together, these elements define a clear picture of student readiness for postsecondary education.
- **Providing meaningful data for better decisions.** ACT is focused on providing better data to students, parents, schools, districts, and states so that all can make more informed decisions to improve outcomes. We accomplish this goal by taking a holistic view and using consistent and reliable historical information so that individuals and institutions have a better context to make critical decisions about the journey they have undertaken.

The Condition of College & Career Readiness 2016

Missouri Key Findings

Performance

- In Missouri, the class of 2016 represents the first year of census testing data. While the ACT Composite score and percent of students meeting the ACT College Readiness Benchmarks decreased, the data also represents a new baseline for the state. For the first time in Missouri's history, there is a snapshot of ACT performance for the entire graduating class:
 - ~ An increase in measured test takers of 18,806 students in Missouri and 165,906 in the United States.
 - ~ A decrease in the percent of students meeting all four Benchmarks (from 30% to 22%) and average ACT Composite score (from 21.7 to 20.2). Again, with year one of census testing, this decrease was expected.
 - ~ The average state Composite score, 20.2, currently lags just slightly behind the national average of 20.8.
 - ~ In the 2016 class, 4,340 students scored an ACT Composite of 30 or higher. In 2015, there were 4,152 students who received an ACT Composite score of 30 or higher. This shows an increase of 188 students that qualify for the Bright Flight scholarship.
- Relative to ACT Composite score and subject level scores, Missouri saw the following:
 - ~ As the size of the state's graduating class taking the ACT has grown, it is important to note the following increases in subgroup participation: African American—2,063; American Indian—244; Hispanic/Latino—1,282; Asian—167; Native Hawaiian/Pacific Islander—67; White—11,615.

STEM

- Missouri graduates who took advanced science and math courses show higher levels of achievement:
 - ~ Students who took physics earned significantly higher average ACT science scores and were more likely to meet or surpass the ACT College Readiness Benchmark in science than those who did not.
 - ~ Students who took a fourth year of math in high school, regardless of course, significantly outperformed those students who did not. Only 10% of students who took algebra 1, algebra 2, and geometry met the Benchmark. However, 67% of students who took a combination of four or more years of math met the Benchmark.
 - ~ The ACT STEM Benchmark (overall proficiency in mathematics and science) of 26 was met by 16% of the tested population. Students who did meet the ACT STEM Benchmark scored an average of 28.3 in mathematics and a 28.6 in science (unchanged from 2015).

Career Readiness

- This year, for the first time, ACT has provided an indicator of career readiness based on ACT composite scores. Table 3.4 in the state ACT Profile Report details how ACT-tested Missouri graduates are progressing toward the ACT National Career Readiness Certificate™ (ACT NCRC®).
- Progress toward career readiness is based on research linking ACT Composite scores to ACT NCRC levels. The ACT Composite cut score for each ACT NCRC level corresponds to a 50% chance of obtaining that level. If a student's ACT Composite score surpassed the cut score for an ACT NCRC level, they are categorized as making progress towards the next higher ACT NCRC level. Attainment of ACT NCRC levels indicates workplace employability skills that are critical to job success.
- In Missouri, 65% of ACT tested graduates are considered making progress towards at least a gold ACT NCRC level. This compares to 68% nationally.

Impact

- Census testing offers a unique opportunity. Where optional/voluntary testing identifies the intrinsic motivation for a score (college bound), census testing offers a picture of an entire class. In addition, because hundreds of validation studies have been conducted demonstrating that higher ACT scores translate into better outcomes in college, it is possible to estimate how an increase in ACT scores for a graduating cohort could positively impact important college outcomes. Based on the class of 2016, here is how a 0.1 point increase in the composite score would impact Missouri students.
 - ~ 141 more students will enroll in college
 - ~ 170 more students will persist to year 2
 - ~ 132 fewer students will need remedial English
 - ~ 257 fewer students will need remedial math
 - ~ 192 more students will persist to year 4
 - ~ 208 more students will earn a postsecondary degree within 6 years

Behaviors that Impact Access and Opportunity

- Missouri initiatives have changed behavior, resulting in increased access and opportunity for underserved learners. For example, 63% of African American students in the 2008 graduating class took their first and only test as a senior. In contrast, only 5% of the class of 2016 did so.
- Of the class of 2016 who took the ACT during their 10th-, 11th-, or 12th-grade year:
 - ~ 46% of White students, 55% of Hispanic students, and 50% of African American students took the ACT only once.
 - ~ 54% of White students, 45% of Hispanic students, and 50% of African American students tested more than once.
 - ~ 1.7% of White students, 3.6% of Hispanic students, and 5.2% of African American students took their first and only test as a senior.
 - ~ 80.4% of White students who tested at least twice and who first tested their junior year increased their score by 1.2 points and scored 4.8 points higher than 11th-grade White students who tested only once.
 - ~ 88.3% of Hispanic students who tested at least twice and who first tested their junior year increased their score by 1.0 points and scored 3.6 points higher than 11th-grade Hispanic students who tested only once.
 - ~ 92.2% of African American students who tested at least twice and who first tested their junior year increased their score by 0.8 point and scored 3.0 points higher than 11th-grade students who tested only once.
- Below are the top five colleges and universities to which Missouri graduates sent their ACT scores:
 1. University of Missouri–Columbia
 2. Missouri State University
 3. University of Central Missouri
 4. University of Missouri–Kansas City
 5. Southeast Missouri State University
- University of Kansas is the out-of-state school that receives the most scores from Missouri students. However, note that the University of Kansas ranked 16th in the number of scores received. This speaks to the wide array of postsecondary options available to Missouri students.

- The ACT Educational Opportunity Service (EOS) is an excellent way to get students in the postsecondary pipeline, allowing them to express their interests and postsecondary options. It also allows institutions to seek out applicants that may be a good match. In Missouri, 64.3% opted into EOS. The opt-in rates for ethnic groups are as follows: African American—76.9%; Hispanic—70.5%; two or more races—71.3%; White—63.3%. In comparison, the nation had an average opt-in rate of 73.1%.
- Fee Waiver Usage
 - ~ In Missouri, there were 14,303 fee waivers issued and 10,441 of those were used. This equates to a 73.0% usage rate. The national rate was 74.5%.
 - ~ 50.0%, or 1,931, of all unused fee waivers were issued to African American students.
 - ~ ACT provides students fee waivers to provide more access and opportunity for students.

Pipeline

- 32% of graduates reported they were Undecided (10%—6,819 students) or did not respond (22%—15,036 students) when asked about a planned major. ACT Profile, if provided early in a high school career, can offer tools and resources to assist students in creating a meaningful path toward life after high school.
- Aspirations matter. Students in Missouri who aspire to a higher level of postsecondary education achieve higher ACT Composite scores:
 - ~ Graduates who aspire to a graduate degree earn an average Composite score of 23.7.
 - ~ Graduates who aspire to a bachelor's degree earn an average Composite score of 20.5.
 - ~ Graduates who aspire to a two-year college degree earn an average Composite score of 16.4.

ACT Footprint

ACT Aspire® Summative	ACT Aspire® Periodic	ACT Engage®	ACT QualityCore®	PreACT™	ACT WorkKeys®
42,527	31,679	2,109	–	7,184*	50,674

* PreACT refers to preorders for FY17.

These are the number of each of these assessments delivered in the state and not reflective of the 2016 ACT-tested graduating class.

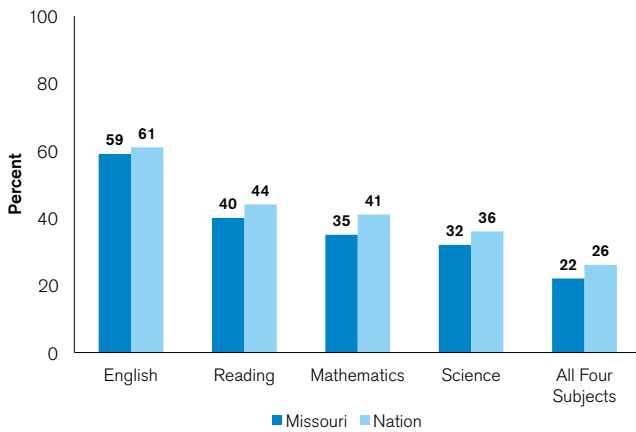
Special State Talking Points

- In 2016, ACT honored exemplars in 41 states as part of our ACT College & Career Readiness Campaign. In Missouri, the student exemplar is Shaelyn Kessler of Park Hill South High School.
- In March 2015, 326 educators participated in the Missouri ACT State Organization conferences in St. Louis and Kansas City.

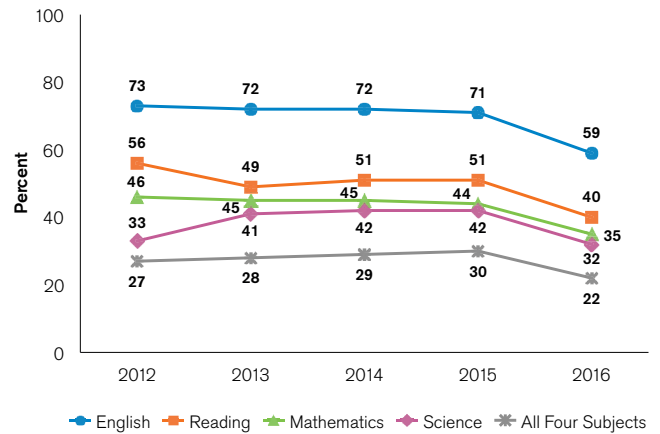
Your State College and Career Readiness Attainment, Participation, and Opportunity

Missouri

Percent of 2016 ACT-Tested High School Graduates Meeting ACT College Readiness Benchmarks by Subject



Percent of 2012–2016 ACT-Tested High School Graduates Meeting ACT College Readiness Benchmarks*



Note: Percents in this report may not sum to 100% due to rounding.

* ACT College Readiness Benchmarks in reading and science were revised in 2013.

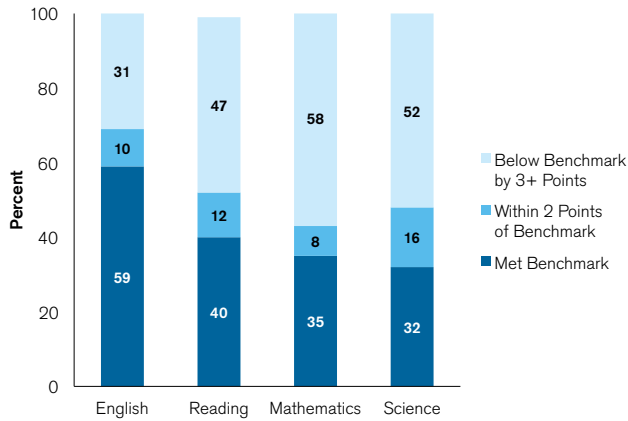
Student Data Trends

- Between 2012 and 2016, the number of students taking the ACT in Missouri increased by 39.1%.

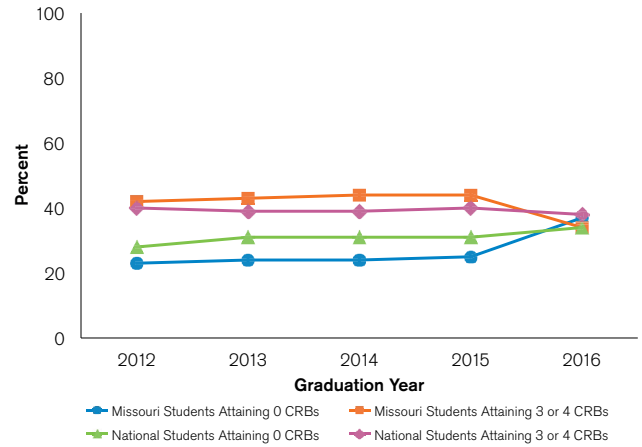
Student Condition Data Interest Trends: 2012–2016, State vs. Nation

Outcome	Cohort	2012	2013	2014	2015	2016
Percent Tested	Missouri	75%	74%	76%	77%	100%
	Nation	52%	54%	57%	59%	64%
N Tested	Missouri	49,222	49,217	48,865	49,640	68,446
	Nation	1,666,017	1,799,243	1,845,787	1,924,436	2,090,342
Average English Score	Missouri	21.4	21.4	21.6	21.4	19.7
	Nation	20.5	20.2	20.3	20.4	20.1
Average Reading Score	Missouri	21.9	21.9	22.3	22.2	20.6
	Nation	21.3	21.1	21.3	21.4	21.3
Average Mathematics Score	Missouri	21.1	21	21.1	21	19.8
	Nation	21.1	20.9	20.9	20.8	20.6
Average Science Score	Missouri	21.5	21.6	21.7	21.7	20.4
	Nation	20.9	20.7	20.8	20.9	20.8
Average Composite Score	Missouri	21.6	21.6	21.8	21.7	20.2
	Nation	21.1	20.9	21	21	20.8

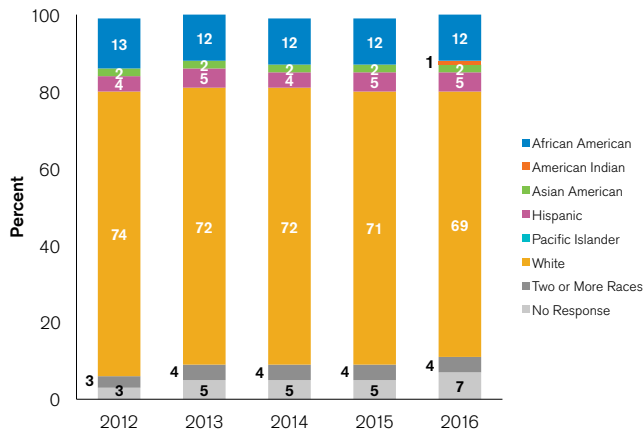
Percent of 2016 ACT-Tested High School Graduates by ACT College Readiness Benchmark Attainment and Subject



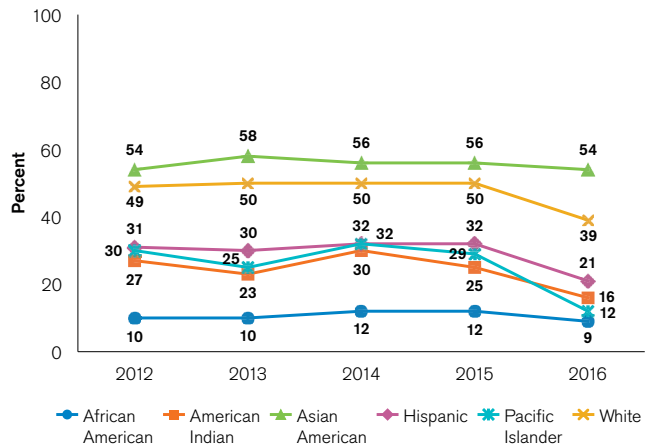
Trends in Percent of ACT-Tested High School Graduates by Number of ACT College Readiness Benchmarks (CRBs) Attained



Percent of 2012–2016 ACT-Tested High School Graduates by Race/Ethnicity

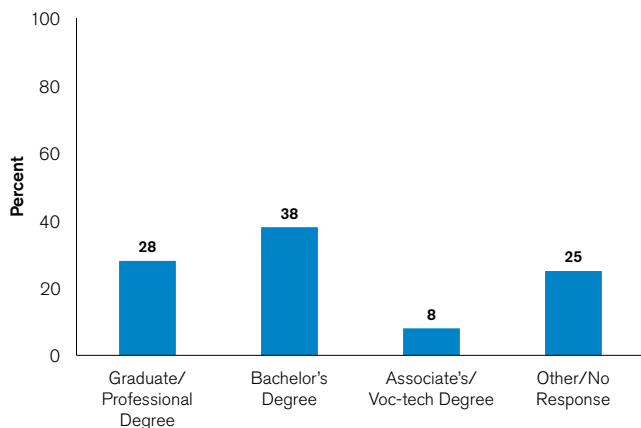


Percent of 2012–2016 ACT-Tested High School Graduates Meeting Three or More Benchmarks by Race/Ethnicity



Note: Values less than 0.5% will not appear.

Percent of 2016 ACT-Tested High School Graduates by Educational Aspirations



There is good news in that 75% of Missouri's 2016 ACT-tested graduates aspired to postsecondary education. Interestingly enough, 91% of Missouri's 2015 ACT-tested graduating class aspired to enroll in postsecondary education, compared to 70% who actually did enroll. If we fully closed the aspirational gap, an additional 10,362 of the 2015 ACT-tested graduates from Missouri would have enrolled in postsecondary education.

What You Need to Know

At ACT, we are inspired every day to make a positive difference. Here are a few ways we are making an impact each day in the lives of students, teachers, education, policy makers, and workforce leaders.

The ACT[®]

- Enhancements to ACT Score Reports starting in September 2016
- Introduction of ACT Kaplan Online Prep Live in September 2016
- New Score Reports

Pre ACT[™]

- Affordable cost—\$12 per student tested for schools, districts, and states
- Flexible administration—Schools, districts, and/or states may administer on any date between September 1, 2016 and June 1, 2017
- Structured test environment—Similar to what the student will experience when taking the ACT test

Online Prep Live

ACT[®] KAPLAN

- A virtual classroom experience that delivers all the benefits of ACT Online Prep, plus an interactive teaching experience
- Live learning experiences available at no cost to students who register for the ACT using a fee waiver
- Recorded sessions available on demand to provide maximum flexibility to students

ACT[®] Aspire[®]

- New Performance Level Descriptors coming in August 2016
- More than 5 million ACT Aspire online assessments administered to US students since January 2016, a major milestone for the program and up by more than 130% compared to the previous year
- New Score Reports

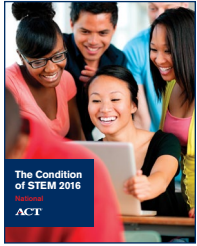
ACT[®] Engage[®]

- Helps schools face the challenge of preparing students for success after high school. Read the latest white paper, *Identifying Skills to Succeed in School, at Work, and in the "Real World."*
- New Score Reports

ACT[®] WorkKeys[®]

- Updated versions of the ACT National Career Readiness Certificate (ACT NCRC) assessments and credential coming in summer 2017
- Fully updated ACT WorkKeys curriculum and test prep available in summer 2017 to support the updated ACT NCRC assessments
- Will include a new test delivery platform that will introduce features and functionality important to ACT WorkKeys customers

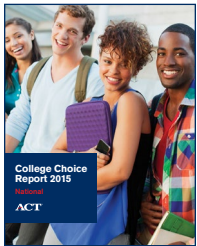
Key ACT Research



The Condition of STEM 2016— Releasing November 2016

This report provides national and state data about the 2016 graduating class in

the context of STEM-related fields (Science, Technology, Engineering, Mathematics) to determine student interest levels in specific STEM fields and, more importantly, readiness in math and science of those interested in STEM careers.



College Choice Report 2015

This report follows the ACT-tested high school graduating class of 2015, focusing on specific testing behaviors that

may expand college opportunities available to students. This is an important topic for enrollment managers and admissions officers to consider, as students' participation in these testing behaviors have implications for colleges' chances to recruit, advise, and place these prospective students.

Recommendations

1. Create an assessment model that measures a variety of skill domains and competencies required for college and career success.

Historically, college and career readiness assessments have focused only on academic skills. ACT research has clearly established areas of competency important for college and career readiness success. While our research shows that ACT solutions independently measure key components of college AND career readiness, we and others have begun to realize that no single solution can measure the full breadth of this readiness, nor should it. Simply put, the ACT alone is not enough to measure the full breadth of career readiness. A more holistic assessment model, incorporating multiple domains and specific skills associated with career clusters or occupations, will typically be most appropriate for describing and evaluating student readiness for college and career.

2. Optimize opportunities to influence awareness and engagement of underserved learners.

Initiatives designed to aid underserved learners are only as effective as they are visible. We must inform advocates and ALL underserved learners about the available and effective programs designed for this purpose. For example, in the 2015–2016 academic year, approximately 730,000 students registered to take the ACT using fee waivers valued at more than \$36 million. Yet, not all eligible students took advantage of this offer. Similarly, institutions must use data to inform intervention strategies if they are going to help underserved students be prepared for postsecondary success.

3. Take the guesswork out of STEM.

It is critically important to align STEM initiatives to capitalize on performance, measured interest, and expressed interest. Essential to this effort is expanding and nurturing interest in STEM, which will impact the emerging pipeline of STEM majors, teachers, and workers. This requires capturing a wider range of students and employing concrete measures to inform intervention and programming. To do so, states and districts must look for partnering opportunities from K–12 to postsecondary education to the workplace.

4. Focus on the implementation of fewer, higher, clearer, standards in K–12 classrooms to raise the bar for all students.

No matter the adopted standards, proper implementation must focus on the most critical component for increasing readiness—effective, high-quality teaching. This requires investment in postsecondary teaching programs, professional development, and state-level collaboration among K–12 and higher education.

5. Don't over test students.

When states, schools, and districts build an assessment strategy that recognizes the limits and promise of test scores, they will reduce the likelihood of over testing. Used ethically and appropriately, assessments can inform decisions at individual and institutional levels. Misunderstood, misused, or abused, assessments cause confusion, can be perceived as punitive, or result in ill-conceived strategies. To quote ACT founder E.F. Lindquist, "Assessment is valuable to the extent it bridges teaching and learning."